



## Certificate of participation

*Jelena Čeriman*

participated in the European Conference on Developmental Psychology (ECDP 2023)  
and gave an oral presentation at the conference entitled:

*Age differences in conspiracy beliefs around Covid-19 pandemic and (dis)trust in the government*

The conference took place at Turku, Finland on 28 August – 1 September 2023.

Christina Salmivalli  
Professor, Chair of the ECDP 2023 Organising Committee  
University of Turku





European Conference on Developmental Psychology (ECDP)  
28 August – 1 September, 2023  
Turku, Finland

# ABSTRACTS

Acceptance type: Oral Presentation .....	3
Acceptance type: Poster Presentation .....	230
Acceptance type: Roundtable discussion .....	456
Acceptance type: Symposium.....	461

## Acceptance type: Oral Presentation

16

### Parent-child separation due to socioeconomical or political reasons: a qualitative exploration of the children's meaning making of the experience.

Lida Anagnostaki<sup>1</sup>, Alexandra Zaharia<sup>2</sup>

<sup>1</sup>National and Kapodistrian University of Athens, Athens, Greece. <sup>2</sup>Hellenic Association of Child and Adolescent Psychodynamic Psychotherapy, Athens, Greece

#### Abstract (max 500 words)

Early parent-child separation is believed to have considerable impact on the development and adaptation of the children. Parent-child separation can be caused by different reasons, some located at the intersection of the psychological with the societal sphere: socioeconomical reasons (for instance, parental immigration), or political reasons (for instance, the incarceration of politically active parents in non-democratic regimes) are some examples. However, very limited research has been conducted on the meaning making of parental separation by the children affected by it. In this paper we investigate whether/how the perceived etiology of separation may influence the children's understanding and meaning making of their experience (and hence, to some degree their adaptation).

Greece is a country with a turbulent recent history. The previous century was marked by the civil war that broke out after World War II. It was a conflict characterized by brutality on both sides, which resulted in the defeat of the Left. The communist parties were outlawed (and remained so for the next 27 years), and their supporters were systematically persecuted. The World War and the civil war that followed brought about a severe economic crisis, resulting to a mass emigration wave. It is estimated that in the 20th century more than 1,750,000 Greeks have migrated to foreign countries the majority of them leaving their children behind to the care of relatives.

The paper compares the findings from two qualitative studies that sought to gain a rich understanding of the experiences of people who, as children, were separated by both parents due to socioeconomic or political reasons and the children's -now adults'- meaning making, in retrospect, of this experience. The first study explored the impact of parental immigration on children who were left behind in Greece. The sample consisted of 14 men and women. The second study explored the experiences of 10 men and women, who as children were separated from their parents due to political reasons (i.e., their parents were political prisoners). In both studies phenomenological accounts were elicited through semistructured interviews with the participants, and their narratives were analyzed using Interpretative Phenomenological Analysis.

The analysis of the 1st study's participants' narratives revealed that parental separation was experienced as a trauma. The analysis of the interviews yielded the over-arching theme "Trauma" and four superordinate themes, "Intense emotions," "Effects on parent-child relationship," "Defenses," and "Psychopathology". In the 2nd study the participants provided justification for the separation, viewing it as an unavoidable sacrifice that, in fact, made them proud. The analysis of the interviews yielded the

overarching theme “Sacred sacrifice” and seven subordinate themes, “Parental idealization,” “Following parental footsteps,” “Justification of separation,” “Emotional effects of separation,” “Political relationship with parents,” “Sense of belonging,” and gender differences between “Mothers and fathers”.

The hypothesis that perceived etiology of separation from the parents might shape the children’s understanding and meaning making of their experiences seems to be confirmed. The impact that this possibly has on children’s later adaptation is discussed.

## 18

### **‘No emotional ties’: investigating the relationships of unaccompanied refugee children**

Lida Anagnostaki<sup>1</sup>, Alexandra Zaharia<sup>2</sup>

<sup>1</sup>National and Kapodistrian University of Athens, Athens, Greece. <sup>2</sup>Hellenic Association of Child and Adolescent Psychoanalytic Psychotherapy, Athens, Greece

#### **Abstract (max 500 words)**

**Objective:** Little is known about the mental well-being and adaptation of unaccompanied refugee children, that is children affected by separation from their home country and their family, repeated exposure to traumatic experiences, and great uncertainty surrounding the future, as the vast majority of studies on unaccompanied refugees focuses on adolescents. Furthermore, very little is known about the meaning making of this experience in retrospect, and the way individuals with this predicament view and deal with past and current relationships. The objective of the study was to explore how unaccompanied refugee children make sense of their relationships with their primary attachment figures, as well as their current relationships. The previous century in Greece was marked by the civil war that broke out after World War II. It was a conflict characterized by brutality on both sides, which resulted in the defeat of the Left. At the height of the civil war the Greek Communist Party began an evacuation program in which approximately 20,000 children between the ages of three and fourteen were evacuated to socialist countries of Eastern Europe. Most of them remained there for many decades, while many of them never returned.

**Methodology:** Nine adult men and women, who as children (three to ten years of age) were evacuated to Eastern Europe and remained there in institutions for unaccompanied refugees for at least five years, were interviewed about their current perspectives on their childhood experiences and their past and current relationships. Their narratives were analyzed using Interpretative Phenomenological Analysis. **Results:** Regarding the participants’ relationships, the analysis of the interviews yielded three main themes: (a) suppression and devaluation of relationships, (b) rupture of relationship with primary attachment figures, and (c) importance of peers.

**Discussion:** As, unfortunately, the number of unaccompanied refugees in the world shows no signs of decreasing, understanding the effects of this predicament on all levels is important. Although in recent

years there has been there has been a growing interest in the concept of resilience for refugees, and the importance of helping them to reconnect with stories of strength, survival and hope in order to go on with their lives, the discussion will also focus on the importance of acknowledging the possible long-term negative impact of this experience on the relationship capacity of children.

## 22

### **The relationship between epistemic cognition (EC) and cognitive flexibility with respect to social inclusion/exclusion in ECEC.**

Sue Walker<sup>1</sup>, Jo Lunn-Brownlee<sup>2</sup>, Laura Scholes<sup>3</sup>

<sup>1</sup>Southern Cross University, Gold Coast, Australia. <sup>2</sup>Queensland University of Technology, Brisbane, Australia. <sup>3</sup>Australian Catholic University, Brisbane, Australia

#### **Abstract (max 500 words)**

Epistemic cognition refers to cognitive processes about the nature of knowledge and knowing (Walker et al., 2020). Recent research (e.g. Walker et al., 2020) has provided insights into the ways epistemic development can contribute towards the inclusion of diverse children in school. We argue that, to engage in reasoning about inclusion or exclusion, children may need both the capacity to evaluate competing perspectives (epistemic cognition) and the ability to be cognitively flexible. Cognitive flexibility forms a subset of skills within Executive functions (EF). The current study proposes that the development of the core EF skill of cognitive flexibility may be related to young children's development of epistemic cognition by facilitating children's ability to take a variety of perspectives. The following research questions are addressed:

1. Is there a relationship between the ability to engage with a variety of perspectives (epistemic cognition) and cognitive flexibility (EF) in early childhood?
2. Can a pictorial scenario and interview methodology effectively assess young children's ability to engage with different perspectives (epistemic cognition)?

A total of 82 children (58.5% male, Mean age = 4.46, SD = 0.44) from three preschool groups across two Australian preschool centres participated. The procedure included two phases. Preschool children first completed three cognitive flexibility tasks (The Dimensional Change Card Sort; Animal Shifting Task; and Shape School Shift) and then they participated in an epistemic interview designed to assess children's ability to engage with different perspectives (epistemic cognition). To assess epistemic cognition, children were asked to draw a common conflict situation involving exclusion from play from the different perspectives of the protagonists involved in the conflict, the child who excludes and the child who is excluded. Drawing on epistemic cognition interview questions from Wainryb et al. (2004), children were asked, "Can both be right, or only one be right? Why?". Interview responses were coded in terms of children's ability to reason from different perspectives and their justifications for including or excluding someone else from play.

One-way ANOVAS were used to explore the relationship between the three measures of cognitive flexibility and children's answers to whether "one could be right" or "two could be right" (epistemic cognition). There were no significant relationships between cognitive flexibility (DCCS:  $F(1, 69) = .035$ ,  $p = .853$ ; Animal Shifting:  $F(1, 67) = .758$ ,  $p = .387$ ; Shape School Shift:  $F(1,68) = 1.20$ ,  $p = .277$ ) and whether children felt that only one person could be right or that both could be right (epistemic cognition).

There are a number of explanations for the lack of a relationship between children's epistemic cognition and cognitive flexibility. It could be that variation in cognitive flexibility does not predict variation in epistemic cognition or that the current measure of epistemic cognition lacked the sensitivity to identify more subtle variations between different types of epistemic thinking. A critical issue for future researchers to address will be the language difficulties associated with measuring epistemic cognition, especially at this early stage.

## 25

### **Working memory training improves children's syntactic ability but not vice versa. A randomized controlled trial.**

Paul Ibbotson

The Open University, Milton Keynes, United Kingdom

#### **Abstract (max 500 words)**

The status of human language as either an extensive recycler of general cognition (Tomasello, 2003; Bybee, 2010; Goldberg, 2005; Dabrowska & Divjak, 2015, 2019; Ibbotson, 2020) or an encapsulated module with processes unique to itself (Chomsky, 1980; Fodor, 1983; Hauser, Chomsky, & Fitch, 2002; Pinker & Jackendoff, 2005) has been intensely contested. The debate is important because it speaks to what language is made of and how it is acquired. Both sides of the debate agree that language interacts with general cognition at some level, however, the extent of this interaction, the causal direction, the developmental periods in which it occurs, and the cognitive domains in which it happens, remains poorly understood.

The current study contributes to our understanding by testing whether transfer occurs between working memory (WM) and syntax. If transfer does not occur, then it suggests an impermeable boundary between these systems, which are informationally encapsulated, as a modular account would predict (Fodor, 1983). If transfer does occur, it would add to a growing body of research that shows deep integration between language development and general cognitive processes. Furthermore, because of our design – three treatment groups and a control – we are able to establish for the first time not just whether transfer is possible between these domains, but in which directions.

The broader theoretical implications of a positive transfer result are that the language-unique parts of language are in retreat to such an extent that it becomes more parsimonious to use the framework of

general cognition to understand linguistic development, rather than call upon processes and structures unique to language (Ibbotson, 2020).

Consequently, the current study explores four possible hypotheses about the way in which WM and syntactic training may affect performance: As a result of training (1) working memory improvements transfer to improved syntactic ability (2) improved syntactic ability transfers to improved working memory performance (3) improvements in working memory and syntax transfer in both directions (4) improvements in working memory and syntax transfer in neither direction.

In a pre- post-test randomized control trial, 104 native Cuban Spanish-speaking children (M = 7;2, 54 Female) took part in either syntax training in their first language; syntax training in their second language; working memory training or no training (control). Compared to the control, after six weeks of training in language or working memory, children showed evidence of cognitive transfer from working memory to syntax, but not vice versa, in support of hypothesis 1.

The result was most striking in the case of their first language, where working memory training was as effective as language training in boosting syntactic performance. As well as establishing cognitive transfer at the group level, we also found individual differences in working memory performance, both at baseline and in training, predicted the extent to which children's syntax improved. The directionality of transfer, the group-level and individual-level results, established in the context of a randomized control design, all point to a strong causal role for domain-general cognition in the processes of language acquisition.

## 28

### **Students' self-disclosure and impression management behaviours via online educational platforms**

Beatrice Hayes, Lizete Murniece, Aiman Suleiman, Dawn Watling

Royal Holloway, University of London, Egham, United Kingdom

#### **Abstract (max 500 words)**

The use of online educational platforms (e.g., Moodle, Blackboard, MS Teams) has become integrated with traditional face-to-face higher education (HE) teaching, particularly since the COVID-19 lockdowns. Students aged 18-24 years are developmentally in late adolescence/emerging adulthood characterised by enhanced social freedom and reliance upon social networks (Sawyer et al., 2018) as well as being digitally immersed since birth (Hagedorn, 2016). Students and staff now communicate through a variety of electronic means not limited to email, direct messaging and video calls (Wallace, 2010). Self-disclosure (revealing information about the self; Fisher, 1984) is required when communicating with others in order to build relationships. Impression management techniques (IMT) are utilised via the way we present ourselves to others (Schlenker, 1980; Michikyan et al., 2015). Online self-disclosure and the use of IMT is eased by the reduction of nonverbal cues and increased time and space to curate responses (Suler, 2004). The online space may therefore benefit student-staff relationships, particularly



for emerging adults who have only ever known a highly digitally connected world. Yet, little is known about this particularly within a HE environment. To explore this, we have conducted two qualitative and two quantitative studies to further understand how HE students and staff communicate online and to what extent this may impact student-staff relationships.

Study one involves quantitatively exploring HE students' self-disclosure and impression management techniques when communicating online with staff. Via an archival review, instances of self-disclosure and types of impression management techniques used were coded and analysed via a path analysis in R. Findings highlight that students' IMT predict their level of online self-disclosure, which in turn predicts how staff respond. Although, findings did not highlight a relationship between students' IMT and staff response directly.

Studies two and three involve qualitatively exploring the types of IMT students use when communicating online with staff, as well as the motivations behind their online self-disclosure. Via thematic analysis in NVivo, these studies highlight that students use particular types of IMT when disclosing to staff online and that the level of their online self-disclosure depends upon the reason why they are contacting staff. These findings also highlight generational differences in perceptions behind online communication.

Finally, study four draws upon the findings from studies one-to-three to create and validate the Online Self-Disclosure on Educational Platforms (OSDEP) scale. Using a confirmatory factor analysis in R, findings present the validated structure of the scale, which is intended for use in future research.

Collectively, these studies help to develop our understanding of HE students' online IMT and self-disclosure behaviours and motivations; especially amongst emerging adults who are transitioning into HE within a highly digitally connected world. The creation of the OSDEP scale is intended to help future researchers measure HE students' online self-disclosure behaviours specifically within an online environment. Together, these findings aim to support HE teachers and policymakers understanding of students' online communication behaviours and support both staff and students (whose digital engagement is generationally different) to communicate successfully.

**29**

## **Exposure to social-media coverage of the Russo-Ukrainian war and stress symptoms in adolescents and young adults**

Jana Runze<sup>1</sup>, Finja Marten<sup>2</sup>, Lysanne te Brinke<sup>3</sup>

<sup>1</sup>Vrije Universiteit Amsterdam, Amsterdam, Netherlands. <sup>2</sup>KU Leuven, Leuven, Belgium. <sup>3</sup>Erasmus University Rotterdam, Rotterdam, Netherlands

### **Abstract (max 500 words)**

Introduction

On February 24th 2022, Russia invaded Ukraine which formed a major escalation of the Russian-Ukrainian war. Via various social media platforms, adolescents and young adults can be constantly exposed to extensive war-related media content, even if they are not directly affected. This might pose an indirect threat to their wellbeing.

## Methods

In the current study, we made use of cross-sectional data from an ongoing survey study with 426 adolescents and young adults (13-25 years old, 66.9% female, 29.1% male, 3.9% other) from the Netherlands. Between May and July of 2022, the participants reported on their media exposure about the Russian-Ukrainian war as well as their stress symptoms.

## Results

A linear regression model showed that war-related media exposure predicted stress symptoms in adolescents and young adults. This relation was not moderated by trust in the news, social media or the government. Age, gender and the occurrence of a psychiatric diagnosis were not significantly related to war-related stress symptoms.

## Conclusion

Our study adds important insight into the indirect effects of war-related media on adolescents in Western Europe. Consequently, it might be important for adolescents' and young adults' well-being to have coping tools to deal with negative content on (social) media.

## 35

### **Using behavioral and molecular genetics to investigate response bias in developmental questionnaires**

Jana Runze<sup>1,2</sup>, Marinus Van IJzendoorn<sup>2,3,4</sup>

<sup>1</sup>Vrije University Amsterdam, Amsterdam, Netherlands. <sup>2</sup>Leiden Consortium on Individual Development, Leiden University, Leiden, Netherlands. <sup>3</sup>UCL, London, United Kingdom. <sup>4</sup>Erasmus University Rotterdam, Rotterdam, Netherlands

#### **Abstract (max 500 words)**

Kagan (2007) criticized the excessive use of questionnaires in developmental science, including the Big Five and CBCL, due to their lack of validity and reliability in delivering accurate descriptions of personality and behavior. He noted low correlation between self-reports and observed data, as well as ambiguity in questionnaire items. Kagan also suggested that the class position of respondents may impact their understanding and answering of questionnaire items, with lower class respondents more likely to take nonsensical questions seriously due to obedience to perceived superiors.

In our current study, we used a modified Wildman Symptoms Questionnaire with absurd items about child development to examine the genetics of the response bias in twin children and their parents' responses to these impossible developmental questions. We used both behavioral genetics and molecular genetics approaches to determine the genetic and environmental influences on response bias. In the current study, 248 parents (91% female, Mean Age = 40.48) and 460 twin children (52% female, Mean Age = 7.92) participated. We conducted univariate ACE twin models to estimate the contributions of additive genetic and (common and unique) environmental factors to the variance in Wildman scores. For the child-reported Wildman score, an AE model provided the best fit with a heritability of 44%.

We also computed polygenic scores (PGS) of educational attainment, IQ and income derived from large Genome Wide Association Studies (GWAS) published in recent years and created a latent factor (EDINQ) of the three highly correlated PGS to assess their prediction of Wildman scores in the parents and the children. For both the parents and the children, their Wildman scores were significantly predicted by the latent factor EDINQ, with higher scores on EDINQ predicting lower scores on the Wildman questionnaire.

The results of our study strengthen the argument that questionnaire results are inherently biased not only due to social factors but also via genetic predispositions for biased answers on questionnaires. Future research should corroborate our preliminary findings and focus on including samples from several ethnic backgrounds. Moreover, future research in the developmental sciences should be cautious when making use of questionnaires and triangulate questionnaire results by other methods, such as observational measures or standardized tests.

In conclusion, using a twin design, we found that a considerable amount of variance in answers to absurd questions was explained by genetic factors. Moreover, we supported this finding by showing that higher scores on a latent factor of polygenic scores for educational attainment, income and IQ predicted less bias in agreeing to absurd statements.

## 36

### Perceptions of treating and eating animals in adolescence

Luke McGuire<sup>1</sup>, Emma Fry<sup>1</sup>, Nadira Faber<sup>2</sup>

<sup>1</sup>University of Exeter, Exeter, United Kingdom. <sup>2</sup>University of Bremen, Bremen, Germany

#### Abstract (max 500 words)

Humans care for the wellbeing of some animals (e.g., dogs, valued wild animals) while tacitly endorsing the maltreatment of others (e.g., pigs, rats). What treatment is deemed morally appropriate for an animal depends in part on the species the animal belongs to. This moral hierarchy of beings depending on their species membership (i.e., speciesism) has important implications for our treatment of animals and decisions about eating animals, a behavior which in turn has far-reaching ecological consequences. Recent research has demonstrated that children, compared to adults, are less likely to categorise farm

animals as “food”, are less speciesist (as measured by a standardised scale), and view eating animals as less morally acceptable, due to concerns for animal welfare (McGuire et al., 2022). So far, less is known regarding such perceptions in adolescence, which is an important developmental period in which youth experience increasing autonomy over decisions such as diet and may become increasingly aware of the realities of food production (e.g., factory farming).

In a pre-registered study, adolescents ( $n = 93$ ,  $M+SD = 13.54 \pm 1.87$ , 10 - 18-years-old, female  $n = 41$ , male  $n = 47$ ) and adults ( $n = 113$ ,  $M+SD = 43.73 \pm 14.26$ , 19 - 78-years-old, female  $n = 53$ , male  $n = 59$ ) from the UK responded to tasks including animal categorisation, speciesism, meat and animal product evaluation and accompanying reasoning (i.e. “why is it okay or not okay to eat animals?”). Compared to adults, adolescents were more likely to categorise a farm animal as a ‘pet’ than as ‘food’ ( $X^2(1) = 19.14$ ,  $p < .001$ ). However, compared to adults, adolescents reported higher levels of speciesism ( $F(5,191) = 5.98$ ,  $p < .001$ ), believed that pigs ought to be treated less well ( $t(209) = -3.26$ ,  $p = .001$ ), and rated eating animals ( $F(5,193) = 7.617$ ,  $p < .001$ ) and their products ( $F(5,192) = 4.04$ ,  $p < .001$ ) as more morally acceptable. Participants who reported eating animals to be morally acceptable reasoned that eating meat was natural and necessary, with some reference to “ethical slaughter” practices (i.e., eating animals is more acceptable when they are killed in a humane way).

Together, these findings provide insight into adolescents’ thinking about humans’ treatment of animals. While existing work has shown that children demonstrate greater concern for animal lives than adults, the current findings contrast this by suggesting that adolescents report lower concern for animal lives than adults and believe it to be more morally permissible to eat animals with less reference to concerns for animal welfare. These findings will be discussed using a cognitive dissonance framework to examine the possibility that such evaluations point to emerging dissonance resulting from adolescents gaining knowledge about the harm caused by food systems.

## 37

### Maternal Effective Parenting Knowledge and Child Problem Behaviors: Maternal Parenting Quality and Child Emotion Regulation as Serial Mediators

Dilek Saritas-Atalar<sup>1</sup>, Cansu Alsancak-Akbulut<sup>1</sup>, İrem Metin-Orta<sup>2</sup>, Zeynep Betül Yenen<sup>3</sup>, Feyzanur Yön<sup>3</sup>

<sup>1</sup>Ankara University, Ankara, Turkey. <sup>2</sup>Atılım University, Ankara, Turkey. <sup>3</sup>Middle East Technical University, Ankara, Turkey

#### Abstract (max 500 words)

**Objective of the study:** This study aims to investigate the interrelationships between maternal parenting quality and children’s emotion regulation skills in mediating the relationship between maternal effective parenting knowledge and children’s problem behaviors (anger-aggression and anxiety-withdrawal) in a sample of Turkish mothers, who have preschool-aged children.

**Methodology:** The sample of this study consisted of 72 Turkish mothers and fathers, who have children aged between 47 and 72 months. Both mothers and fathers filled out the questionnaire, which included

Social Competence and Behavior Evaluation-30 (LaFreniere & Dumas, 1996) and the Emotion Regulation Checklist (Schields & Cicchetti, 1997). Then, two separate interviews were conducted only with mothers in order to measure effective parenting knowledge by using Domain-Specific Parenting Vignettes (DSPV; Saritaş-Atalar et al., 2023) and parenting quality by using Domain-Specific Parenting Interview (DSPI; Saritaş-Atalar et al., 2023). DSPV and DSPI were evaluated by qualified coders.

**Results:** Two independent multiple serial mediation analyses (Model 6) were conducted (Hayes, 2013). The composite scores of the mother and father reports were used. The findings of this study showed that the relationship between maternal effective parenting knowledge and children's anger-aggression was mediated by maternal parenting quality via children's emotion regulation skills ( $B = -.17$ ,  $SH = .10$ ,  $CI = [-0.41, -0.02]$ ). It was also found that the relationship between maternal effective parenting knowledge and children's anxiety-withdrawal was not mediated by maternal parenting quality via children's emotion regulation skills ( $B = -.04$ ,  $SH = .03$ ,  $CI = [-0.11, 0.01]$ ).

**Conclusion:** Although the findings display significant links between parenting quality and child emotion regulation (Norona & Baker, 2014) and child problem behaviors and emotion regulation (Cole et al., 1996), the mediating role of maternal parenting quality via child emotion regulation in the relationship between maternal effective parenting knowledge and children's problem behaviors are novel findings. These findings indicate the importance of examining both mother- and child-related factors in the association between parenting knowledge and child outcomes. The findings are discussed in light of the current literature.

This presentation is part of a project supported by the Scientific and Technological Research Council of Turkey (TUBITAK) (Project no: 120K153).

39

## **Developing inclusivity from within: Advancing our understanding of how teachers' personality characters impact ethnic prejudice and homophobic attitudes**

Giulio D'Urso<sup>1</sup>, Andrea Maynard<sup>2</sup>, Irene Petrucci<sup>3</sup>, Alberto Di Domenico<sup>1</sup>, Mirco Fasolo<sup>1</sup>

<sup>1</sup>G. D'Annunzio University of Chieti and Pescara, Chieti, Italy. <sup>2</sup>University College Dublin, Dublin, Ireland.

<sup>3</sup>Mercatorum Universitas, Rome, Italy

### **Abstract (max 500 words)**

**Introduction:** Understanding how internal characteristics of teachers impact their teaching practices can shed light onto ways to promote inclusivity. Specifically, teachers' personality traits and social anxiety could influence their acceptance of others, influencing student acceptance and achievement, yet minimal research has explored these relationships. **Method:** The role of personality characteristics and social anxiety related to ethnic prejudices and homophobic attitudes were investigated in a sample of 551 Italian secondary school teachers (76 % female, age range: 20-70;  $M = 46.20$ ) using the teachers'

attitudes towards the representation of homosexuality in film and television scale, the big five questionnaire short form, the subtle and blatant prejudice scales, and the Social Phobia Inventory. Results: The first model suggested that higher levels of conscientiousness, combine with lower levels of agreeableness and extraversion are related to blatant prejudice. As participant age increased, those with lower levels of agreeableness and higher levels of conscientiousness expressed subtle prejudice. Increased age combine with lower levels of agreeableness was also linked to negative attitudes towards lesbian and gay topics. Similar results were found in the second model, which included social anxiety, however social anxiety was found to impact negative attitudes towards lesbian and gay topics only, while the effect of age towards subtle prejudice disappeared. Conclusions: Personological characteristics such as personality and social anxiety were found to impact ones attitudes and acceptance towards ethnic groups and lesbian and gay populations. Implications for policy: Our findings highlight key areas of focus to help raise awareness and address socio-emotional through school supports, teacher trainings, and policy aimed at promoting inclusive education systems.

## 42

### Parenting typologies in Georgian and Belgian adolescents: Associations with self-esteem

Nino Skhirtladze<sup>1</sup>, Stijn Van Petegem<sup>2</sup>, Gregorie Zimmerman<sup>3</sup>, Gillian Albert Sznitman<sup>3</sup>

<sup>1</sup>Iliia State University, Tbilisi, Georgia. <sup>2</sup>Université Libre de Bruxelles, Brussels, Belgium. <sup>3</sup>University of Lausanne, Lausanne, Switzerland

#### Abstract (max 500 words)

The parenting context is of fundamental importance for the optimal development of adolescents. Making use of a person-centered approach, we derived parenting typologies from the perspective of Georgian and Belgian adolescents based on four dimensions of perceived parenting (responsiveness, structure, psychological control, and autonomy support). Further, we examined how perceived parenting typologies were associated with adolescents' self-esteem. The study sample included 511 Georgian and 830 Belgian adolescents (N = 1341; 48% female). A cluster-analytic procedure on the full sample was conducted separately for mothers and fathers. The analysis yielded five parenting typologies: Supportive-Highly structuring (high responsiveness and structure), Highly structuring-Moderately controlling (high structure and psychological control, moderate responsiveness), Supportive-Low structuring/controlling (high responsiveness and autonomy support, low structure and psychological control), Highly controlling (very high psychological control, low responsiveness and autonomy support) and Uninvolved (low on all dimensions). Results indicated that the Highly structuring-Moderately controlling paternal cluster was more prevalent in the Belgian sample. A country-moderating effect was found with the paternal Uninvolved profile associated with low levels of self-esteem in Belgian adolescents, but with moderate levels of self-esteem in Georgian adolescents.

43

## A framework for studying environmental statistics in developmental science

Nicole Walasek, Ethan Young, Willem Frankenhuis

Utrecht University, Utrecht, Netherlands

### Abstract (max 500 words)

Interactions between people and their environments are central to developmental science. To study this relationship, we need to describe both the individual and its environment across time. Distributional and dynamic properties of environmental data (e.g., level and rate of change) are typically described using natural language (e.g., variable, unpredictable, instable), which tends to be ambiguous. This ambiguity weakens the match between theory and methods within studies, and leads to inconsistencies across studies, impeding cumulative science and interdisciplinary integration. This work presents a framework that organizes different notions of distributional and dynamic environmental properties in unambiguous, formal terms: as statistical definitions. Although our framework is novel, it draws on statistical definitions widely used in other disciplines, such as biology, ecology, and economics. To demonstrate feasibility, we apply our framework to a longitudinal dataset of crime rates in New York City across 15 years, focusing on 'unpredictability' as a case study. Unpredictability, conceptually defined as random variation in harshness, is a common construct in developmental studies. Here, we showcase the various ways in which unpredictability can be statistically defined across developmental time scales. We observe moderate correlations between 'unpredictability statistics' across regions in NYC. However, the directions of some correlations are counterintuitive. Relatedly, regions within NYC rank differently on unpredictability depending on which definition is used and at which spatial scale statistics are computed. Thus, researchers using different definitions or spatial scales would draw different conclusions about how unpredictability shapes key life outcomes, such as health, wellbeing, and psychopathology across development. Additionally, we explore associations between unpredictability statistics and measures of unemployment, poverty, and educational attainment derived from publicly available NYC survey data. In our data, these measures are associated with mean levels in crime rates but almost never with unpredictability in crime rates. Our case study illustrates the merits of disentangling notions for describing distributional and dynamic environmental properties through a shared statistical framework. We believe that environmental statistics can become a valuable addition to a developmentalist's toolbox. Environmental statistics can be computed in environment-level data (such as crime rates) alongside individual-level data collected through questionnaires or in the lab. Studies that include statistics from both types of data as predictors may afford separating their contributions to development. Additionally, environmental statistics may be directly computed in repeated measures data to quantify changes across time within individuals. To facilitate the use of our framework, we developed a friendly, step-by-step guide for applying it to developmental datasets.

44

## **"God, how did you create such an ugly face?" The Consequences and Living Experience in Adulthood of Female Child Sexual Abuse Survivors: A Retrospective Qualitative Study**

Limor Goldner, Ortal Ortal Herzig Reingold

University of Haifa, Haifa, Israel

### **Abstract (max 500 words)**

Exploration of child sexual abuse (CSA), especially by a female perpetrator, has grown significantly in the last few decades though there is still a lot to uncover. Thus, the presented study aims to expand the knowledge regarding the lived experience and the long-term effects of female child sexual abuse in adult survivors using semi-structured interviews and bird nest drawings with a sample of 15 adult survivors. Analyzing the data was conducted using the Interoperative Phenomenological Approach. The analysis revealed three central themes. The first theme refers to the characteristics of the abuse. The second theme deals with the perpetrator's characteristics, while the third relates to the abuse's consequences. Most abuses were incest abuse conducted by mothers, using direct violent penetration and indirect acts of abuse involving exposure to nudity, observing sexual contacts, or engaging in sexual contact with strangers. In most cases, the offenders masked their abuses by caregiving, disciplined or playful behaviors. Furthermore, the survivors perceived their offenders as narcissistic, controlling, and hostile having tremendous difficulty separating. The survivors reported vast negative long-lasting psychopathology, including PTSD symptoms, suicidal attempts, and dissociation, partially created because of being invalidated and silenced by society. Threatened by re-enacting the victim or the aggressor's role, the participants experienced extensive difficulties in various relationships (with romantic partners, older women, and their children). In addition, they describe profound challenges relating to their shameful revulsive bodies, which are reflected in self-harms, eating disorders, eliminating signs of femininity, and the fear of being pregnant. The drawings revealed the prevalence of insecure attachment classifications, mainly ambivalent and the expression of sadness, lack of protection, and vulnerability due to the incompetency of the mothers. The results highlight the complexity of the experience, given society's tendency to minimize and normalize abuse.

48

## **Sexual Harassment Revictimization at School and Extracurricular Contexts among Adolescents: A three-year Longitudinal**

Darun Jaf<sup>1</sup>, Susanna Geidne<sup>1</sup>, Kristina Holmqvist<sup>2</sup>, Carolina Lunde<sup>2</sup>, Therése Skoog<sup>2</sup>

<sup>1</sup>Örebro University, Örebro, Sweden. <sup>2</sup>University of Gothenburg, Gotheburg, Sweden

### **Abstract (max 500 words)**



**Background:** In the present study, we rely on arguments from the sexual revictimization theory (Grauerholz, 2000) to gain an improved understanding of the course of sexual revictimization among adolescents across two important developmental settings, the school, and organized free-time activity contexts. We expect that: 1) adolescents with experiences of sexual harassment (SH) will be more likely to be sexually revictimized over time, and 2) that experiences of SH may lead to social vulnerabilities, in this case scoring high on depressive symptoms and low on subjective-well-being, which in turn increase the likelihood of being sexually revictimized over time.

**Methods:** A longitudinal design following students in 7th grade (N = 678, 43% girls, Mage = 14.90, SDage = .39) who filled out questionnaires annually over three years. Out of the analytic sample, 422 participated in organized free time activities such as sports, music, religious, and political activities.

**Results:** Our analyzes revealed that: 1) sexual harassment was prevalent in both school and activity contexts, 2) being sexually harassed in the past was the strongest predictor of future harassment, above and beyond the effects of covariates (age, gender SES, immigration background, and traditional bullying) and depressive symptoms, and subjective well-being, and 3) adolescents that were sexually harassed in school were more likely to be victims of SH in the extracurricular context, and vice versa.

**Conclusions:** Our findings indicate that adolescent victims of SH are at increased risk of revictimization over time and across two important developmental settings. The findings broaden the understanding of the complexity and gravity of SH among adolescents.

## 50

### Comparing the focus of maternal infant-directed speech to twin and singleton infants

Theano Kokkinaki<sup>1</sup>, Maria Markodimitraki<sup>2</sup>

<sup>1</sup>Laboratory of Applied Psychology, Department of Psychology, School of Social Sciences, University of Crete, Greece, Rethymnon, Greece. <sup>2</sup>Department of Preschool Education, University of Crete, Greece, Rethymnon, Greece

#### Abstract (max 500 words)

**Objective of the study:** The research question of this study is the following: Are there variations in the focus of maternal infant-directed speech in early spontaneous interactions of mothers with their firstborn dizygotic twin and singleton infants? Compared to singletons, each twin child will receive a lesser quantity and limited quality of direct-one-to-one linguistic/non-linguistic interaction (Butler et al., 2003; Tomasello et al., 1986). Compared to singleton mothers, twin mothers are more unresponsive and less sensitive to their infant's cues (D'haeseleer et al., 2016; Prino et al., 2016; Thorpe, Golding, MacGillivray, and Greenwood, 1991). Infant-focused speech provides an optimal language environment for the infants by focusing on their infant's experience rather than control the course of the interaction. Less responsive, mother-focused styles of communication have been shown to have a negative impact on children's acquisition of language (Butler et al., 2003). Dyad-focused maternal speech, from the 'we'-

position, may be a process through which parents give voices to their infants and support the development of their children's selves (Omi-Okamoto, 2015). **Methodology:** Nine twins and nine singletons were video-recorded at home in spontaneous face-to-face interactions with their mothers, from the 2nd to the 6th month at 30-day intervals. Maternal infant-focused, mother-focused and dyad-focused speech to twin and singleton infants was micro-analyzed. **Results:** The main findings of this study are summarized as follows: a) Singleton mothers' infant-focused speech favors infant emotion and attention thematic sequences. However, singleton and twin mothers responded similarly to the rest infant internal states. Twin, but not singleton, mothers' infant attention utterances differed at times when there are marked advances in the infants' attentiveness; b) Though mother-focused speech to singletons remained stable across the age range of this study, variations of this kind of speech were frequent and extended in interactions of mothers with twin infants; c) Singleton mothers expressed the 'we' viewpoint in more extended and transitional periods compared to twin mothers. **Conclusion:** This study may extend the theory of innate intersubjectivity on sensitivity of twin mothers to their infants' expressive behaviors. Appropriate interventions for language delay should focus on the language experiences of twin infants in dyadic one-to-one interactions with sensitive Significant Others early in life.

## 51

### The Role of Peer Relations in the Relation between Residential Mobility and Internalizing and Externalizing Behavior Problems in Adolescence

Juul Henkens<sup>1,2</sup>, Gonneke Stevens<sup>3</sup>, Helga de Valk<sup>1,2</sup>

<sup>1</sup>Netherlands Interdisciplinary Demographic institute, Den Haag, Netherlands. <sup>2</sup>University of Groningen, Groningen, Netherlands. <sup>3</sup>Utrecht University, Utrecht, Netherlands

#### Abstract (max 500 words)

##### Objectives

Residential mobility in adolescence is a common, but potentially stressful life experience (Humke & Schaefer, 1995), related to a range of internalizing and externalizing problems in adolescence (for a meta-analysis, see Simsek et al., 2021). The social capital theory (Coleman, 1988) assumes that it is the disruption of social networks after a move that is largely responsible for the negative effects of residential mobility. It is important to study whether and for whom residential mobility can contribute to internalizing and externalizing behavior problems in adolescence because problems with adolescent mental health are important predictors of poor outcomes in adulthood (e.g., lower adult income or low adult mental health, Oerlemans et al., 2020). Previous research is mainly correlational, which makes it impossible to examine whether behavioral differences between movers and non-movers are due to the move or whether this relation is confounded by pre-existing differences between moving and non-moving families, the so-called selection effect (Gasper et al., 2010). Therefore, this longitudinal study examines the effects of residential mobility over time, controlling for potential selection effects. We include a special focus on the role of friendships and gender in the studied relationship.

## Methods

Data for this study come from the first three waves of the Tracking Adolescents' Individual Lives Survey (TRAILS; Ormel et al., 2012). The total sample consisted of 2230 adolescents in wave 1. We plan to analyze the data longitudinally (see figure 1) with between-within models, separating between-person and within-person effects. The outcome variables internalizing and externalizing problems were measured at waves 1, 2, and 3 and predicted by whether participants had moved residents between waves 1 and 2 (yes or no). We control for behavior problems prior to the move and relevant demographic and family factors (e.g., SES, family structure, parental divorce between waves 1 and 2). Finally, friendship quality from before the move is included as a moderator in the relationship between residential mobility and internalizing and externalizing problems.

## Expected outcomes

We expect that residential mobility in adolescence is related to an increase in internalizing and externalizing behavior in the years after the move, but that the effect diminishes over time. Adolescents with friendships before the move may experience support from their friends and will have the social skills to form new friendships after the move. Therefore, we expect the negative effect of a move to be less strong for adolescents with good friendships before the move. Finally, adolescent girls are more sensitive to stressful life events (Oldehinkel & Bouma, 2011). Therefore, we expect that the negative effects of residential mobility are stronger for girls than for boys.

## Conclusion

With the results of this study, we will show whether residential mobility can have a negative effect on adolescents' internalizing and externalizing problems. Moreover, we may reveal whether adolescents without friendships and girls are at higher risk of the negative effects of residential mobility. These insights may guide interventions help to prevent mental health and behavior problems in adolescence and young adulthood.

## 53

### The Long Arm of Breakup Distress in Early Emerging adulthood

Shmuel Shulman<sup>1,2</sup>, Refael Yontan\_ Leus<sup>2</sup>

<sup>1</sup>Bar Ilan University, Ramat Gan, Israel. <sup>2</sup>College of Management, Rishon LeZion, Israel

#### Abstract (max 500 words)

Objectives: Dissolution of a romantic relationship has been described and nominated as one of the “worst events” and to induce significant distress and greater depressive reactions. The purpose of the current study is to examine the long-term effect of romantic breakup over a period of eight years among emerging adults and to learn how earlier breakup might affect future relationships. In addition, the

study assesses the extent to which emotional regulation strategies and the tendency for breakup growth (PBG) might moderate the effect of earlier breakup distress.

**Methodology:** 110 Israeli emerging adults aged 20 years were asked to report on the level of stress they had experienced in response to a recent significant breakup. At age 23, participants were re-approached and reported on their emotional regulation strategies. PBG was assessed at age 25. Finally, at age 28, participants reported about their current romantic relationship and were given an in-depth interview to assess their romantic competence.

**Results:** Contrary to our expectations, no interactions between breakup distress, emotional regulation, or PBG were found. However, breakup distress measured at age 20 explained greater coherence and capacity to learn from past romantic experiences at age 28. Their romantic life stories were more coherent and indicated that they had the capacity to learn from past romantic experiences. Additionally, coherence and capacity to learn from past romantic experiences were also explained by greater earlier capacity for PBG. Earlier PBG also explained future greater capacity to handle conflicts in romantic relationships. Finally, earlier tendency to suppress emotions was associated with a lower sense of certainty and a higher tendency for self-silencing in future romantic relationships.

**Conclusions:** This is one of the first studies to show the long-term effect of breakup distress over eight years. More important, earlier breakup distress was associated with greater competence in understanding future relationships, similar to the effect of PBG. This finding suggests that though a breakup experience during early emerging adulthood can be distressing in the long run, this painful experience might operate as a learning mechanism similar to that expressed by PBG. Embedded within a developmental and emerging adulthood framework, it can thus be suggested that experiencing distress following a breakup might not be after all a negative experience. Emerging adulthood is a learning period, and experiencing distress might serve as a learning arena to cope with dissolutions and facilitate a better understanding of romantic involvements in the future.

**Key words:** Romantic Relationships, Breakup distress, Emerging Adulthood

**56**

## **What types of bullying are most hurtful for young people, and does it depend on gender and age?**

Marit Larsen, Kyrre Breivik

Regional Centre for Child and Youth Mental Health and Child Welfare, NORCE Norwegian Research Centre, Bergen, Norway

**Abstract (max 500 words)**

**Objective:** Bullying is a problem for young people across the globe with long lasting negative consequences. Knowledge about what types of bullying that lead to negative consequences, and for whom, is important for preventive measures and treatment for young people that are victimized by bullying. The aim of this study was to investigate to what degree young people felt sad or hurt by different types of bullying (e.g. verbal, physical, indirect and cyber), and whether these relations were dependent on gender and age.

**Method:** The sample consists of 16 163 pupils from 5. to 10. grade in 93 schools in Norway assessed in 2019. All schools had implemented the Olweus anti-bullying program. The survey included information about which types of bullying young people experienced during the last months (13 questions) and whether they were hurt or sad by the bullying (2 questions). We conducted descriptive statistics and multilevel linear regression analyses.

**Results:** Being victimized by all types of bullying were uniquely related to feeling sad or hurt, and a higher frequency of bullying victimization were predictive of feeling more sad or hurt. Girls felt more sad or hurt than boys from verbal bullying and social exclusion, while boys felt more sad or hurt by photos or videoclips shared online than girls. Pupils in elementary school were more hurt by verbal and physical bullying compared to pupils in lower secondary school, while the opposite was the case for sexual bullying.

**Conclusions:** The fact that boys and girls and young people in different age groups reacted differently to some bullying types indicates that these dimensions should be considered when instigating preventive measures for bullying and when handling the consequences of bullying victimization.

**67**

## **What differentiates productive from unproductive adolescent groups engaged in collaborative problem-solving: A Qualitative Systematic Review**

Ivana Stepanovic Ilic<sup>1</sup>, Aleksander Baucal<sup>1</sup>, Smiljana Josic<sup>2</sup>

<sup>1</sup>University of Belgrade, Faculty of Philosophy, Department of Psychology, Belgrade, Serbia. <sup>2</sup>Institute for educational research, Belgrade, Serbia

### **Abstract (max 500 words)**

Peer interaction is widely recognized as one of the important factors of cognitive development, especially in constructivists and sociocultural approach. Having in mind that global demands for collaborative problem-solving (CPS) have sparked investigations of peer interaction in the educational context, we have reviewed research findings within that setting. We chose adolescents considering their advancements in cognitive and socio-emotional prerequisites to embrace and consider different views regarding argument exchange, in comparison to younger children, and their higher potential to further develop those competencies compared to the older population. Our main goal was to make a qualitative systematization of studies investigating face-to-face peer interaction within school context in order to extract characteristics which differentiate productive from unproductive groups of adolescents engaged

in CPS. The literature inspection using research strings within the three databases (PsycInfo, WoS, ERIC) yielded 5,256 human studies published in English between 2012 and 2022, which are uploaded to Covidence. The systematic narrative literature review was conducted in the form of an inductive-deductive thematic analysis of 160 papers, selected from the mentioned sample aligned with the steps in PRISMA guidelines. Interrater reliability was excellent (Cohen's  $\kappa=.92$ ; agreement percentage = 97%). We extracted six major themes differentiating productive from unproductive adolescent peer groups dialogues during CPS. The first was named Socio-Cognitive Aspects of Collaboration, associated with the quality of idea exchange and its potential to be a solid base for joint construction of meaning/knowledge. The second, Socio-Emotional Aspects of Collaboration is related to social and emotional processes in a peer group during problem-solving. The third theme entitled The Quality of Task/Problem-Solving Strategies is pertained to adequate reasoning and approaching the problem. The fourth and fifth groups describe two types of regulation within a peer group, one oriented towards the problem/task itself (The Regulation of Group Activity Oriented Towards the Task) and the other towards participants in the process (The Regulation of Group Activity Oriented Towards Group Members). The sixth one, Participant Engagement, reflected on the nature of adolescents' involvement in CPS. The number of identified themes describing peer dialogue during CPS has revealed the enormous complexity of social interaction and numerous factors influencing it. The obtained results are in accordance with similar literature reviews (Howe & Abedin, 2013; Asterhan & Schwarz, 2016; Gillies, 2016) but seem to have a particular focus on the quality of peer interaction and cover a broader spectrum of its features. Besides theoretical, our findings have practical implications and serve as a guidebook for teachers eager to contribute to productive collaboration between students in their classroom, but also for researchers who seek deeper understanding of the nature of peer interaction in order to develop new interventions focusing on productive dialogue features and prevention of unproductive peer interaction.

68

## **Does congruency of teacher judgments across students' educational trajectory matter for the development of motivation and self-esteem?**

Marlis Buchmann<sup>1</sup>, Jeanine Grütter<sup>2</sup>, Axinja Hachfeld<sup>2</sup>, Antonio Zuffiano<sup>3</sup>

<sup>1</sup>University of Zurich, Zurich, Switzerland. <sup>2</sup>University of Konstanz, Konstanz, Germany. <sup>3</sup>University of Rome, Rome, Italy

### **Abstract (max 500 words)**

Objective of the study

Since the pioneering study of Rosenthal & Jacobson (1968), research has documented that teacher judgments about student achievement can affect their school performance and developmental outcomes such as life satisfaction (e.g., Bergold & Steinmayr, 2023). However, most studies focus only on one teacher, not considering that teachers change between school years. Different teachers might hold different perceptions and judgments about one and the same student. Hence, the question arises whether (in)congruency of teacher judgments matters for a student's performance and developmental outcomes. We aim to answer this question by investigating the stable and variable components of

teacher judgments of student motivation and classroom behavior across the educational trajectory. As teachers are important socializing persons in student lives, we surmise that incongruity in teacher judgments across students' formative educational years (age 9 to age 15) may provoke insecurity in students about their capabilities and, hence, affect their school engagement. Or changing judgments may provide a window of opportunity for students to adapt their behavior. We, therefore, assume that incongruity may promote changes in student motivation and self-esteem.

## Methodology

The data for this study are from the Swiss Survey of Children and Youth (COCON), a multi-cohort and multi-informant panel project on the interplay of contextual determinants and developmental processes from childhood to young adulthood (Buchmann et al., 2021). The data refer to the child cohort (born in 2000) and are based on a representative sample for Switzerland's German- and French-speaking parts. The analyses include information from the child's 3rd-grade teacher (age 9), 6th-grade teacher (age 12), and the class teacher in the third year of lower-secondary schooling (age 15), as well as the corresponding child information. Self-esteem measures are also available for the three survey waves. The identification of stable and variable components of teacher judgments of student motivation and student self-evaluation thereof is assessed with latent congruence models across time. Based on these analyses, latent difference score models are computed to predict the role of (in)congruity on the development of motivation and self-esteem across the educational trajectory.

## Results obtained or expected

We will conduct the analyses in the next two months. We expect findings that will be in accordance with our assumptions and explore the potential role for either positive or negative implications on student motivation and self-esteem.

## Conclusions

Across the educational trajectories, students go through judgments expressed by several teachers. Understanding whether and how (in)congruity in teacher judgments matters for the development of student motivation and self-esteem will provide insights into the developmental role of teacher judgments. Such insights may help devise protocols for transition points from one teacher to the next.

## References

- Buchmann, M., Grütter, J., & Igel, C. (2021). COCON: Swiss Longitudinal Survey of Children and Youth. *Longitudinal and Life Course Studies* 12,4:573-589. <https://dx.doi.org/10.1332/175795920X16062920646814>
- Bergold, S. & Steinmayr, R. (2023). Teacher Judgments Predict Developments in Adolescents' School Performance, Motivation, and Life Satisfaction. *Journal of Educational Psychology*. Advance online publication. <https://dx.doi.org/10.1037/edu0000786>
- Rosenthal, R. & Jacobson, L. (1968). *Pygmalion in the classroom*. Holt, Rinehart & Winston.

69

## The Road to Addiction (might be) Paved with Good Intentions. Social Media Use Motives and Psychological Distress among Early Adolescents

Alexandra Maftei, Loredana Diaconu-Gherasim

Alexandru Ioan Cuza University, Iasi, Romania

### Abstract (max 500 words)

**Objectives of the study.** Relying on an extended functionalist perspective, we investigated how motives underlying social media use (i.e., conformity, social, and coping), and defensive motives (anti-mattering, i.e., the feeling of not mattering to others) are linked to early adolescents' psychological distress. We also evaluated the potential mediating role of social media addiction on the relationship between social media use motives and psychological distress in vulnerable social media users, i.e., early adolescents.

**Methodology.** Our sample consisted of 480 middle school students ( $M = 12.03$ ,  $SD = .78$ , 52.3% girls). Of them, 26.96% of students were in 5th grade, 55.6% in 6th grade, and 17.5% in 7th grade. All scales were distributed at the start of the academic year (2022/2023). Adolescents completed self-reported scales measuring the reasons for using social media, anti-mattering, social media addiction, and psychological distress.

**Results.** The results suggested that anti-mattering and mood regulation were positively associated with psychological distress. Further, social relationships, mood regulation, and anti-mattering were positively associated with social media addiction, and social media addiction was positively related to psychological distress. Furthermore, social media addiction mediated the relationship between the motives for social media use and psychological distress.

**Conclusion.** Our study extends the functionalist model of social media addiction, adding to the literature focused on early adolescents as a vulnerable group. The present findings provided evidence related to the mediating role of social media addiction on the link between early adolescents' social media use motives and psychological distress. Our study reminds us of the importance of identifying the motivational mechanisms underlying Internet-based behavioral addictions, given the significant adverse effects on their mental health.

**Keywords:** social media; motives for social media use; addiction; adolescents; distress.

75

## School Club Experiences that Predict Class Engagement for LGBTQ+ Youth

Paul Poteat



Boston College, Boston, USA

## **Abstract (max 500 words)**

### **Objective**

LGBTQ+ youth continue to experience discrimination at school, which is associated with lower school belonging and greater school avoidance. Researchers have sought to identify protective school resources for LGBTQ+ youth that could support them and improve the school environment. Gender-Sexuality Alliances (GSAs) are clubs that affirm youth with diverse sexual orientation and gender identities through support and advocacy. Some findings suggest GSA membership is associated with greater wellbeing; however, few studies have linked this association to specific GSA experiences. Even fewer studies have looked at GSA experiences in relation to academically-oriented outcomes. Finally, most research has considered youth's GSA experiences "overall" rather than how their experiences could vary from meeting to meeting. This study addresses these issues in an 8-week weekly-diary study among GSA members to identify whether a youth's meeting-to-meeting experiences predict their subsequent level of class engagement and disaffection each week. It was hypothesized that youth would report greater class engagement and lower disaffection on days following GSA meetings wherein they had perceived relatively greater support from the group and advisors, had taken on more leadership, and had discussed academic issues (Figure 1).

### **Methodology**

GSA members (n=98; M=15.81 years; 93% LGBTQ+; 35% gender non-binary) across 11 U.S. states received eight online surveys, once weekly, sent on a pre-assigned weekday afternoon. In every survey, youth reported their experiences from their most recently attended GSA meeting, along with indicators of their level of engagement and disaffection in classes for the day on which they were completing the survey (thus preserving the temporal order: prior GSA experiences predicted subsequent class engagement and disaffection). Most participants (89%) completed at least half of the surveys and 29% completed all surveys (27 youth, in addition to the 98 above, who completed only the first survey were excluded). The independent variables included a youth's perceived group and advisor support, leadership, and whether they had socialized, discussed personal issues, or engaged in advocacy efforts/planning in the meeting. The dependent variables were class engagement and disaffection. All items came from established measures. See Figure 1 for additional covariates.

### **Results**

Table 1 presents the multilevel model results (using Mplus with robust maximum likelihood estimation and 100 multiply-imputed datasets to handle missing data). Youth reported greater class engagement on days following GSA meetings wherein they had taken on more leadership. Youth reported less class disaffection on days following GSA meetings wherein they had perceived greater advisor support, had discussed academic issues, and had time to socialize with peers.

### **Conclusion**

Partial support was found for modest contributions of specific GSA meeting experiences predicting a youth's relatively greater class engagement and relatively lower disaffection from week to week. Results

suggest that GSAs may not only cultivate a youth's health and wellbeing, but they may also play a role in fostering positive academic experiences. Future research should consider how GSAs operate with other protective school policies, practices, and resources to support LGBTQ+ youth (and heterosexual cisgender peer allies) and promote their academic success.

76

## **Statistical challenges in describing social emotion regulation development across adolescence: An example from the Leiden Consortium on Individual Development**

Jeroen Mulder

Utrecht University, Utrecht, Netherlands

### **Abstract (max 500 words)**

Achterberg, Mulder, Dobbelaar, Heunis, and Crone (manuscript in preparation, preregistration available at <https://doi.org/10.17605/OSF.IO/HDRZC>) investigated the cognitive and behavioral development in emotion regulation in adolescents. The aim of the study was threefold: 1) to describe developmental trajectories of behavioral and brain responses to negative social feedback throughout childhood and emerging adolescence, as well as individual difference herein; 2) to estimate associations between development in cognitive responses, and development in behavioral responses to social rejection; 3) to assess the predictive relationship of this development for later social well-being. The research is part of the longitudinal twin study of the Leiden Consortium on Individual Development (L-CID), and uses an ambitious, and complex study design. This presentation focusses on the statistical challenges of this research project, and hopes to inspire researchers dealing with similar difficulties.

L-CID participants were invited to participate in MRI sessions at three measurement occasions with approximately 2-year intervals (wave, 1, 3, and 5, respectively). At each occasion, the social network aggression task (SNAT) was used to measure behavioral aggression following social rejection, and stimulation of three brain regions, namely the right dorsolateral prefrontal cortex, anterior insula, and medial prefrontal cortex. Additionally, a social well-being questionnaire was administered at wave 6. Characteristics of the data that should be taken into account during analysis include a) a hierarchical (4-level) structure, b) individually-varying times of observation for the waves, c) censoring in the behavioral measurements, and d) participant dropout across time.

A two-part modeling approach was taken to take the complexity of the data into account, while allowing investigation of all three research questions. First, a Bayesian multilevel (MLM) growth curve model was fitted to the SNAT data to describe development in cognitive and behavioral emotion regulation across adolescence. The Bayesian framework was chosen as it offers great flexibility for dealing with censoring, and the imputation of missing values. An MLM approach was preferred over a structural equation modeling (SEM) approach because the former can more easily accommodate individually-varying times of observation. Second, the posterior predictive samples from the Bayesian growth curve model served

as input for a SEM model, in which individual growth components were used to predict later social well-being.

Results show that there are considerable individual differences in how adolescents develop in their cognitive and behavioral responses to social rejection, both in terms of linear development, quadratic development, and their intercepts (interpreted as mean response to social rejection at 9 years and 9 months). These growth components did not significantly predict later social well-being.

The complex design of this study, as well as the ambitious set of research questions, makes the statistical analysis of the data no mean feat. Using a two-part modeling approach -- combining a Bayesian MLM growth curve model and a SEM model -- we were able to take the complexity of the data into account, while investigating all three research questions. I hope this presentation can serve as an informative illustration of this modeling approach, and can inspire researchers who deal with similar complex characteristics in their data.

## 80

### **Action and gestures: First protagonists in the origin of Executive Function**

Cintia Rodríguez, Iván Moreno-Llanos, Irene Guevara

Universidad Autónoma de Madrid, Madrid, Spain

#### **Abstract (max 500 words)**

Children begin to control intentionally their behavior and attention at the end of the first year of life. They give themselves objectives and use means to achieve them. This requires flexibility, inhibition and updating, skills known as Executive Functions. However, how is cognitive control built? Which are children's first goals? What means do they use? (Rodríguez, 2022).

We carried out a series of longitudinal studies in which we analyzed the daily activities of children in the classrooms of early-years-schools. From the end of the first year, children regulate their behavior through (1) actions (mainly uses of objects and tools) and (2) gestures. So far, we have found no evidence that children resort to language to self-regulate in these classrooms.

In classrooms 0-1 years (4 to 17 months of age), children already give themselves objectives and coordinate prelinguistic means to achieve them from 8 months of age. The most frequent goals were functional uses of objects and tools (Moreno-Llanos et al., 2020). Children also self-regulated when they tried to make rhythmic-sound functional uses and, later but less frequently, to make symbolic uses. In the preliminary results of classroom 1-2 years (18 to 27 months of age), we found a high presence of metacanonial uses (Rodríguez, Moreno-Llanos, Guevara & Flecha, submitted), effective uses with objects that were not originally designed for that purpose. For example, stacking cans as if they were building blocks. These uses imply the development of children's creativity and imagination to achieve more complex goals.

Regarding children's means, they employ uses of objects and gestures, as external forms of thought to organize and coordinate their actions. Children think about the object with the object, to direct their behavior.

Another interesting finding of our studies is that children do not only use objects and tools effectively, but they also try to understand why they succeeded. Hence, the Piagetian distinction between *réussir*, "to have success", and *comprendre*, "to understand", is particularly relevant in the study of early executive functioning.

Children manifested EF during their action. Inhibition was identified (i) in their action, when they stopped using the object/s in irrelevant or ineffective ways for their goal (e.g., sucking or throwing), and (ii) in their attention, when they inhibit attending to distractors in the classroom. Flexibility was identified when they employed various prelinguistic means (uses and gestures) during their activities to find creative solutions to their difficulties. They manifested updating with highly sustained attention. Through their action, children built and adjusted their goals and means necessary to achieve them. Overall, their action resembles a dynamic top-down/bottom-up process. With less frequency, children also self-evaluated their successes and failures, and even began to give the first signs of planning.

Research in the classrooms of the early-years-school shows that the functional or symbolic uses of the material world represent a significant challenge for children. The meanings of objects are not a direct acquisition for children, but instead a complex task in which children manifest and develop EF.

## 81

### **Loneliness, Self-Control, and Challenges of the Covid-19 Experience in the Academic Adaptation of Young Adults**

Catarina Pinheiro Mota<sup>1,2</sup>, Mariana Ferreira<sup>1</sup>

<sup>1</sup>University of Trás-os-Montes and Alto Douro – UTAD, Vila Real, Portugal. <sup>2</sup>Center for Psychology at the University of Porto, Porto, Portugal

#### **Abstract (max 500 words)**

**Introduction:** Loneliness has proven to be a significant concern for young adults in the transition to higher education, negatively affecting the academic adaptation process. Due to the recent pandemic caused by the COVID-19 virus, the literature has pointed to an increase in loneliness levels in the young adult population, which may interfere with their adaptation to the university setting. Self-control is also relevant in this equation and may act as a facilitator or as an obstacle to academic adaptation.

**Objectives:** This study aims to analyze the role of loneliness, the experiences in the face of COVID-19, and self-control in the academic adaptation of young adults in the university setting. **Methodology:** The sample was composed of 407 young adults, aged between 18 and 25 years old. Self-report instruments were used to collect data for this study, and data were analyzed using structural equation models.

**Results:** The results point to a negative prediction of loneliness on academic/career adaptation. In contrast, the relationship with peers and the university environment during times of COVID-19 positively

impacted the personal, interpersonal, and study adaptation to the university setting. Furthermore, self-control, with the egocentrism variable, and explosive temperament had a positive and negative effect on adaptation to university, respectively. Discussion: The analysis of the results was discussed in light of the relevance of the quality of interpersonal relationships, and personal characteristics of young people in the pandemic setting, to enhance better academic adaptation.

95

## Night sleep and parental bedtime practices in low-risk and preterm and full-term late-talkers

Mariagrazia Zuccarini<sup>1</sup>, Martina Riva<sup>2</sup>, Arianna Aceti<sup>3,4</sup>, Luigi Corvaglia<sup>3,4</sup>, Anat Scher<sup>5</sup>, Annalisa Guarini<sup>2</sup>, Alessandra Sansavini<sup>2</sup>

<sup>1</sup>Department of Education Studies “Giovanni Maria Bertin”, University of Bologna, Bologna, Italy.

<sup>2</sup>Department of Psychology “Renzo Canestrari”, University of Bologna, Bologna, Italy. <sup>3</sup>Neonatal Intensive Care Unit, IRCCS Azienda Ospedaliero-Universitaria Bologna, Bologna, Italy. <sup>4</sup>Department of Medical and Surgical Sciences, University of Bologna, Bologna, Italy. <sup>5</sup>Department of Counseling and Human Development, University of Haifa, Haifa, Israel

### Abstract (max 500 words)

Objective of the study:

Night sleep is essential and strictly related to child health and neuropsychological development and is affected by parental bedtime practices from very early in life. Night sleep and parental bedtime practices have scarcely been investigated in late talkers (LTs). This study explored LTs’ night sleep characteristics perceived by parents, parental bedtime practices and their associations, as well as individual, socio-demographic, and socio-relational factors affecting them.

### Methodology

Parents of 47 30-month-old late talkers, born low-risk preterm (GA < 37 weeks; n = 24) and full-term (GA ≥ 37 weeks; n = 23), with an expressive vocabulary size ≤ 10th percentile measured by the Italian version of the MacArthur-Bates Communicative Development Inventory Words and Sentences, and no neurological disorders, sensory impairments, and severe cognitive deficits (i.e., Bayley-III cognitive score < 70), filled out the Italian versions of the Infant Sleep Questionnaire, the Parental Interactive Bedtime Behaviour Scale, and the Parenting Stress Index Short-Form.

### Results

Slight settling difficulties, frequent night wakings and co-sleeping were reported by LT’s parents, with frequent settling difficulties in one-fourth of the sample and frequent night wakings and co-sleeping in almost half of the sample. Encouraging autonomy practices were frequently used by parents rather than

active physical comforting ones. Recurrent settling difficulties were reported by parents who often applied encouraging autonomy practices, whereas greater night waking problems and frequent co-sleeping were reported by parents who often left their child crying. Low-risk preterm birth and high mother's parenting stress predicted general sleep difficulties and night wakings; first-born condition, high maternal education level and high mother's parenting stress predicted settling difficulties; high mother's parenting stress was the only predictor for co-sleeping and leaving to cry.

## Conclusions

Identifying risk factors for the emergence of perceived sleep difficulties in LTs and adequate parental bedtime practices has relevant implications for the early monitoring and implementation of intervention programs to promote optimal LTs' sleep patterns, physical and mental health, and neuropsychological development.

99

## **Rejected by Peers, Rejected by the Teacher too?! An Experimental Vignette Study of Peer Status Effects on the Teacher-Student Relationship and the Explanatory Role of Teacher Attributions**

Anouck Lubon, Nina Steenberghs, Karlien Demol, Jantine Spilt, Karine Verschueren, Hilde Colpin

KU Leuven, School Psychology and Development in Context, Leuven, Belgium

### **Abstract (max 500 words)**

#### **Introduction**

Relationships with teachers and peers have been found to influence adolescents' development, as well as one another. According to social referencing theory (Walden & Ogan, 1988), students' perceptions of likeability of peers are based on teachers' interactions with these peers. Longitudinal evidence for reverse effects has been found as well, i.e., teacher-student relationship (TSR) quality is contingent upon the quality of the students' peer status (e.g., Endedijk et al., 2022), yet explanations are unknown. Based on interpersonal attribution theory (Weiner, 1995; 2000), one possible explanation refers to teachers' attributions. The present study aims at further unravelling the effect of peer relationships on TSRs, and its working mechanisms, using an experimental design.

First, this study will investigate a 'reversed' social referencing theory, i.e., the effects of peer status on the TSR quality. In line with this theory, we expect the TSR quality to be positively affected (high closeness, high likeability and low conflict) when a student is well-liked by their peers. Conversely, we expect the TSR quality to be negatively affected (low closeness, low likeability and high conflict) when a student is rejected by their peers.

Second, this study will investigate whether teachers' attributions of controllability are working mechanisms of the effects of peer rejection on the TSR quality, referring to interpersonal attribution theory (Weiner, 2000). In line with this theory, we expect that the TSR quality will be negatively affected (low closeness, low likeability and high conflict) when teachers attribute the student's rejection by peers to causes under the control of the rejected student (i.e., internal control). On the other hand, we expect that TSR quality will be less negatively affected or even positively affected (high closeness, high likeability and low conflict) when teachers attribute the student's rejection by peers to causes not under the rejected student's control (i.e., external control).

## **Method**

An experimental vignette study using a 2x2 between person design will be conducted with Belgian preservice primary and secondary school teachers. We aim to recruit 500 preservice teachers who will participate between February and June 2023. The vignettes will portray a 12-year old male student and a classroom situation of students working together in small groups. In the different conditions, the student's peer status (i.e., peer acceptance/well-liked or peer rejection) and the controllability of the peer status (i.e., internal or external to the student) will be manipulated. After reading the vignette, participants will answer questions for manipulation checks and questions regarding their expected responses to the situation and their expected relationship (i.e., closeness, likeability and conflict) with the student from the vignette.

## **Results**

Result are not yet available, but will be presented at the conference. We expect to find experimental evidence for both social referencing theory and interpersonal attribution theory.

## **Conclusions**

The findings of the present study will add to the current knowledge on the interplay between peer relationships and TSRs, and may help developing and improving interventions to promote positive relationships and student well-being in schools.

**100**

## **To use or not to use: role of digital resources in adolescents' collaborative problem solving - a literature review**

Ksenija Krstić, Marina Videnović, Jovan Ivanović

University of Belgrade, Belgrade, Serbia

### **Abstract (max 500 words)**

Digital tools are an inevitable part of adolescents' everyday life. Consequently, increasing attention is dedicated to its role as a resource for knowledge and learning. The need for teamwork and collaborative

problem solving (CPS) in modern, progressive society demands from adolescents critical thinking in selecting, validating, and integrating data and knowledge available online. Studies have found that although adolescents spend much of their time using digital tools, they do not necessarily have the skills to use such tools for productive learning and problem-solving.

The findings presented in this paper are the result of a broader systematic literature review aimed at exploring characteristics of productive peer interaction in problem-solving. A special focus of this study is on adolescent use of digital resources for supporting collaborative learning and problem-solving. This literature review was performed following the PRISMA guidelines, in search of features of (un)productive peer dialogue, and the way adolescents use digital resources during CPS. After the process of abstract and full-text screening, 160 papers were selected for data extraction. There were 56 papers (35% out of 160) relevant to our research question – use of digital resources in adolescents CPS.

Thematic analysis revealed two major roles of digital resources in productive CPS. The first referred to the use of digital resources for supporting processes of knowledge acquisition or problem-solving, identified in half of the selected papers (N = 28). More focused analysis suggested that digital resources were significant for students' knowledge integration and learning and better conceptual understanding. Further, in the context of CPS, digital tools helped students evaluate different internet data sources. They stimulated further investigation, drawing conclusions, and a deeper understanding of the problem at hand. The second role is related to the use of digital resources as tools for scaffolding collaboration, which emerged in about a third of papers (N = 18). These resources could enhance the production of creative ideas during collaboration. Also, they could shape adolescent collaboration supporting students to rise questions, discuss different meanings, and engage in exploratory talk within the group. Finally, some of the reviewed studies showed that digital resources were relevant for socio-emotional group processes. The use of different digital tools can help in shaping group identity and interpersonal relations in the classroom and developing and regulating social relations during teamwork. While systematic and thorough internet searching behavior is characteristic of productive peer groups, few studies showed that students don't always take advantage of digital resources during CPS. Also, the use of digital resources did not always improve all aspects of teamwork. Our findings indicate that students need additional support and guidance in using digital tools for collaborative learning and problem-solving in groups, as well as that additional research is needed on the factors of effective use of these resources in different areas of adolescents' life and work.

**102**

## **The Virtual Child Witness: Using VR Technology to Understand the Confidence-Accuracy Relationship in Child Witnesses**

James M Lampinen<sup>1</sup>, Jan Antfolk<sup>2</sup>, Julia Korkman<sup>2</sup>, Kara Moore<sup>3</sup>, Pia Pennekamp<sup>1</sup>, Thomas Nyman<sup>4</sup>, Pekka Santtila<sup>4</sup>

<sup>1</sup>University of Arkansas, Fayetteville AR, USA. <sup>2</sup>Åbo Akademi University, Turku, Finland. <sup>3</sup>Oklahoma State University, Stillwater OK, USA. <sup>4</sup>New York University, Shanghai, China

**Abstract (max 500 words)**



**Objective of The Study.** Wixted and Wells (2017) proposed that eyewitness suspect identifications obtain under pristine conditions will be “remarkably accurate.” They proposed that high confidence identifications will be highly accurate even when witnessing conditions are poor (e.g., brief duration, long distance, poor lighting). Although, some researchers have examined how confidence and accuracy are related in child witnesses, researchers have not examined how variations in witnessing conditions might affect the confidence/accuracy relationship in children. We address this issue using high realism, high definition virtual reality to address this question.

**Methods.** This project is currently ongoing in conjunction with a large local science center. At least 500 participants will participate from each of the following age groups: 5-8 years-old, 9-12 years-old, 13-17 years-old, 18+. Participants are viewing a 360 / 3D crime video presented through VR goggles. A professional cinematographer with experience filming in 360 degree / 3D supervised the filming of the project. Filming was done using an Insta360 Titan cinematic VR camera, shooting in 11K high definition 3D. Audio was captured using a professional ambisonics microphone producing a 3D soundscape that matched the 3D video. Professional actors were hired to play the roles. The end product is being presented to child participants using Varjo AERO VR goggles, with human eye resolution. Eye-tracking, GSR and pulse are being obtained as children watch the scene. The 360 3D videos depict a non-violent theft of shopping bags by two thieves. In one condition of the video, the thieves’ faces are visible for less than 10 seconds. In the other condition, they are visible for approximately 45 seconds. Following the VR experience, children receive unbiased pre-lineup instructions and then are shown two six person lineups (one culprit present and one culprit absent – counterbalanced across thieves). After each lineup, children provide confidence using a child friendly confidence scale that uses emojis reflecting different levels of confidence.

**Anticipated Results.** Wixted and Wells (2017) proposal holds that highly confident witnesses will be highly accurate, as long as best practices are used, even when viewing conditions are poor. It is not known the degree to which this is true for child witnesses. To examine the hypothesis, we will analyze results using Confidence-Accuracy-Characteristic (CAC) curves for each age group and each condition (brief duration/long duration). CAC curves plot suspect identification accuracy as a function of confidence. We predict that for younger children high confidence will be associated with high accuracy for long durations but not short durations. Consistent with Wixted and Wells (2017), we predict that for older children and adults, high confidence will be associated with high accuracy, even for the short duration condition.

**Conclusions.** The research we will present will provide one of the most detailed studies to date of the confidence / accuracy relationship in child witnesses and will do so using very high realism virtual reality stimuli. The results will improve our understanding of meta-cognition in children and will also provide a better understanding of factors that influence the reliability of child witnesses.

**103**

## **The Lived Experiences of Singlehood among Always Single Filipino Women at Midlife**

Samantha Erika N. Mendez

University of the Philippines Diliman, Quezon City, Philippines

### **Abstract (max 500 words)**

This study explores how always single, middle-aged Filipino women experienced and made sense of their singlehood in a marriage-promoting socio-cultural context, like in the Philippines. Looking into this is relevant as the world has witnessed an increase in the number of single people in recent years. Using a semi-structured interview guide, seven always single Filipino women in their forties and fifties were interviewed, one-on-one, through audio and video calls in the latter half of 2022. Interpretative Phenomenological Analysis (IPA) was used as the qualitative framework to extract themes from the women's accounts. This presentation outlines the personal experiential themes of each participant, in keeping with the idiographic feature of IPA that highlights the individual voices and unique experiences of each participant albeit sharing the same larger sociocultural context of being middle-aged single women in the Philippines. Discussing each participant's personal experiential themes provides varied images of how singlehood is experienced in a context where marriage and family are highly promoted and even expected developmental milestones, particularly for women. Based on these, recommendations on how single women's development can be supported are also presented.

**104**

### **Families' trajectories in child protective services in Portugal: What is the influence of an evidence-based parenting program implementation?**

Rita Pinto<sup>1,2</sup>, Catarina Canário<sup>1,2</sup>, Orlanda Cruz<sup>1,2</sup>, Maria José Rodrigo<sup>3</sup>

<sup>1</sup>Faculty of Psychology and Education Sciences at the University of Porto, Porto, Portugal. <sup>2</sup>Center for Psychology at the University of Porto, Porto, Portugal. <sup>3</sup>Faculty of Psychology at the University of La Laguna, San Cristóbal de La Laguna, Spain

### **Abstract (max 500 words)**

Background: Every year, several families engage with Portuguese child protective services (CPS). The 2021 national CPS report indicates that 82% (24,571 out of 29,928) of the promotion and protection measures applied were referrals to parenting support in community services. Over the last decades, the Portuguese CPS framework has progressed towards a family preservation approach, working to support child development, assist parents in their role as caregivers, and avoid family breakdown. Research highlights the benefits of Evidence-Based Parenting Programs (EBPP) in addressing child behavior problems, improving parenting practices, and reducing child maltreatment. However, empirical studies on the real-world implementation of EBPP are limited and have never been carried out addressing families engaged with Portuguese CPS.

Objectives of the study: The study aims to examine how receiving the Standard Triple P (STP) parenting program influenced the families' trajectories within CPS; and to analyze whether this effect varied depending on the implementation characteristics. Specifically, this study intends to answer the following

research questions: 1) Does receiving the STP enhances positive outcomes in the family's trajectory, preventing new/additional referrals to CPS? 2) Which characteristics of STP implementation are associated with favorable family trajectories?

**Methodology:** This study presents the results of 30 implementations of STP delivered to parents of 6-to-12-years-old children at-risk for placement/re-entry in out-of-home care and implemented by trained professionals working in CPS in Portugal. STP is an individual intervention based on cognitive-behavioral and self-regulatory frameworks, delivered in 10 weekly sessions. Participants include 30 parents that completed the STP intervention and 10 practitioners that implemented it. We performed qualitative document analysis to characterize each family's trajectory over time in their contact with CPS since the first referral, such as the number/reasons for referrals and applied measures. Following such characterization, we assessed the referral process status and the family's preservation status immediately after the intervention 3, 6, and 9 months following the intervention. We performed nonparametric analysis of longitudinal data and logistic regression analysis to answer the research questions mentioned above. The implementation characteristics examined include practitioners' implementation fidelity and adaptations, which we assessed using the STP Summary Checklists. Practitioners completed these checklists after each session of STP implementation.

**Results:** The results are based on quantitative and qualitative measures. With this study, we will assess possible improvements along the trajectory of families engaged with CPS, identifying which characteristics of STP implementation are associated with favorable family trajectories and analyzing to what extent STP can be a resource to promote family preservation.

**Conclusion:** Although the Triple P system's interventions are among the most widely disseminated EBPP with proven effectiveness in preventing child maltreatment, as far as we know, this is the first time a Triple P intervention has been used to analyze the family's trajectory in CPS. This study's findings will strengthen evidence-based practice in CPS, with the ultimate goal of avoiding families' prolonged trajectory in social services and children's out-of-home placement.

**105**

## **ENGAGEMENT BETWEEN CHILDREN WITH ASD AND HUMANOID ROBOTS: IMPLICATIONS FOR INTERVENTION**

CHRISTINA PAPAELIOU<sup>1</sup>, DAFNI ANAGNOSTOPOULOU<sup>2</sup>, NIKI EFTHYMIIOU<sup>2</sup>, PETROS MARAGOS<sup>2</sup>

<sup>1</sup>UNIVERSITY OF WEST ATTICA, ATHENS, Greece. <sup>2</sup>NATIONAL TECHNICAL UNIVERSITY OF ATHENS, ATHENS, Greece

### **Abstract (max 500 words)**

**Objectives:** Two studies were carried out with the following objectives: (1) to estimate the engagement level for children with ASD interacting with humanoid robots (Study 1), and (2) to define and apply child-robot interaction scenarios for developing specific socio-affective and collaboration skills in children with ASD (Study 2).

## Study 1

**Methodology:** Participants were 10 children with ASD (mean chronological age: 10.6 years) and 10 typically developing (TD) children (mean chronological age: 8.6 years). Child-human and child-robot interactions were observed during 4 games i.e., (a) Show me the Gesture, (b) Express Feeling, (c) Pantomime, (d) Guess the Object, and a Joint Attention setting. Three levels of engagement were identified: 1) disengaged, 2) converging interest, 3) collaboration. Data were annotated according to visual and acoustic flow cues corresponding to each engagement level. Annotated data were then used to design a Deep Convolutional Neural Network (DCNN). The DCNN received as input 6-second clips that estimated engagement.

**Results:** Children with ASD spent twice as long time disengaged in the child-human compared to the child-robot condition. Moreover, in the child-robot condition children with ASD spent twice as long time disengaged compared to TD children. On the other hand, children with ASD collaborated with a robot twice as long time compared to TD children. However, the ASD group spent the same amount of time collaborating in the child-robot and the child-human condition. DCNN managed to estimate engagement in children with ASD to a large extent, although the metrics values were not as high as for the TD children.

**Conclusion:** In structured situations children with ASD may be less disengaged and more collaborative, although quality of engagement is still poorer compared to TD children.

## Study 2

**Methodology:** In the intervention study participated 6 children assigned in 3 levels of severity according to ADOS: high, moderate, and mild. Data were collected during 16 intervention sessions (2 sessions per week) taking place in a quiet room at school. Children played two games with Zeno robot: Sums Game: Zeno asks child to help him learn how to add up to number four. Emotions Game: Zeno asks child to express happiness, sadness, or fear. In both games, Zeno prompts in three levels i.e., from more concrete to more abstract. Five levels of child's response were defined: avoidance, response to concrete orders, response to concrete orders with acknowledgement, response to abstract orders, response to abstract orders with praise/comforting.

**Results:** Children with severe ASD symptoms were avoidant at the beginning of the study and managed to respond to abstract orders with acknowledgement at the end. Children with moderate and mild symptoms of ASD initially could respond to concrete orders with acknowledgement. At the end of the study children with moderate symptoms could respond to abstract orders, while children with mild symptoms could respond to abstract orders while praising or comforting the robot.

**Conclusion:** Structured interaction situations with humanoid robots may help ASD children with different levels of severity to improve their social and collaborative skills.

106

## MODELING SOCIAL ENGAGEMENT: A NOVEL APPROACH FOR EARLY DETECTION OF AUTISM SPECTRUM DISORDER

CHRISTINA PAPAELIOU<sup>1</sup>, ALEXANDROS POTAMIANOS<sup>2</sup>

<sup>1</sup>UNIVERSITY OF WEST ATTICA, ATHENS, Greece. <sup>2</sup>NATIONAL TECHNICAL UNIVERSITY OF ATHENS, GREECE, Greece

### Abstract (max 500 words)

**Objective:** Disturbances in the ability for social engagement is a core feature of Autism Spectrum Disorder (ASD) manifested early in life. The purpose of the present study is to construct a model of social engagement based on dynamic audio-visual and linguistic cues that will be utilized for early detection of ASD.

**Methodology:** Participants were 10 children with ASD (mean chronological age 54.1 months) and 10 typically developing (TD) toddlers (mean chronological age 17.1 months). All children were at the single-word stage and were matched for visuospatial, fine motor, and linguistic abilities. Four 30-minute video recordings were carried out during a month in a structured naturalistic setting. Microanalysis consisted in noting the onset and offset of each manifested behavior (gaze, vocal/verbal, gestures, actions to other or objects) for both partners. Specific temporal and acoustic features were also extracted. The type of ongoing interaction was defined as solitary, interpersonal, converging interest or collaborative. These multimodal data were used for training a Support Vector Machine (SVM) classifier. For the experimental procedure a leave-one-child out scheme was adopted, i.e., testing over the data that refer to one child, while training was performed using the data dealing with the rest of the children. As fusion the concatenation of the different feature sets was used. The unweighted average classification accuracy (UA) and the unweighted average recall (UR) were used as evaluation metrics. Detection was considered as a binary classification problem, i.e., engaged vs. non-engaged. To evaluate human perception of child engagement, two annotators were asked to detect in a subset of the data set whether the child was engaged or not (i.e., binary decision) by (1) only hearing the parent's utterance (audio only), and (2) only watching the parent's movements (video only).

**Results:** The best results are achieved when fusing all feature types (UR: 0.57 and 0.64, UA: 53.9% and 63.3% for ASD and TD children, respectively). Regarding individual feature types, the highest performance was observed for the action-related features (UR: 0.59 and 0.62, UA: 53.0% and 61.4% for ASD and TD children, respectively). The linguistic features extracted from the parent's transcribed utterances also achieved good performance (UR: 0.51 and 0.55 for ASD and TD, respectively). In contrast to the initial hypothesis, maternal prosody was not a discriminative feature for the two engagement classes. However, manual data inspection revealed that mothers of children with ASD used significantly more imperatives and repetitions, they produced approximately 1.6 words per second compared to 2.2 words per second produced by mothers of TD children, while their vocabulary was smaller. Annotators' data indicated that the agreement for the audio-based detection is poor, but video-based detection can be regarded as fair.

Conclusion: Engagement detection is less accurate for children with ASD than for TD children. However, video-related, and lexical features from the parent's transcribed utterances may reliably distinguish engagement from non-engagement states in young children with ASD. Implementation of computational models in early detection of ASD is proposed.

108

## Family Experienced Bereavement and Early Adulthood Mental Health: The Role of Modifiable Parental Factors.

Layla Rashid

University of Oxford, Oxford, United Kingdom

### Abstract (max 500 words)

**Background:** It is estimated that 78% of children will experience the death of a close friend or family member by 16 years of age (The Childhood Bereavement Network, 2022), yet research examining the long-term mental health outcomes of bereavement is scarce. We conducted a longitudinal investigation of the association between family experienced bereavement before the age of 11 years and depressive and anxiety disorders at age 18 and examined moderation of this association by modifiable parental factors.

**Methods:** We analysed data from the Avon Longitudinal Study of Parents and Children, a UK-based birth cohort, including 9088 child participants with data available on bereavement. Bereavement was measured via maternal report at eight timepoints until children were 11 years. Child depressive and anxiety disorders were assessed at 18 years old using the Clinical Interview Schedule-Revised (CIS-R). Moderators were maternal anxiety, maternal depression, parental monitoring, positive parenting, and negative parenting practices.

**Results:** Family experienced bereavement was not significantly associated with clinical levels of depression and anxiety and related disorders in early adulthood. In addition, no support was found for negative parenting practices, parental monitoring, or maternal anxiety and depression in moderating the relationship between family experienced bereavement and clinical levels of mental health problems in early adulthood. There was only partial support for a moderating role of positive parenting practices; children who experienced bereavement were less likely to show later mental health problems when higher levels of positive parenting were observed.

**Conclusions:** We found no evidence that family experienced bereavement during childhood increases risk for psychiatric disorders in early adulthood. Although findings highlight that children who experienced bereavement were less likely to show later mental health problems when higher levels of positive parenting were observed, this finding was not robust and warrants further research. The findings have potential implications for researchers and other sectors relevant to promoting children's mental health.

129

## **The Mediating Role of Need Fulfillment and Fear of Missing Out in the Relationship Between Emotion Dysregulation and Problematic Use of Social Media**

Daniilo Calaresi<sup>1</sup>, Valeria Saladino<sup>2</sup>, Marco Cannavò<sup>1</sup>, Nadia Barberis<sup>1</sup>, Valeria Verrastro<sup>1</sup>

<sup>1</sup>Magna Græcia University of Catanzaro, Catanzaro, Italy. <sup>2</sup>University of Cassino and Southern Lazio, Frosinone, Italy

### **Abstract (max 500 words)**

**Objective:** Problematic social media use (PSMU) has become a major issue nowadays. Literature has shown significant relationships between need fulfillment, emotion dysregulation, fear of missing out (FoMO) and PSMU, though their roles in such relationships are not clear yet. Drawing on self-determination theory (SDT), this study tested a mediation model in young adults in which need fulfillment and FoMO mediate the relationship between emotion dysregulation and PSMU.

**Method:** The model was tested via structural equation modeling (SEM) in a sample comprising 1215 individuals aged between 18 and 35 years ( $M = 27.83$ ;  $SD = 5.31$ ). Participants took part in an online survey which included self-report measures to assess emotion dysregulation, need fulfillment, FoMO, and PSMU.

**Results:** The findings highlighted negative associations between emotion dysregulation and need fulfillment, between need fulfillment and FoMO, and between need fulfillment and PSMU. In addition, positive relationships were underlined between emotion dysregulation and FoMO, between emotion dysregulation and PSMU, and between FoMO and PSMU. Furthermore, indirect links were found through need fulfillment, between emotion dysregulation and FoMO, and between emotion dysregulation and PSMU. Finally, there were indirect relationships through FoMO, between emotion dysregulation and PSMU, and between need fulfillment and PSMU.

**Conclusion:** The results offer evidence in favor of a new SDT-based model that might aid in understanding the connection between emotion dysregulation, need satisfaction, FOMO, and PSMU. Specifically, to deal with PSMU issues, it may be helpful to develop preventive interventions for use in family and educational contexts, as well as programs that concentrate on the management of emotions associated with PSMU.

130

## **DISRUPTION OF EARLY INTERACTIONS IN MOTHER-INFANT DYADS WITH ADHD SYMPTOMS AS A POSSIBLE CAUSE OF DEVELOPMENTAL LANGUAGE DISORDER**

ELENI - MICHALITSA KARAGIANNI<sup>1</sup>, CHRISTINA PAPAELIOU<sup>2</sup>

<sup>1</sup>UNIVERSITY OF THE AEGEAN, RHODES, Greece. <sup>2</sup>UNIVERSITY OF WEST ATTICA, ATHENS, Greece

### **Abstract (max 500 words)**

**Objective:** It is now well documented that language development depends highly on prelinguistic interactions between infants and their caregivers. Neurodevelopmental disorders such as Attention Deficit Hyperactivity Disorder (ADHD) may disturb early interactions and consequently affect seriously language development leading to the manifestation of Developmental Language Disorder (DLD). The present longitudinal study examined timing features and type of interaction between infant boys and their mothers with ADHD symptoms, and their relation to language development at preschool age. High heritability of ADHD places infants whose mothers manifest symptoms of the disorder in a high-risk group.

**Methodology:** Ten infants and their mothers with ADHD symptoms and 10 control dyads were recruited from local maternity clinics a couple of weeks before delivery. All participants came from middle-class Greek-speaking families. Mothers were assigned in two groups, the ADHD group, and the control group, according to the results in the Adult ADHD Self-Report Scale Symptom Checklist (ASRS-V1.1) and the Diagnostic Interview for ADHD in Adults (DIVA). None of the mothers had a previous clinical diagnosis. Dyads were video recorded at home during free play interactions when infants were 2-, 4-, 6-, and 9 months old for 10, 15, 20 and 30 minutes respectively. Microanalysis of the video recordings was carried out to assess synchronization, turn-taking, and type of interaction. Infants' temperament was also assessed. Synchronization is defined as the time frame in which mother and infant are involved in the same activity. It begins when both partners take over the same activity and terminates when one partner stops acting on this theme. When children were at the kindergarten (mean chronological age: 4.7 years), language development was assessed with the Diagnostic Test of Verbal Intelligence and ADHD symptoms were assessed with Child Behavior Checklist (1.5-5).

**Results:** ADHD dyads showed significantly shorter synchronization at 2 and 6 months as well as significantly shorter duration of Joint Attention at 9 months. Group differences in synchronization at 4 and 9 months were marginally significant. At preschool age no significant group differences were observed in the Attention Problems subscale of the CBCL. However, children in the ADHD group scored significantly lower in vocabulary production and grammar comprehension and production compared to the control group. Vocabulary development was significantly predicted from synchronization at 2 and 6 months and joint attention at 9 months, grammar production was predicted from synchronization at 2 and 6 months, and grammar comprehension was predicted from synchronization at 2 months and joint attention at 9 months.

**Conclusion:** These data indicate that ADHD symptoms may affect interactional synchrony between mothers and their infants. In turn, disturbances in early interactional synchrony may predict deficits in vocabulary and grammar development during preschool years. The present study may have important clinical implications for early diagnosis and intervention of ADHD as well as secondary prevention of accompanying problems such as DLD.



131

## **The longitudinal relation between anxiety symptoms and academic achievement. The explanatory role of scholastic competence**

Cornelia Măirean<sup>1</sup>, Ines Țucă<sup>1</sup>, Alexandra Zancu<sup>1</sup>, Loredana Diaconu-Gherasim<sup>1</sup>, Laura Brumariu<sup>2</sup>

<sup>1</sup>Alexandru Ioan Cuza University of Iasi, Iasi, Romania. <sup>2</sup>Adelphi University, Derner School of Psychology, New York, USA

### **Abstract (max 500 words)**

The transition to middle school can be complex and difficult for students, due to the multiple changes that students have to manage (Engels et al., 2019; Strand, 2019). It may impact students' academic achievement after the transition (Evans et al., 2018). Among the predictors of academic performance, previous studies highlighted the role of personal factors, such as emotional states (e.g., joy, hope, anxiety) and cognitions about personal abilities (e.g., Du et al., 2021). This study aims to analyze the longitudinal relationship of the children's anxiety symptoms assessed before the transition to middle school, 4th grade, with their scholastic competence at the beginning of the transition, the first semester of 5th grade, and academic achievement measured during transition, the second semester of 5th grade. We also examined whether scholastic competence might mediate the longitudinal relation between anxiety symptoms and academic achievement, in the context of children's transition from elementary to middle school. Three hundred-twenty children completed questionnaires assessing a) their anxiety symptoms at the end of primary school (the second semester of the 4th grade, Time 1); b) academic competence at the beginning of middle school (the first semester of the 5th grade, Time 2) the end of the first year in middle school (the second semester of the 5th grade, Time 3). The results showed that children's anxiety symptoms at Time 1 were negatively related to scholastic competence six months later, at Time 2, and not significantly related to academic performance, one year later, at Time 3. Further, scholastic competence was positively related to academic performance at Time 3. Finally, scholastic competence mediated the longitudinal relation between anxiety symptoms (Time 1) and academic performance (Time 3). High levels of children's pre-transition anxiety symptoms were related to low levels of scholastic competence after transition to middle school, which was related to higher academic achievement at the end of the first year of middle school. These results suggest that interventions for helping students perform well are of much help and can be done on two different levels. First of all, as pretransition anxiety (in the 4th grade) was related to low levels of scholastic competence over time (in the 5th grade), it is important for students to be helped to find ways of reducing anxiety before the end of primary school. Secondly, as academic competence predicts achievement over time, children with low perceived academic competence can be helped by implementing interventions with the purpose of growing their perceived competence.

133

## **Educational Plans in Primary and Lower Secondary School Predicting Engagement in and Completion of Upper Secondary Education**

Kati Vasalampi, Noona Kiuru

University of Jyväskylä, Jyväskylä, Finland

### **Abstract (max 500 words)**

Attaining upper secondary education is a prerequisite for both accessing higher education and being able to enter the labour market. This longitudinal study investigated, first, to what extent adolescents' educational plans in primary and lower secondary school predict their engagement in upper secondary education studies (in terms of satisfaction with a study place, persistence in studying, intentions to drop out of school, and absence from school). Second, the study examined, to what extent these aspects predict the completion of upper secondary education studies in normative time (3.5 years).

The sample consisted of approximately 650 adolescents, who were surveyed five times across the school career: (1) in the sixth grade (age 12), (2) in the seventh grade and (3) in the ninth grade of comprehensive school, (4) in the first year of upper secondary education (age 16), and (5) two and a half years after the second measurement point, when the participants should have completed upper secondary education studies (age 18-19).

Adolescents were asked at the end of primary school (sixth grade) and during lower secondary school (seventh and ninth grade) to rate how clear plans they have for further education after comprehensive school. During upper secondary education studies, they were asked to rate how satisfied they are with their current study place, how persistent they are in studying, how often they have thoughts or intention to drop out of school, and how often they have been absent from school because of low motivation or truancy. Information concerning the completion of upper secondary education was achieved by school registers.

The preliminary results of regression analyses showed that the clearer educational plans adolescents had in seventh and ninth grade, the more satisfied they were with their study place and the less they reported intention to drop out during the first year of upper secondary education studies. After controlling for persistence in studying in comprehensive school, clearer educational plans in ninth grade predicted higher persistence and fewer absences in upper secondary education studies. Moreover, satisfaction with a study place and low intention to drop out or absence from school predicted the completion of upper secondary education in normative time.

Findings emphasize the importance of student guidance during comprehensive school years concerning different educational tracks and occupations. The clearer plans adolescents had for their further education, the more likely they were satisfied and persistent in their upper secondary education studies. Moreover, in order to prevent the non-completion of upper secondary education, attention should be paid to the students' satisfaction, intention to drop out, and absences already at the beginning of upper secondary education studies. Particularly those, who have intention to drop out or absences from school are at high risk to actual drop out.

135

## **Appearance pressures, weight bias and social functioning in early adolescents. A moderated mediation model**

Simona-Alexandra Zancu, Loredana R. Diaconu-Gherasim

Alexandru Ioan Cuza University, Iasi, Romania

### **Abstract (max 500 words)**

**Objective of the study:** The experience of appearance pressures and weight stigma is increasingly common in early adolescence, and has negative and lasting implications for socio-emotional functioning and peer relationships. Further, these stigmatizing experiences may also lead to development of weight bias internalization, that could explain these adverse effects on adolescents' social functioning. The present study aims to examine the relations among peers' appearance pressures, weight stigma and social functioning on a sample of early adolescents. We also explored the mediating role of internalized weight bias on the relations of peer pressures and weight stigma and early adolescents' social functioning. Finally, we examined whether these relations are moderated by children's body esteem.

**Methodology:** The study was conducted on a sample of 400 sixth grade children (56% girls), aged between 11-14 years old, recruited from urban middle schools from Romania. Children completed measures assessing appearance pressure from peers (SATAQ-4, Schaefer et al., 2016), perceived weight stigma (POTS, Thompson et al., 1995), internalized weight bias (WBIS-C, Zuba & Waschburger, 2018), body esteem (BES, Mendelson et al., 1996) and social functioning (i.e., loneliness and peer acceptance, Asher & Wheeler, 1985).

**Results:** Results indicated that early adolescents' reports of appearance pressures from peers and perceived weight stigma were positively related with their self-reported loneliness, and negatively related with their peer-acceptance sociometric score. Further, internalized weight bias mediated these relations; appearance pressures and stigmatizing experiences were positively related with internalization of weight bias, which further was positively related with self-reported loneliness and negatively related with peer-acceptance. Furthermore, these mediating paths were stronger for adolescent with lower body esteem, indicating a moderating effect.

**Conclusion:** The findings highlight the negative effects of appearance pressures and weight stigmatizing experiences on the relationships with peers during early adolescence, a critical stage for the socio-emotional development. The results enhance the understanding of the psychological mechanisms that may explain these effects during this developmental stage (i.e., weight bias internalization), as potential targets for intervention in order to prevent long-lasting problems. Finally, the findings may help identify vulnerable subgroups to social isolation due to weight bias, pointing to the areas in most need to focus prevention efforts on.

136

## Cognitive Profiles in Children and Adolescents with Mild Intellectual Disability

Urszula Sajewicz-Radtke<sup>1</sup>, Ariadna Łada-Maśko<sup>2</sup>, Bartosz Radtke<sup>1</sup>, Paweł Jurek<sup>2</sup>, Katarzyna Krempla-Patron<sup>3</sup>, Małgorzata Lipowska<sup>2</sup>, Rafał Nowicki<sup>1</sup>

<sup>1</sup>Laboratory of Psychological and Pedagogical Tests, Gdańsk, Poland. <sup>2</sup>University of Gdańsk, Gdańsk, Poland. <sup>3</sup>Neurologopedic Therapy Center, Gdańsk, Poland

### Abstract (max 500 words)

Mild Intellectual Disability (MID) is a neurodevelopmental disorder that begins in childhood and is characterized by limitations in intellectual functioning (IQ = 55–69) and adaptive behavior that manifests in everyday living. Clinical practice shows that the population of children with MID has heterogeneous deficits in cognitive functioning. Thus, the aim of this study was to identify groups of homogenous cognitive profiles within a heterogeneous population of students with MID. The cognitive profiles of 16 411 participants with MID were examined with Stanford–Binet Intelligence Scales–Fifth Edition, during individual assessment. Prior to the assessment, participants were divided into three age groups: 1) 7;00–9;11, 2) 10;00–14;11, and 3) 15;00–18;11 years old. Three distinct cognitive profiles (clusters) were identified in each age group, using cluster analysis. Results of our study indicates that these clusters differed from each other within and between each age group. Our research is, to our knowledge, the first to use SB5 to identify both strengths and weaknesses in cognition in a large sample of students with MID. Distinguishing cognitive profiles among children and adolescents with MID proved to be important both in the context of diagnosis as well as the development of research-based interventions for these students.

138

## Do adverse childhood experiences cluster together and how are they related to psychopathology?

Athena Chow<sup>1</sup>, Jessie Baldwin<sup>2,3</sup>, Lucy Bowes<sup>1,4</sup>

<sup>1</sup>University of Oxford, Oxford, United Kingdom. <sup>2</sup>University College London, London, United Kingdom. <sup>3</sup>King's College London, London, United Kingdom. <sup>4</sup>University of Turku, Turku, Finland

### Abstract (max 500 words)

Adverse childhood experiences (ACEs) consistently predict psychopathology and health problems; however, there is not yet a consensus on the best way to conceptualise ACEs. The recent dimensional model established a framework for measuring ACEs along dimensions of threat and deprivation, in an effort to identify the mechanisms through which ACEs increase psychopathology risk. However, evidence supporting the dimensional model has been mostly limited to small cross-sectional samples,

found inconsistent dimensions across studies, and excluded peer victimisation as an adversity. To address these research gaps, we aimed to test (1) if there are meaningful dimensions of ACEs (e.g., threat and deprivation), and (2) if specific dimensions of ACEs are differentially associated with later psychopathology outcomes in adolescence.

We analysed data from the Millennium Cohort Study (complete cases  $N = 6,593$ , imputed up to  $N = 18,539$ ), a representative birth cohort of British children born in 2000-2002 across the UK. ACEs were measured prospectively across a 14-year period from infancy to mid-adolescence. Exploratory factor analysis revealed three latent dimensions: deprivation, victimisation, and parental threat. In a structural equation model, all three dimensions were directly associated with adolescent psychopathology at age 17, and victimisation was more strongly associated with psychopathology compared to deprivation and parental threat. Findings provide partial support for the dimensional model of threat and deprivation, with further research needed to test if the same dimensions will replicate in other birth cohorts.

140

## “Silent voices” in COVID-19: Students’ experiences of wellbeing, learning, and social relationships

Marja-Kristiina Lerkkanen<sup>1</sup>, Venla Panula<sup>1,2</sup>, Noona Kiuru<sup>1</sup>, Sanni Pöysä<sup>1</sup>, Niina Junntila<sup>2,1</sup>, Matilda Sorkkila<sup>1</sup>, Eija Pakarinen<sup>1</sup>

<sup>1</sup>University of Jyväskylä, Jyväskylä, Finland. <sup>2</sup>University of Turku, Turku, Finland

### Abstract (max 500 words)

The COVID-19 pandemic and related distance learning may have compromised learning and well-being of children and youth. The present study aimed to receive increased understanding on students’ own experiences of well-being, learning, and social relationships during the COVID-19 pandemic. The study examined what kind of groups of students could be identified based on their experiences of well-being, learning, and social relationships during the COVID-19 pandemic (RQ1). In addition, the aim was to examine the extent of which do the identified clusters differ in terms of students’ background factors and self-reported mood, loneliness, study burnout, and resilience (RQ2). The data was collected via online questionnaires from 443 students (71% female; 14% male; Mage = 17 years) living in Finland in spring 2022. The questionnaires included structured and open-ended questions. First, cluster analysis was conducted. Second, the analysis of variance (ANOVA) was run to determine differences of the clusters in terms of background factors and other self-ratings. As a final step, students’ answers in open-ended questions in each cluster were analyzed to validate the results of cluster analysis. Based on cluster analysis, six clusters were identified: 1) students with increased well-being and eased learning (5%); 2) students with no big changes in well-being, learning, and loneliness (30%); 3) students with decreased well-being, increased loneliness, and more difficulties in learning (42%); 4) students with decreased well-being and more difficulties learning, but no big change in loneliness (13%); 5) students with decreased well-being and increased loneliness but no big change in learning (7%), and 6) students with decreased loneliness (3%). The clusters differed from each other in a meaningful way in terms of self-rated loneliness, study burnout, and resilience. Students’ answers to open-ended questions

provided more insights into their experiences and validated the quantitative results. The findings indicated diversity in ways how students experienced the COVID-19 pandemic and related distance learning. The further analyses were conducted to examine the extent to which the clusters would differ with respect to students' reports of background factors, mood, loneliness, study burnout, and resilience. In addition, students' answers to open-ended questions were analyzed in each cluster. The findings provided important knowledge concerning how students experienced the COVID-19 pandemic and related distance learning. These experiences are important to consider in any attempts to renew education and to tackle the future crises in society.

**143**

## **The Effect of Co-rumination on the Association between Best Friend Support and Adolescent Emotional Distress**

steffie van der Mey-Baijens<sup>1,2,3</sup>, Patricia Vuijk<sup>2</sup>, Kim Bul<sup>4</sup>, Pol van Lier<sup>1</sup>, Marit Sijbrandij<sup>1,3</sup>, Athanasios Maras<sup>5</sup>, Marieke Buil<sup>1,3</sup>

<sup>1</sup>Vrije Universiteit Amsterdam, Amsterdam, Netherlands. <sup>2</sup>Research Centre Urban Talent, Rotterdam University of Applied Sciences, Rotterdam, Netherlands. <sup>3</sup>Amsterdam Public Health Research Institute – Mental Health, Amsterdam, Netherlands. <sup>4</sup>Institute for Health and Wellbeing, Centre for Intelligent Healthcare, Coventry University, Coventry, United Kingdom. <sup>5</sup>ARQ Nationaal Psychotrauma Centrum, Diemen, Netherlands

### **Abstract (max 500 words)**

The transition late childhood to early adolescence is a challenging period in which adolescents increasingly seek support from each other. Disclosing personal thoughts and feelings often relieves personal distress and alleviates feelings of depression and anxiety, but when conversations are characterized by an excessive focus on problems and negative feelings, adolescent best friends may be engaging in a communication style called co-rumination (Rose, 2002; Rose et al., 2014; Rose et al., 2016). The continued focus on negative affect is assumed to weaken adolescents' problem-solving abilities and reduce the positive effect of peer social support (Nolen-Hoeksema et al., 2008; Rose, 2002). Although as of yet not empirically investigated, some studies suggest that co-rumination may weaken the positive effects of social support in adolescent friendships, or may even lead to negative outcomes (Miller et al., 2020; Rose, 2002; Rose et al., 2007).

This study aimed to test the associations of best friend support with the continuation of adolescent symptoms of anxiety, depression, and perceived stress (i.e. emotional distress) from primary to secondary education for high versus low co-ruminating adolescents.

A final sample of 187 adolescents (52.9% girls) with a mean age of 13 years old in the first grade of secondary school ( $SD = 0.72$ ) was included in our sample. Self-reported emotional distress was assessed among adolescents on two occasions: in the last grade of primary education and the first grade of secondary education using the Revised-Child Anxiety and Depression Scale and the Maastricht University

Stress Instrument for Children. Self-reported best friend support and co-rumination were assessed in the first grade of secondary education using the Network of Relationships Inventory and an abbreviated version of the Co-Rumination Questionnaire. Data were analyzed using a path analysis model in Mplus version 8.0.

Results indicated that when adolescents engage in low to medium levels of co-rumination with their best friends, support from this friend decreased subsequent symptoms of depression (Figure 1a) and perceived stress (Figure 1b). When co-rumination levels were relatively high, best friend support significantly diminishes subsequent symptoms of depression (Figure 1a) and perceived stress (Figure 1b). There was no interaction effect of co-rumination on the association between support and anxiety symptoms.

Although our study shows that venting emotions to friends can indeed be helpful, it is recommended that prevention and treatment programs targeting adolescent mental health should consider the potential negative effects of co-rumination. Programs might help to reduce adolescent emotional distress by learning adolescents to recognize when they are heavily co-ruminating and how to alter this into adaptive and healthy support, especially since adolescents themselves indicate a preference for informal help from friends, thereby possibly increasing the effectiveness of peer support in reducing adolescent emotional distress (Singh et al., 2019).

**148**

## **ASSOCIATION BETWEEN ATTENTION DEFICIT HYPERACTIVITY DISORDER AND DEVELOPMENTAL LANGUAGE DISORDER: DATA FROM MONOLINGUAL AND BILINGUAL CHILDREN**

MARIA TSINTAVI<sup>1</sup>, CHRISTINA PAPAILIOU<sup>2</sup>, KATERINA MANIADAKI<sup>2</sup>

<sup>1</sup>UNIVERSITY OF THE AEGEAN, RHODES, Greece. <sup>2</sup>UNIVERSITY OF WEST ATTICA, ATHENS, Greece

### **Abstract (max 500 words)**

**Objective:** It is now admitted that Developmental Language Disorder (DLD) can co-occur with other neurodevelopmental disorders. Indeed, children with DLD, especially clinical samples, show elevated rates of Attention Deficit Hyperactivity Disorder (ADHD), while both disorders are characterized by deficits in executive functions. Although, executive functions may be positively affected by bilingualism, they are not differently associated with DLD in monolingual and bilingual children. The present study aims to investigate possible associations between DLD and ADHD by examining executive functions in monolingual and bilingual children with DLD compared to typically developing (TD) children.

**Method:** In this study participated 4 groups including 10 children each (chronological age range: 8 to 11;2 years): (a) Monolingual typically developing Greek-speaking children (MTD), (b) Successive bilingual typically developing children (BTD), (c) Monolingual Greek-speaking children diagnosed with DLD (MDLD), and (d) Successive bilingual children diagnosed with DLD (BDLD). All bilingual children began

acquiring Greek around the age of 4 years. Intellectual ability was assessed with the WISC-III and verbal intelligence with the Diagnostic Test of Verbal Intelligence. 'Cold' and 'hot' executive functions were assessed using standardized tests. 'Cold' executive functions included sustained attention, verbal fluency, design fluency, verbal inhibition, motor inhibition, and planning. 'Hot' executive functions included delay gratification and emotion regulation. Child Behavior Checklist (CBCL 6-18) was also completed by parents to detect ADHD symptoms, as measured by the Attention Problems subscale. Each child was assessed at home in three different visits during a month.

Results: Both monolingual and bilingual children with DLD scored significantly lower than both monolingual and bilingual TD children in all measures of executive function i.e., sustained attention, verbal fluency, design fluency, verbal inhibition, motor inhibition, planning, delay gratification and emotion regulation. On the other hand, no significant differences were observed either between monolingual and bilingual children with DLD or between monolingual and bilingual TD children. Moreover, it was shown that both monolingual and bilingual children with DLD obtained significantly higher score in the Attention Problems subscale of the CBCL compared to both TD groups, although none of the participants fell in the clinical range. Although, Attention Problems were significantly negatively correlated with all measures of executive functions, they were best predicted by verbal fluency, verbal inhibition, and emotion control.

Discussion: The present study did not confirm a bilingual advantage in executive functions. Rather, both monolingual and bilingual children with DLD showed deficits in executive functions compared to TD children which also predicted increased symptoms of ADHD. Discussion focuses on the hypothesis supported by the present data that ADHD may be a causal factor of DLD. Implications for intervention are also examined.

**153**

## **The Effect of Relationship Status on Conflicts and Relationship Satisfaction in Romantic Relationships: The Mediating Role of Perceived Partner Responsiveness**

Gözde Gürler, Duygu Taşfiliz

Altınbaş University, İstanbul, Turkey

### **Abstract (max 500 words)**

Romantic relationships, especially in late adolescence and young adulthood, gain great importance compared to other close relationships and contribute to the development of individuals. Based on the idea that development continues throughout life and that romantic relationships are a major part of the life of individuals, it is thought that the investigation of romantic relationships is necessary for the improvement and development of human life. Studies conducted in the context of conflicts in romantic relationships have shown that the individual's ability to cope with current distress in conflicts has a great impact on relationship dynamics and continuity. When the relevant literature is examined, it is seen that



the relationship between relationship status and human health and well-being is generally investigated in studies dealing with relationship status. Unlike previous studies, the current study will focus on the relationship of relationship status with both the frequency of conflicts in romantic relationships and conflict resolution methods, as well as relationship satisfaction. The present study aims to investigate the relationship between relationship status and frequency of conflicts in romantic relationships, conflict management responses, and relationship satisfaction. In addition, the moderator role of perceived partner responsiveness and insensitivity will be tested in those relationships. A cross-sectional design is used. Data will be collected through online surveys which include Responses to Dissatisfaction in Close Relationships-Accommodation Instrument (Rusbult et. al., 1991), Perceived Responsiveness and Insensitivity Scale (Reis et. al., 2021), and Perceived Relationship Quality Components Inventory (Fletcher et. al., 2000). The data collection process continues actively, and results will be available by May 2023. It is expected that perceived partner responsiveness and insensitivity will moderate the relationship between relationship status and conflicts as well as relationship satisfaction. It is thought that the relationship status, processes, and outcomes studied examined within the scope of the study will be a guide in determining the groups at risk and organizing trainings for healthy conflict management.

158

## **Narrative abilities of Mandarin-speaking children with and without developmental language disorder: An investigation of task and material effects**

Wen Hui Sah<sup>1</sup>, Pao Chuan Torng<sup>2</sup>

<sup>1</sup>National Chengchi University, Taipei, Taiwan. <sup>2</sup>National Taipei University of Nursing and Health Sciences, Taipei, Taiwan

### **Abstract (max 500 words)**

A number of studies have characterized oral narratives of children with developmental language disorder (DLD) as containing fewer story-grammar (SG) elements, or less diverse vocabulary, in comparison with those of typically-developing (TD) peers. However, observations regarding the DLD children's narrative abilities have not always been consistent. The contradictory findings might stem from differences in elicitation tasks across studies (Duinmeijer, de Jong, & Scheper, 2012). In addition, the inconsistencies might presumably relate to differences in elicitation materials used for assessments. In light of these, the present study investigated the impacts of both elicitation tasks and materials on narrative performance of children with and without DLD. As there might be differences between narrative tasks in demands on working memory, we also looked at the relationship among verbal working memory, elicitation tasks, and narrative performance of each group of children.

Nine Mandarin-speaking school-aged children with DLD (*Mage*:7.35) and nine age-matched TD children (*Mage*: 7.4) were recruited. To examine the effect of elicitation materials, stories of two complexity levels (simple and complex levels) were used. Each level comprises two stories comparable in terms of length, number of pictures, and number of episodes. For the simple level, pictures from the Edmonton Narrative Norms Instrument (Schneider, Hayward, & Dubé, 2006) were used as elicitation

materials. For the complex level, we used two stories adapted from *Frog, where are you?* (Mayer, 1969) and *One frog too many* (Mayer & Mayer, 1975), each containing 6 episodes and 22 pictures. To examine the task effect, a generation task and a retelling task that both employed simple and complex stories were used. The narratives were analyzed in terms of microstructure (i.e., story length, word variety, and syntactic complexity), and macrostructure (i.e., SG elements). A digit span task (WISC-IV; Chen & Chen, 2007) and a non-word repetition task were used to measure verbal working memory capacity.

The results revealed that children with and without DLD were comparable in microstructural measures; yet, the TD group outperformed the DLD group on macrostructure across tasks and materials. There were no significant task by material interactions, but significant main effects were observed for different aspects of narration. The task effect was evident that both groups employed more diverse vocabulary, and more SG elements in the retold stories as compared to the generated ones. Word variety and macrostructure were sensitive to the variations in both elicitation tasks and materials, whereas story length varied only with materials. Regarding syntactic complexity, there was a main task effect, which was manifested only in the TD group, but no main effect for material was found. Although DLD children were significantly worse than TD children in verbal working memory capacities, no correlations were found among verbal working memory, elicitation tasks, and individual narrative index. To conclude, our results suggest that macrostructure would be useful for identifying DLD children's difficulty in narration. The outcome advances our knowledge of narrative abilities of Mandarin-speaking children with DLD in Taiwan, and reveals the importance of selecting appropriate elicitation tasks and materials for clinical assessments.

162

## **Academic Competence as a Mediator of the Longitudinal Relation between Parental Psychological Control and Children's Worries after Transition to Middle School**

Ana-Maria Tepordei, Alexandra S. Zancu, Loredana R. Diaconu-Gherasim

Faculty of Psychology and Educational Sciences, Alexandru Ioan Cuza University of Iași, Iași, Romania

### **Abstract (max 500 words)**

The present study examined whether the perceived parental psychological control (dependency-oriented and achievement-oriented, respectively) reported by children before transition to middle school (in the second semester of their final year of primary school) is longitudinally associated with their post-transition worries (reported in the first semester of their first year of middle school). The mediating role of post-transition perceived academic competence in these relations was also explored, as well as the moderating role of physical transition (i.e., changing schools). Participants were 370 Romanian early adolescents, with 30% of them having changed schools. Path analysis showed the relation between children's perception of dependency-oriented psychological control and their post-transition worries was mediated by academic competence and moderated by physical transition. More specifically, children who perceive higher dependency-oriented parental control also report lower levels of academic self-confidence which consequently link to an increased level of worries in their first year of

middle school. The relations between perceived parental psychological control and post-transition worries were significant only in the case of physical transition. Educational, counselling and parenting implications are discussed.

164

## **Formal and informal support for adolescents following self-harm before and during the first COVID-19 lockdown: results from a large-scale English schools survey**

Rohan Borschmann<sup>1,2</sup>, Galit Geulayov<sup>3</sup>, Karen Mansfield<sup>3</sup>, Paul Moran<sup>4</sup>, Keith Hawton<sup>2</sup>, Mina Fazel<sup>2</sup>

<sup>1</sup>University of Melbourne (Centre for Mental Health), Melbourne, Australia. <sup>2</sup>University of Oxford (Department of Psychiatry), Oxford, United Kingdom. <sup>3</sup>University of Oxford, Oxford, United Kingdom.

<sup>4</sup>University of Bristol, Bristol, United Kingdom

### **Abstract (max 500 words)**

**Background:** Little is known about the perceived acceptability and usefulness of supports that adolescents have accessed following self-harm, especially since the onset of the COVID-19 pandemic. We aimed to examine the utilisation and acceptability of formal, informal, and online support accessed by adolescents following self-harm before and during the pandemic.

**Methods:** Cross-sectional survey (OxWell) of 10,560 secondary school students aged 12-18 years in the south of England. Information on self-harm, support(s) accessed after self-harm, and satisfaction with support received were obtained via a structured, self-report questionnaire. No tests for significance were conducted.

**Results:** 1,457 (12.5%) students reported having ever self-harmed and 789 (6.7%) reported self-harming during the first national lockdown. Informal sources of support were accessed by the greatest proportion of respondents (friends: 35.9%; parents: 25.0%). Formal sources of support were accessed by considerably fewer respondents (Child and Adolescent Mental Health Services: 12.1%; psychologist/psychiatrist: 10.2%; general practitioner: 7.4%). Online support was accessed by 8.6% of respondents, and 38.3% reported accessing no support at all. Informal sources of support were rated as most helpful, followed by formal sources, and online support. Of the respondents who sought no support, 11.3% reported this as being helpful.

**Conclusions:** More than a third of secondary school students in this sample did not seek any help following self-harm. The majority of those not seeking help did not find this to be a helpful way of coping. Further work needs to determine effective ways of overcoming barriers to help-seeking among adolescents who self-harm and improving perceived helpfulness of the supports accessed.

168

## **“Beyond Surviving”: The Role of Civic Engagement Groups in Promoting the Well-Being of Socially Excluded Young Women**

Irit Birger Sagiv, Limor Goldner

University of Haifa, Haifa, Israel

### **Abstract (max 500 words)**

**Objective:** Civic engagement is thought to contribute to young adults’ well-being. However, less is known about how civic engagement promotes well-being in socially excluded populations and among socially excluded young adult women in particular. The current study aims to identify the experience and the promoting trajectories that facilitate women’s well-being and thriving among 21 socially excluded young Israeli women who participated in social activism programs.

**Methodology:** The Interoperative Phenomenological Approach was applied to the findings from 50 semi-structured interviews, which were collected in four-time points of assessments.

**Results:** The analysis of the interviews revealed three main themes. The first theme was termed “group connectedness” and focused on the centrality of group atmosphere as a safe place and satisfying women’s relatedness needs. The second theme was termed “exploring and practicing civic engagement” and concentrated on the women’s views on civic engagement, describing their initial attempts to practice civic engagement, as a means to improve their own state. The third theme was called “from flaws to sparks” and referred to women’s psychological development through self-reflection, gaining meaning, and re-examining future plans.

Aspects of gender and intersectionality are discussed throughout the presentation of the findings.

**Conclusions:** The findings underscore the potential benefits of participating in civic engagement groups to promote the well-being of socially excluded women.

171

## **A marriage skills intervention for couples in resource-limited communities.**

Marilyn Saunders<sup>1,2</sup>, Maretha Visser<sup>1</sup>

<sup>1</sup>University of Pretoria, Pretoria, South Africa. <sup>2</sup>Private practice, Midrand, South Africa

### **Abstract (max 500 words)**

**Background:** The development and maintenance of intimate relationships are important aspects of development throughout adulthood. Relationships influence the mental health of couples because love and intimacy are at the root of what makes us well and what makes us unwell. Yet, couples receive very little preparation to equip themselves for married life, especially in lower socio-economic communities where people cannot afford professional services. Previous research has indicated that one of the reasons for divorce is a lack of communication skills and that attending a marriage skills program can improve marital satisfaction.

**Objective:** To address this problem in a multi-cultural country like South Africa, the researcher developed a marriage skills group intervention to improve the marital competencies and marital satisfaction of couples who cannot afford professional services.

**Methods:** An action research process was followed. It started with a situational analysis to understand the problems people experience in their marriages, to develop the intervention around people's needs. A mixed-methods approach was employed to collect data from fifty married individuals using the Three Couple Scales of the Prepare/Enrich assessment and a survey with open-ended questions. The Marital Systems Theory (Lewis, 1997) was used as a theoretical approach. The intervention aimed at developing couples' competencies, as identified in the Marital Competency Model: negotiation, equal power, subjective reality, conflict management, empathy, and problem-solving. The topics of the intervention included: communication, conflict, finances, in-laws, and sexual intimacy. The 18-hour intervention was implemented in small groups (3-4 couples) over three consecutive Saturdays. Fourteen couples from different cultural groups were recruited through a church, to participate in the intervention. The couples were married between two and 30 years; their ages varied between 32 and 55 years. Pre- and post-assessments using the Three Couple Scales were done to establish whether change took place. An evaluation questionnaire with open-ended questions was used to understand couples' experiences of the intervention and changes in their relationships. Thematic analysis was used to analyse the qualitative data.

**Results.** Comparison between the pre-and post-assessment scores on the Three Couple Scales showed significant improvement in the marital satisfaction, communication, and conflict management of participants. Further analysis shows that the scores of 11 couples improved significantly – high-risk couples improved the most.

The qualitative data showed improvement in communication and conflict management skills, self-awareness, emotional growth, and sensitivity to the partner's emotional experiences which brought about more closeness and commitment in their relationships.

**Conclusion.** The research provided evidence that the intervention has had a positive effect on the marriages of couples from different cultural groups, as it addressed core marital competencies and universal relationship skills. The programme can be disseminated and implemented by trained individuals in communities where people cannot afford professional services.

172

## Experiences of adolescent girls who have been sexually abused that influence help-seeking behaviour

Robyn Weimar<sup>1,2</sup>, Maretha Visser<sup>1</sup>

<sup>1</sup>University of Pretoria, Pretoria, South Africa. <sup>2</sup>Charis psychological services, Johannesburg, South Africa

### Abstract (max 500 words)

**Objective:** Childhood sexual abuse can have serious consequences for the development of any child, as it can result in both short-term and long-term psychological, physical, and behavioural consequences that can be life altering and devastating without appropriate treatment. Sexual violence is often referred to as the 'silent epidemic' as it is frequently underreported. Many adolescent girls who have experienced childhood sexual abuse are hesitant to disclose the abuse, they do not actively seek help, do not know what help is available and may even deny it ever happened. As a result, there is a continuous cycle where vulnerable individuals may remain vulnerable. In an effort to increase help-seeking behaviour, this research explored the help-seeking process and the barriers to and facilitators of help-seeking of adolescent girls who have been sexually abused.

**Methodology:** In-depth interviews, focusing on post-abuse experiences that influenced their help-seeking journeys, were conducted with six adolescent girls (aged between 13 and 18) recruited from The Teddy Bear Clinic for Abused Children, in South Africa, where they eventually received help. Interpretative phenomenological analysis was used to analyse the data.

**Results:** Four main themes, with several sub-themes, emerged that described the girls' journeys of coming to terms with what had happened, of considering seeking help, and of eventually disclosing to at least one person in an effort to get psychological help. The themes: 1) Having to go alone (hiding what happened, carrying on as usual and attempting self-help); 2) Realisation hits home (having to deal with own emotions, fears, threats, expectation of reactions to disclosure); 3) Considering the best option in terms of time and person to disclose to; and 4) Joining forces (how to access available help). The following barriers to disclosure were found: not having trusting relationships; experiencing or expecting judgement and stigma; feeling threatened or scared to ask for help; not knowing where to find help; and support services not working in unison. Having a trusting, caring relationship with someone close, not expecting to be judged or blamed, having access to high-quality services, and being able to disclose the experience immediately or soon, facilitated the help-seeking process.

**Conclusion:** Disclosing sexual abuse is complicated and sensitive; therefore, it is often delayed or silenced. Increasing community awareness, sensitivity to identify girls that experienced trauma and information about and coordination of support services could prevent this already vulnerable group from experiencing further trauma.

173

## Infants' physiological regulation during family interactions: The influence of family alliance

Valentine Rattaz<sup>1</sup>, Hervé Tissot<sup>1,2</sup>, Nilo Puglisi<sup>1</sup>, Chantal Razurel<sup>3</sup>, Manuella Epiney<sup>4</sup>, Nicolas Favez<sup>1</sup>

<sup>1</sup>University of Geneva, Geneva, Switzerland. <sup>2</sup>Lausanne University Hospital and University of Lausanne, Lausanne, Switzerland. <sup>3</sup>University of Applied Sciences Western Switzerland, Geneva, Switzerland.

<sup>4</sup>University of Geneva Hospital, Geneva, Switzerland

### Abstract (max 500 words)

**Background.** The quality of mother-father-infant interactions has been showed to be a strong predictor of infants' socioemotional functioning. Vagal tone, a physiological indicator of emotion regulation whose optimal regulation is involved in infants' socioemotional functioning, has been showed to be influenced by the quality of parent-infant interaction. The aim of this study is to investigate the influence of family alliance on infants' physiological regulation. More precisely, it aimed to investigate the influence of family alliance, considered as cooperative or problematic, on the initial level of vagal tone and on its evolution through mother-father-infant interactions.

**Hypotheses.** We expect cooperative family alliances to be associated with a higher initial level of vagal tone compared to problematic family alliances. We also expect vagal tone to decrease throughout the mother-father-infant interaction for problematic family alliances, whereas it should remain stable in cooperative family alliances.

**Method.** 85 families participated in laboratory visits when the infant was 3 months of age. Parents were asked to play together with their infant. Infant's ECG was recorded to obtain the RMSSD, an indicator of cardiac variability that reflects vagal tone. Family alliance was coded for each family to assess the family alliance category (cooperative or problematic).

**Results.** Results show that family alliance influences the initial level of vagal tone in the mother-father-infant interaction, such as infants of cooperative family alliances have higher initial level of vagal tone compared to infants of problematic family alliances. Results showed no significant effect of the family alliance on the evolution of vagal tone through the interaction. However, contrary to expectations, results marginally showed that family alliance influences the evolution of vagal tone such as infants of cooperative family alliances tend to show a decrease in vagal tone through the mother-father-infant interaction.

**Conclusion.** The present study provides further information on the influence of family interactions in the development of physiological regulation. Even though results did not show the expected differences in the way vagal tone evolved through interactions of cooperative or problematic family alliances, results still give an indication of the influence of family functioning on infants' physiological regulation. Indeed, vagal tone initial levels are considered to be an indicator of the vulnerability to stress. Therefore, as infants of problematic family alliances have lower vagal tone, they might be more vulnerable, which could explain the later difficulties in socioemotional functioning.

175

## Intergroup Conflict in Early Childhood: The Role of Hostile Attributions

Ghadir Zreik<sup>1</sup>, Michal Reifen-Tagar<sup>2</sup>

<sup>1</sup>The Max Stern College, Emek Yezraeel, Israel. <sup>2</sup>Reichman University, Herzliya, Israel

### Abstract (max 500 words)

Violent intergroup conflicts continue to be one of the most pressing issues of our time. Support for belligerent policies (e.g. use of military force and objection to conciliation) in such contexts is largely shaped by people's Hawkish (versus Dovish) ideology. To understand the psychological underpinnings of hawkishness we turned the limelight to early childhood to examine this ideology as it first emerges. Specifically, we investigated the role of hostile attributions – the tendency to see outgroup actions as stemming from hostility toward the ingroup – in the development of hawkish responses to intergroup conflict in young children living in intractable conflict. We examined the reactions of 4-8-year-old Jewish and Palestinian children in Israel (N=336) to a story about a protracted intergroup conflict. Children were asked to advise one of the parties on how to manage their 'problem'—an outgroup aggression. We found that the more children interpreted the aggression as stemming from malevolent intent and hostility toward the target outgroup (e.g. 'they did it because they hate the other group', 'because they want to hurt them') the more they supported hawkish responses (e.g. 'they should attack them'). This held true for both Jewish and Palestinian children. Importantly, when experimentally introduced to a benign attribution for the aggression (the promotion of the aggressor's own welfare) children of both groups increased their support of dovish responses (e.g. 'they should talk to them', 'they should share so both groups get what they want'). These findings point to a key role for hostile attributions in constituting hawkish ideology, indicating that proto-political ideology emerges already in early childhood at least in contexts of intractable conflict, and highlight the potential of interventions in early childhood for promoting conflict resolution and non-violence.

181

## What is being done to promote child and adolescent refugee wellbeing in Africa? A scoping review

Kristin Hadfield

Trinity College Dublin, Dublin, Ireland

### Abstract (max 500 words)



Experiencing war and displacement can have long-lasting impacts on youth across their lifespan, with substantial negative impacts on health and wellbeing of refugees. While there is good evidence to suggest that child and adolescent refugees have worse mental health than their native-born peers, much less is known about their wellbeing and positive outcomes. Despite resilience-promotion being a key feature of humanitarian interventions in crisis contexts, interventions which specifically target wellbeing or measure efficacy in improving positive outcomes among refugee youth are lacking. This is even more so in Africa, where research how to promote young people's wellbeing is lacking.

Research question: What wellbeing-promoting interventions have been conducted and evaluated among forcibly displaced children and adolescents in Africa?

Methodology: In this presentation, we will describe the findings from a pre-registered scoping review of formal and informal wellbeing-promoting interventions which have been used with displaced youth in Africa. We focused on interventions which have been evaluated in some way. Our scoping review involved searching 11 databases (MEDLINE, APA PsycINFO and PsycArticles, ERIC, CINAHL Ultimate, MIDIRS, Sociological Abstracts, Embase, Web of Science Core Collection, ETHOS, and the Campbell Library), two clinical trial registries, and multiple grey literature databases and websites. This resulted in 10781 hits, with 9628 titles and summaries reviewed after duplicates were removed. Ultimately, 8 studies were included.

Results: These 8 studies focused on displaced youth in Tanzania, Uganda (x3), Ethiopia, Liberia, and the Democratic Republic of the Congo. Most of these interventions were evaluations of Child Friendly Spaces, conducted by the same team of researchers, and showed small and mixed impacts. The others evaluated manualised therapeutic programs, including Common Elements Treatment Approach (CETA) and EASE. None looked across multiple levels or targeted wider community systems.

Conclusion: This review shows the lack of focus how to promote wellbeing among displaced children and adolescents in Africa. Despite 1/3rd of displaced people being in Africa, we know little about what interventions are effective at promoting their wellbeing. More work is urgently needed both implementing and evaluating a wider range of interventions which target wellbeing-promotion as a primary outcome.

**185**

## **Parents' Trust Towards Teachers and Teachers' Trust Towards Parents: Links to Children's Task Persistence and Performance**

Gintas Silinskas<sup>1</sup>, Saule Raiziene<sup>2</sup>

<sup>1</sup>University of Jyväskylä, Jyväskylä, Finland. <sup>2</sup>Vilnius University, Vilnius, Lithuania

### **Abstract (max 500 words)**

1) Objective of the study.

The current study investigated the reciprocal longitudinal associations between parents' trust in teachers, teachers' trust in parents, and children's task persistence and performance during transition from kindergarten to Grade 1 and during Grade 1.

## 2) Methodology

Lithuanian children (n = 350), their parents and teachers were assessed three times: end of kindergarten (T1), the beginning of Grade 1 (T2), and the end of Grade 1 (T3). At each time point, children's math performance was tested and their task persistence during testing sessions was evaluated by test administrators. At each time point, parents (n = 350) answered questionnaires about their trust in children's teacher, and teachers (n = 25) answered questionnaires about their trust in their students' parents. Noteworthy, all teachers in kindergarten (n = 18) were different from all Grade 1 teachers (n = 25). The measure of trust included items about teacher–parent cooperation, managing children's behavior, motivation, and learning.

## 3) Results obtained or expected

First, the results showed that math performance in kindergarten (T1) (not task persistence) positively predicted Grade 1 teachers' trust in parents (T2). Second, task persistence in the beginning of Grade 1 (T2) (not math performance) positively predicted teachers' trust in parents at the end of Grade 1 (T3). Third, we found that parents' trust in their children's kindergarten teachers (T1) negatively related to children's task persistence at the start of Grade 1 (T2). Fourth, teachers' trust in parents at the start of Grade 1 (T2) positively predicted children's task persistence at the end of Grade 1 (T3).

## 4) Conclusion

Taken together, the results suggest that Grade 1 teachers may evaluate their trust in students' parents based on children's performance at the start of Grade 1, whereas by the end of Grade 1 they get to know their students and their students' parents more and reevaluate their trust in parents based on children's behavior, that is, how much children try to stay focused and persistent to complete tasks. The results may also suggest that parents put a lot of trust in their children's kindergarten teachers concerning their children's learning. Finally, it should be emphasized that, as early as Grade 1, teachers' trust in their students' parents play a crucial role in promoting positive learning outcomes (i.e., task persistence).

**195**

## ***Put your phone down!* Rejection sensitivity, life satisfaction, and psychological distress among youth: The mediating role of perceived phubbing**

Alexandra Maftei, Cornelia Măirean

Alexandru Ioan Cuza University, Iasi, Romania

**Abstract (max 500 words)**

**Objectives of the study.** Given its importance for one's emotional health and social behaviors, especially at young ages, the present study focused on rejection sensitivity and the potential associations with psychological distress and life satisfaction among youth. Additionally, we examined the mediating effect of perceived phubbing, given the increasing research suggesting the need to explore this increasing phenomenon further.

**Methodology.** The cross-sectional, web-based study involved 386 young Romanian adults aged 18 to 20 ( $M = 19.22$ ,  $SD = .68$ , 79.3% females). Participants completed self-reported scales measuring perceived phubbing, rejection sensitivity, life satisfaction, and psychological distress.

**Results.** Our data suggested positive associations between perceived phubbing, rejection sensitivity, and psychological distress. Further analyses suggested that perceived phubbing partially mediated the link between rejection sensitivity and psychological distress. Also, perceived phubbing fully mediated the link between rejection sensitivity and life satisfaction.

**Conclusion.** Our study highlighted the significant role of perceived phubbing when discussing psychological distress and life satisfaction among youth. Given the young ages of the participants and the significant adverse psychological outcomes that resulted from phubbing, the present results underline the need to address further the (mis)use of digital devices (e.g., smartphones) within interpersonal relationships, as well the need to better understand the outcomes of such behaviors to shape effective interventions in this regard.

201

## Do Friends matter more than parents for LGBTs mental health? The relevance of family and non-family relations of cis-hetero and LGBT+ adult's mental health

Pirmin Pfammatter, Yannic Soder, Beate Schwarz

Zurich University of Applied Sciences, Zurich, Switzerland

### Abstract (max 500 words)

Family relations are among the most important relations for adult children in the 21st century. Family members give and receive support from each other, which promotes the healthy development and mental health of adults. However, research shows, that adults, belonging to the Lesbian, Gay, Bisexual, Transgender and other sexual orientation and gender minority (LGBT+) community have less contact with their parents and exchange less support with them. Furthermore, research showed that LGBT+ adults experience lower well-being. As a compensation for these detached family relations, close friends may become more important to LGBT+ adults and compensate for negative effects on mental health and well-being. How important friendships to LGBT+ adults are and whether they compensate for detached family relations remains unclear. Thus, the present study aims to investigate the following questions: 1) Are the relationships with the family more important for cis-gender, heterosexual (cis-hetero) adults than for LGBT+ adults? 2) Do family relationship aspects (support, relationship quality) mediate the association between belonging to the LGBT+ community and well-being. 3) Do friend

relationships compensate the negative effects of detached family relations on well-being and perceived stress among LGBT+ adults? The measures included scales on the importance of family, relationship quality, support exchange, as well as mental health aspects (e.g., satisfaction with life, positive and negative affectivity, and perceived stress). The data collection started in January 2023 and is still ongoing. We aim to collect the data of 250 LGBT+ adults and 250 cis-hetero adults. Using Structural Equation Modelling, we will investigate the hypothesis mentioned above. The importance of familial and non-familial relations for LGBT+ development will be addressed in the discussion.

**203**

### **Does what you say and how you say it matter? A sentence-to-sentence analysis of motivational messages.**

Berdien Vrijders<sup>1</sup>, Maarten Vansteenkiste<sup>1</sup>, Silke Paulmann<sup>2</sup>, Netta Weinstein<sup>3</sup>

<sup>1</sup>Ghent University, Ghent, Belgium. <sup>2</sup>University of Essex, Colchester, United Kingdom. <sup>3</sup>University of Reading, Reading, United Kingdom

#### **Abstract (max 500 words)**

According to Self-Determination Theory (SDT), speakers can motivate listeners in more controlling and pressuring or more autonomy-supportive and choice promoting ways, that, respectively, support or thwart listeners' basic need for autonomy or volition. To do so, speakers can modulate both what they say when directing their interlocutors and the tone of voice with which they express their message. Research so far has especially shed light on the differential effects of controlling (e.g., 'should'; 'have to') and informational (e.g., 'could'; 'may') contents but far less research has examined speakers' tone of voice in a fine-grained manner, thereby examining which prosody parameter (i.e., voice quality, loudness or pitch) exactly carries an effect and whether such effects can be observed at a sentence-to-sentence level. Therefore, the current research investigated the way listeners perceive controlling and autonomy-supportive messages, zooming in on the unique effects of both semantics (i.e., content of spoken language) and different prosody parameters, while also shedding light on their interplay. Results of two experimental studies are presented, with prosody and semantics being manipulated at the sentence-level.

Findings of multilevel analyses in Study 1 (N = 61; M age = 31.51) showed that sentences, spoken by actors with an increased voice quality, as well as sentences containing more controlling content (i.e., commands vs. statements) were perceived to be more pressuring and less supportive of choice than autonomy-supportive sentences. In terms of the prosody parameters, it was voice quality rather than loudness or pitch that played a critical role. Moreover, a significant interaction effect was found between content and prosody, indicating that controlling contents were rated as even more pressuring when spoken with a higher voice quality. Study 2 (N = 111, M age = 44.73) extended Study 1 by asking parents how the sentences would be perceived by their toddlers (instead of themselves), including a broader set of outcomes (e.g., cooperation; closeness) and examining the role of Right-Wing Authoritarianism (RWA) as a moderator of these effects. Findings of Study 1 got fully replicated and extended, with parents indicating that their toddlers would perceive controlling prosody as bossier, less

supportive of choice, would be less inclined to cooperate and experience less closeness towards the speaker in comparison with autonomy-supportive prosody. A similar interaction was found as in Study 1, so that controlling contents were rated as even more pressuring, less supportive of choice and less effective when spoken in a controlling tone of voice. Interestingly, an interaction between right-wing authoritarianism (RWA) and prosody was found, so that parents high in RWA perceived controlling prosody as less bossy and more supportive of choice than parents scoring low on RWA. This finding provides a first indication that parents high in RWA estimate the cost of controlling prosody as lower. Overall, the present findings indicate for the first time that sentence-to-sentence variation in autonomy-supportive and controlling semantics and prosody predict sentence-to-sentence variation in perceived communication, cooperation and closeness, with both working in unison to produce additional effects not accounted for by both main effects.

**213**

## **Revisiting the variability hypothesis: Mathematical and language skills of children at the age of five**

Pekka Räsänen<sup>1</sup>, Anna Holvio<sup>2</sup>, Ramin Izadi<sup>3</sup>, Mikko-Jussi Laakso<sup>1</sup>, Marja-Kristiina Lerkkanen<sup>4</sup>, Katariina Salmela-Aro<sup>5</sup>, Matti Sarvimäki<sup>2</sup>

<sup>1</sup>University of Turku, Turku, Finland. <sup>2</sup>Aalto University, Espoo, Finland. <sup>3</sup>VATT Institute for Economic Research, Helsinki, Finland. <sup>4</sup>University of Jyväskylä, Jyväskylä, Finland. <sup>5</sup>University of Helsinki, Helsinki, Finland

### **Abstract (max 500 words)**

The objective of the study

The variability hypothesis states that males tend to display greater variability than females. This hypothesis raised discussion among the founders of psychological sciences (Johnson, Carothers, & Deary, 2008). The debate continues, and multiple large-scale data analyses have supported the variability hypothesis in scholastic aptitude tests. For example, greater male variance in reading and mathematical skills has been documented across countries in OECD surveys' datasets such as IEA, PIRLS and PISA (Machin & Pekkarinen, 2008; Baye & Monseur, 2016; Gray et al. 2019). This work suggests that differences in variance across genders are slightly higher at the secondary education level compared to the primary grades. However, little is known about the variability hypothesis among much younger children. The objective of this study is to present the first large-scale evidence of the variability hypothesis for children at an age of five when they have not yet attended school.

### Methodology

The dataset in our analyses is the baseline assessment for a longitudinal study to analyze the effects of the two-year pre-primary education trial in Finland. The sample consists of two cohorts of children (born 2016 or 2017) who turned five years old in 2021 or 2022 and participated in early childhood education

and care (ECEC) or preschool education in 973 daycare centres. Both cohorts consist of over 16 000 children creating a total sample of over 32 000 participants. The early childhood education teachers conducted the assessments with each child individually with the help of tablet computers and an online net experimentation system (VILLE, see <http://trila.fi>) during four weeks period at October. All teachers had completed remote online training with video and written instructions. The assessment consisted of mathematical skills (arithmetics, quantities, number comparison, quantity comparison, counting), language skills (letter knowledge, phonological awareness, word recognition, vocabulary), and a visuospatial skills.

## Results

The preliminary results using the first cohort (n = 16,170, 91% response rate) show that there were no significant differences in means in mathematics, but a significant, while a small, difference in language skills, favouring girls (Cohen  $d < .20$ ) when the social background variables were controlled. The variability hypothesis get support in the area of mathematics (z-score variances: boys 1.06, girls .94) but not in language skills (boys 1.00, girls .99). We expect to replicate these results with the second cohort, and likewise in the presentation, we will present the results while controlling for social background variables and visuo-spatial skills, which we expect partly to affect the phenomena of variability in our sample.

## Conclusion

This is the first large-scale study to analyze the variability hypothesis in basic academic skills at age of five before school entrance. We can partly find support for this hypothesis in mathematics, but not in language skills.

## References

- Baye & Monseur (2016). Large Scale Assessments in Education, 4.  
 Gray et al. (2019). Large-scale Assessments in Education, 7.  
 Halpern et al. (2007). Psychological science in the public interest, 8.  
 Johnson, Carothers & Deary (2008). Perspectives on psychological science, 3.  
 Machin & Pekkarinen (2008). Science, 322.

**214**

## **The Development and Interaction of Peer Victimization and Peer Sexual Harassment in Children Between Ages 10 to 12 Years**

Andrea Valik, Carolina Lunde, Therése Skoog, Kristina Holmqvist Gattario

Department of psychology, University of Gothenburg, Gothenburg, Sweden

**Abstract (max 500 words)**

**Background/Aim:** The literature concerning children's experiences of peer victimization uses a plethora of concepts in its theories and measurements, such as peer victimization, peer harassment, peer aggression, or bullying. Yet there is little guidance regarding how these concepts are related to one another. During recent years, peer sexual harassment, including unwanted sexual attention from peers, has been added to the list of concepts, although it is still underexplored among pre-adolescent children. Peer sexual harassment is arguably more specific than peer victimization, and may partly be covered by measures assessing peer victimization. However, there may also be differences in the concepts' development over time. Whereas peer victimization is most common among pre-pubertal children, peer sexual harassment is assumed to peak as children reach puberty and interest in sexual behaviors increases. Disentangling how peer victimization and peer sexual harassment develop in relation to one another and over time at a time when many children reach puberty, could help advance the literature regarding these concepts. Hence, the aim of this study was to examine how peer victimization and peer sexual harassment develop and interact over time in children between the ages 10-12 years.

**Method:** The study is based on three-wave questionnaire data collected in the PRISE-project (T1 N = 997, M age = 10.0 years, 48% girls; T2 N = 966; T3 N = 881 [88% of original sample]).

**Results:** Peer sexual harassment increased between ages 10-12 years for both boys and girls, whereas peer victimization increased only for girls. Correlations between peer victimization and peer sexual harassment were strong at baseline (age 10 years; T1: boys  $r = .60$ , T1: girls  $r = .63$ ) but became weaker over time for both boys (T2:  $r = .58$ , T3:  $r = .51$ ) and girls (T2:  $r = .60$ ; T3:  $r = .49$ ). A multivariate multigroup LGCM analysis further demonstrated that more peer victimization at baseline was positively related to higher levels of peer sexual harassment at baseline for both boys and girls. For girls only, the slopes between peer victimization and peer sexual harassment were positively related to each other, and higher initial levels of peer sexual harassment were related to a less steep slope of peer victimization.

**Discussion/Conclusion:** The current findings suggest that peer victimization (girls only) and peer sexual harassment become increasingly frequent experiences for children between ages 10-12 years. These experiences were more related to one another when the children were younger and became less related as they grew older, suggesting that the concepts change in relation to one another as many children reach puberty. For girls, peer sexual harassment and peer victimization seem to follow a more similar path than for boys, suggesting that there is more overlap between how the concepts develop among girls. We conclude that the concepts of peer victimization and peer sexual harassment and their development are closely linked to one another, especially for girls; yet, these concepts become more distinct as children grow older potentially reflecting biological, psychological, and social developmental changes.

218

## **Associations between the features of maternal talk, children's engagement in conversations, and their language skills**

Tiia Tulviste, Anni Tamm

University of Tartu, Tartu, Estonia

### **Abstract (max 500 words)**

Much research on mother-child verbal interaction has been inspired by and the results are in line with the Vygotskian views that children acquire language and culture-specific ways of using language through actively participating in early daily conversations with adults. Most prior studies in this field have been done in English-speaking Western middle-class families during the first years of children's life, and focused on vocabulary acquisition. Less is known about whether the features of mother-child interaction that promote children's language learning the most (e.g., the diversity of parental vocabulary, the frequency of wh-questions, the amount of children's talk) are similar in older children (3 yr and 4 yr olds) whose linguistic abilities are better and in children with other cultural background. Because Estonian middle-class mothers have been found to pay much more heed to controlling children than mothers from some other cultural background, we include the frequency of attentional and behavioral directives among the features of mothers' speech that might have an impact on child language development. Thus, the current study explored the relative contribution of different features of mother-child interaction (e.g., mothers' vocabulary diversity, use of attentional and behavioral directives, wh-questions, and the amount of children's talk) to children's linguistic and conversational skills using the data collected at two timepoint 1 year apart in Estonian middle-class families. 88 children and their mothers participated at children's' ages 3;0 and 4;0. We observed their interactions during a semistructured videorecorded toy play at home. Mothers reported child communicative abilities via the ECDI-III. Children's language comprehension and production were measured by the examiner-administered New Reynell Developmental Language Scales (NRDLS). Although the results showed somewhat differential effects of various aspects of mothers' speech to different measures of child linguistic skills at two timepoints, the diversity of mothers' speech was positively and mothers' frequent use of directives negatively related to children's language skills. At both ages, the diversity of mothers' vocabulary predicted the amount of children's verbal contribution to conversations. The findings will be discussed in the light of Vygotskian and his followers' theoretical views as well as the theories about child language development.

219

### **Skip ads and beyond: The interaction between mothers and infants and toddlers during touchscreen use and its implications on child development and parenting in the digital age**

Annalyn Capulong

University of the Philippines-Diliman, Quezon City, Philippines

### **Abstract (max 500 words)**

This study, which was part of a larger sequential research on digital media and child development, looked into the qualitative interaction between mothers and their infants or toddlers during



touchscreen use (e.g., smartphone or tablet). Participants were four mother-child dyads, which consisted of mothers and their children with ages 20 to 45 months and who were categorised as either high touchscreen user (high screen time) or low touchscreen user (low screen time). Selection of participating dyads was based on the inclusion criteria and data analysis from an earlier study, which was also part of the said larger research. Naturalistic observation was conducted twice in the home of each mother-child dyad to look into the quality of interactions between the mother and child during touchscreen use. Each home observation lasted about 30 minutes per visit, excluding the additional time spent by the researcher to establish rapport with each child. In addition, interview was also conducted with each mother to examine their perceptions, motivations, attitudes as well as the media mediation strategies they employ to monitor their children's touchscreen use. Data from the naturalistic observations were analysed using content analysis while data from maternal interviews were analysed using thematic analysis. Results from the home observations revealed that there was not much variety in the children's screen activity during observations because watching was the sole activity engaged by all of them. Results also suggest that children's age, more than the screen time group, was an important factor in describing the nature of mother-child interactions during touchscreen use. Mothers with infants (6-24 months) were more likely to practice co-use where they interact with their children during touchscreen use while mothers with toddlers (25-42 months) intentionally chose not to join their children during touchscreen use because the latter were already adept in navigating the devices compared to infants. Results from the maternal interview showed that the primary reason for their children's touchscreen use is for them to be able to do work. Mothers also expressed their perceived drawbacks of their children using touchscreens. But despite these perceived disadvantages, mothers still viewed touchscreens positively, looking at it as a potential educational tool for their children. Lastly, mothers appeared to use more than one media mediation strategies to regulate their children's touchscreen use. Overall, this study was able to situate the children in their actual home environment as far as touchscreen use practices are concerned. It provided a snapshot of how children actually use touchscreens in their homes. Furthermore, it also provided more in-depth information on the mothers' motivations, attitudes, and actual practices regarding their children's touchscreen use and media mediation.

**221**

## **How children understand and interpret pictures used as communicational support**

Linnea Koponen<sup>1</sup>, Mikaela Magnusson<sup>2</sup>, Sara Landström<sup>1</sup>

<sup>1</sup>University of Gothenburg, Gothenburg, Sweden. <sup>2</sup>Linköping University, Linköping, Sweden

### **Abstract (max 500 words)**

The Convention of the Rights of the Child stipulates that children have the right to freely express their views in all matters affecting their lives. However, young children and children with cognitive disabilities may need communicational support to effectively make themselves understood. In many contexts, such as in school and health care settings, pictures and symbols can be used to aid communication with these children. The present study is the first part of a larger project that seeks to explore whether using

picture cards (communication cards with pictures or symbols) as communicational support could be beneficial in child forensic interviews with child victims and witnesses with limited verbal abilities.

Using picture cards in child forensic interviews may prove challenging. Forensic interviews should be non-leading, and pictures are per se suggestive and could increase the risk of contaminating the child's report or memory with incorrect details. In child forensic interviews, children's statements are assessed in terms of reliability, yet research on the effects of using picture cards on children's testimonies is limited. Therefore, using visual aids when questioning children about suspected criminal events is currently not recommended in many European countries, including Sweden and Finland. On the other hand, child victims and witnesses who are not able to provide detailed verbal statements when interviewed with the current interviewing methods may benefit from communicational support in form of picture cards.

In the present study, we will study how children of different ages interpret and understand pictures used in graphic systems of symbols. The participating children will be shown picture cards and asked about their representation. The children will also be given words and asked to point at the picture of their choice. Furthermore, we will collect children's thoughts and reflections about the pictures and their perceptions of usability for other children. The results of the study will help us to find pictures that are clear and easily understood by children. These pictures will then be used in follow-up experiments in which we will investigate how using picture cards affects the length and accuracy of accounts provided by young preschoolers and children with cognitive disabilities.

To ensure that the study, as well as the project as a whole, include children's perspective, we will consult with a child advisory board regarding the planning of the study, methods used, interpretation of the results, and distribution of the findings. The objective of a child advisory board is to make children more involved in child-related research, not just as participants but as active developers during the entire research process. We believe that children's right to get their voice heard in all matters affecting them should be applied in research that involves children. By providing an example and guidance, we hope that this project will encourage researchers on the field of child forensic psychology to involve children as active agents in their research process.

**223**

## **Can classroom seating arrangements help establish a safe environment for victims? A randomized controlled trial**

Nathalie Hoekstra<sup>1</sup>, Yvonne van den Berg<sup>1</sup>, Hannah Peetz<sup>1</sup>, Tessa Lansu<sup>1</sup>, Tim Mainhard<sup>2</sup>, Toon Cillessen<sup>1</sup>

<sup>1</sup>Behavioural Science Institute Radboud University, Nijmegen, Netherlands. <sup>2</sup>Department of Educational Sciences Leiden University, Leiden, Netherlands

### **Abstract (max 500 words)**

When a student is brave enough to disclose that they are victimized by a classmate, every teacher wants to help immediately. They could implement anti-bullying interventions, but these require substantial

time to implement effectively and the victim needs the teachers' help immediately. One potential way to instantly support victimized students could be a strategic classroom rearrangement. In this field study, we therefore examined whether teachers could create a safer environment for a victim just by assigning them to a specific seat. Our specific research question was: What are the effects of a seating arrangement intervention on victims' classroom wellbeing, internalizing problems, academic engagement, and victimization?

Research has shown that friends can support victims and provide a sense of safety (Flashpoler et al., 2009; Kendrick et al., 2012). When a victim is seated next to their best friend, it is easier for the friend to prevent victimization or comfort the victim afterwards. Similarly, sitting far away from the bully may make a victim feel less threatened and confronted with negative thoughts about victimization (Kochenderfer-Ladd & Pelletier, 2008; Troop-Gordon & Ladd, 2015). Additionally, it may limit a bully's harassment opportunities. In experimental classrooms, victims were thus seated next to their best friend and as far away as possible from their bully. All other students were seated randomly. In control classrooms, all students were seated randomly, but victims were never seated next to their bully. As we aimed to find a solution for victims to feel safe, our primary goal was enhancing their feelings of comfort and their well-being. Examining whether they also felt less victimized was a secondary goal.

We assessed 1932 students in 81 grade 4, 5, and 6 classrooms in the Netherlands. Classrooms were randomly assigned to the experimental or control condition. After the pretest, teachers implemented the new seating arrangement. The posttest took place after 8 to 12 weeks. The data are currently being analyzed, but preliminary repeated measures ANOVAs indicated increasing classroom comfort,  $F(1, 213) = 5.40, p = .021$  and decreasing victimization,  $F(1, 121) = 159.68, p < .001$ . No effects of time on academic engagement or internalizing problems were found. There were also no effects of condition or time by condition on these outcomes.

Although preliminary results do not confirm that teachers can support victims through a rearrangement of seats, follow-up analyses will take into account the nestedness of the data, variability in duration, acceptability and fidelity, and heterogeneity within our sample of victims. As such, we will gain a more nuanced understanding on whether, how, and for whom teachers can use seating arrangements to manage classroom social dynamics.

**224**

## **Parental Control, Adolescent Disclosure, and Resistance to Peer Influence: A Longitudinal Study across More Individualistic and More Collectivistic Countries**

Sule Selçuk<sup>1</sup>, Christy M. Buchanan<sup>2</sup>, Ann T. Skinner<sup>3</sup>, Jennifer E. Lansford<sup>3</sup>

<sup>1</sup>Hacettepe University, Ankara, Turkey. <sup>2</sup>Wake Forest University, Winston-Salem, USA. <sup>3</sup>Duke University, Durham, NC, USA

**Abstract (max 500 words)**

Two important predictors of adolescent adjustment are adolescent disclosure about out-of-home activities and whereabouts, and adolescent resistance to peer influence (RPI; e.g., Duell et al., 2022; Kapetanovic & Skoog, 2021). This paper focused on parenting practices that facilitate or undermine these two characteristics. To this end, we investigated solicitation, rule-setting, and psychological control, which are important dimensions of parental control across cultures and development including adolescence (Lansford et al., 2021), as longitudinal predictors of adolescent disclosure and RPI. Given that interpretations of parenting practices can differ across cultural contexts (Bornstein, 2012), we examined the mediating role of adolescents' perceptions of parental love, neglect, and overcontrol in connections between parenting and adolescent behavior. Moreover, we examined whether the associations varied across culture. Adolescents (N=1215) were recruited from more individualistic (Italy, Sweden, the United States) and more collectivistic (Colombia, Jordan, Kenya, the Philippines, Thailand) countries (Hofstede Insights, 2021). Adolescents reported on parental control practices (at age 13), perceptions of parental love, neglect, and overcontrol (at age 15), disclosure (at ages 15 and 16), and RPI (at ages 14 and 17). We conducted path analyses with adolescent gender and parental education as covariates, and controlling for early disclosure (age 15) and RPI (age 14). Across both more individualistic and more collectivistic countries, more rule-setting predicted less disclosure via perceptions of overcontrol, whereas more solicitation directly predicted greater disclosure. More psychological control predicted less disclosure via perceptions of overcontrol, and less RPI via perceptions of neglect. These findings suggest that, in both cultural groups, psychological control and rule-setting can evoke feelings of overcontrol in adolescents that have the effect of inhibiting disclosure. It also appears that adolescents can sometimes experience a feeling of neglect from psychological control that might make them more vulnerable to peer influence. In contrast, and relevant to current debates over the role of solicitation (e.g., Hawk, 2017), our results imply that parents across cultures can facilitate voluntary disclosure from adolescents regarding their daily activities through solicitation that is not perceived as psychologically controlling or emphasizing rules. These data are important because they examine solicitation, rule-setting, and psychological control independently, and suggest that solicitation can indeed play a positive role in parenting adolescents, while confirming that psychological control should be avoided. The role of rule-setting, while negative in this study, seems more mixed in the literature at large.

**230**

## **PARENTING PROFILES, CHILD EXTERNALIZING BEHAVIORS, AND THE MODERATOR ROLE OF NEGATIVE AFFECT: A NATIONALLY REPRESENTATIVE STUDY**

Rana Durmuş<sup>1</sup>, Sibel Kazak Berument<sup>1</sup>, Başak Şahin-Acar<sup>1</sup>, Aysun Doğan<sup>2</sup>, Deniz Tahiroğlu<sup>3</sup>

<sup>1</sup>Middle East Technical University, Ankara, Turkey. <sup>2</sup>Ege University, İzmir, Turkey. <sup>3</sup>Bogazici University, İstanbul, Turkey

**Abstract (max 500 words)**

This study aimed to examine the relationship between parenting profiles, child temperament, and externalizing behaviors in children and adolescents. In the previous research, there are contradictory results related to the effects of parenting styles accepted in the literature on child outcomes across different cultural contexts. Therefore, in the present study, parenting profiles were considered as a concept derived from different dimensions of perceived parenting and evaluated with their cultural context. Furthermore, the moderator role of negative affectivity as a temperamental characteristic was also examined in order to understand better the relationship between parenting and child externalizing behaviors.

The present study was conducted as a part of a nationally representative project with the sample of 3218 children aged 9-18 and their mothers from Turkey. Externalizing behaviors and negative affectivity were measured in children using the Child Behavior Checklist and The Early Adolescent Temperament Questionnaire, respectively, through maternal report. Parenting profiles were investigated based on children's perceptions of parenting behaviors, examining 11 dimensions including behavioral control, psychological control, parental acceptance/rejection, comparison, inductive reasoning, performance pressure, and overprotection. Descriptive statistics, one-way analysis of variance, and hierarchical multiple regression analysis were used to analyze the data.

The project determined four distinct parenting profiles: sensitive/ideal, insensitive/hostile, warm/intrusive, and disengaged. Sensitive/ideal parenting is characterized by the highest levels of warmth, monitoring, and inductive reasoning, and the lowest levels of hostility, rejection, psychological control, and comparison. The insensitive/hostile profile is defined by high levels of negative parenting behaviors such as hostility, rejection, and psychological control, and low levels of positive behaviors such as warmth, inductive reasoning, and child disclosure. Anxious/intrusive parenting is marked by high levels of overprotection, as well as a combination of positive behaviors (e.g. warmth, monitoring, child disclosure) and negative behaviors (e.g. psychological control, performance pressure, comparison). Disengaged parenting is characterized by low levels across all parenting dimensions.

The results indicated that children with mothers who exhibited an insensitive/hostile parenting style displayed the highest levels of externalizing behaviors. This was followed by children with anxious/intrusive mothers and children with disengaged mothers, respectively. Children with sensitive/ideal mothers exhibited the lowest levels of externalizing behaviors. All clusters were significantly different from each other. Furthermore, child negative affectivity plays a moderating role in determining the extent to which parenting influence child externalizing behaviors. The analysis revealed that while their mothers' parenting styles did not significantly influence the externalizing behaviors of children with low levels of negative affect, children with high levels of negative affect exhibited differing levels of externalizing behaviors in relation to the specific parenting style shown by their mothers.

This study was conducted in Turkey, encompassing a diversity of cultural characteristics both from Eastern and Western. Given this, the research findings pertaining to the effects of parenting profiles on child behavior must be considered within the cultural context. Besides, the study also highlights the moderating role of child's temperament in the relationship between parenting and child behavior, which is consistent with the diathesis-stress theory.

233

## Psychological outcomes of growing up with community and collective violence in post-conflict Northern Ireland, and the mediating role of family level adversity.

Teresa Rushe<sup>1</sup>, Nicole Devlin<sup>1</sup>, Tara O'Neill<sup>2</sup>

<sup>1</sup>Queen's University Belfast, Belfast, United Kingdom. <sup>2</sup>Ulster University, Coleraine, United Kingdom

### Abstract (max 500 words)

We examined associations between childhood experiences of community and collective violence and psychological functioning in young people who grew up in post-conflict Northern Ireland. We hypothesized that they would demonstrate internalizing and externalizing difficulties in early adulthood, and furthermore that these difficulties would be mediated by adverse childhood experiences occurring within the home environment. As part of the Northern Ireland Childhood Adversity Study we recruited 213 young people aged 18-25 years (108 males) using purposive sampling. Participants completed a digital questionnaire to measure adverse childhood experiences as well as aspects of psychological functioning. We employed the Adverse Childhood Experience International Questionnaire (ACEIQ) adaptation of the original ACE Questionnaire (ACE) as it additionally measures aspects of witnessing community violence (e.g., seeing someone being beaten/killed, fights), and experiences of collective violence (e.g., war, terrorism, police, or gangs' battles exposure) during the first 18 years of life. 51% of our sample reported experiences of community and/or collective violence (N=108). Compared to young people with no such experiences (N=105), they also reported significantly more adverse experiences indicative of household dysfunction (e.g., family substance misuse, mental illness or domestic violence in the family, incarceration of a family member), but not more experiences of abuse or neglect. As expected, young people who grew up with community and/or collective violence reported significantly higher anxiety and depression scores and were more likely to engage in acts of deliberate self-harm (internalizing symptoms). They also started drinking and taking drugs at a younger age and were significantly more likely to have been in trouble with the police (externalizing symptoms). When the type of violence exposure was separated by whether the violence was witnessed (community Violence) or more directly experienced (collective Violence), we found community and collective violence to have similar effects on externalizing symptoms, but for internalizing symptoms, we found evidence of a differential effect. Collective violence was associated with depressive symptoms, whereas witnessing community violence was associated with anxiety type symptoms and deliberate self-harm. However, when experiences of household dysfunction were entered into the models predicting anxiety, depression and deliberate self-harm, none of the main effects remained significant. This suggests internalizing type symptoms are mediated by immediate family level experiences. By contrast, significant community and collective violence effects on externalizing behaviours: younger initiation of alcohol use, younger initiation of drug use, and getting into trouble with the police, persisted after controlling for family level factors and thus are directly associated with growing up with community and collective violence. Given the cross-sectional nature of our study we cannot comment on the direction of the effect. However, post-hoc correlational analyses revealed associations between externalising behaviours and person factors including greater risk taking and younger age at puberty. The implications of the findings will be discussed in relation to interventions for young people and families living with community and collective violence.

236

## **Bidirectional associations between mother- and father-infant synchrony, and 3-month-old infants' vagal regulation**

Nilo Puglisi<sup>1</sup>, Hervé Tissot<sup>1,2</sup>, Valentine Rattaz<sup>1</sup>, Chantal Razurel<sup>3</sup>, Manuella Epiney<sup>4</sup>, Nicolas Favez<sup>1</sup>

<sup>1</sup>Faculty of Psychology and Educational Sciences, University of Geneva, Geneva, Switzerland. <sup>2</sup>Center for Family Studies, Department of Psychiatry, Lausanne University Hospital and University of Lausanne, Lausanne, Switzerland. <sup>3</sup>Department of Midwifery, University of Applied Sciences Western Switzerland, Geneva, Switzerland. <sup>4</sup>Department of Obstetrics and Gynecology, University of Geneva Hospitals, Geneva, Switzerland

### **Abstract (max 500 words)**

**INTRODUCTION:** Dyadic synchrony (i.e., the quality of dyadic coordination of interactional behavior between parent and infant) and the infant's emotion regulation during the interaction with the parent are mutually related. Vagal tone, a physiological index of emotion regulation, is sensitive to dyadic synchrony and participates in the activity of the autonomic nervous system that supports the infant's social engagement. The interactions of a dyad are part of a complex system of inter-dependences between the members of a family, whereby what happens in one dyad can condition and be conditioned by what happens in another dyad. To date, no study has assessed the extent to which there is a bidirectional association between the synchrony in a dyad (e.g., mother-infant) and the infant's vagal regulation when interacting in another dyad (e.g., father-infant).

**HYPOTHESIS:** We aimed to investigate whether a bidirectional association exists between the synchrony in one dyad and the infant's vagal regulation when interacting in another dyad. We hypothesize that (i) mother-infant synchrony relates to the infant's vagal tone in interaction with the father, and that (ii) father-infant synchrony relates to the infant's vagal tone in interaction with the mother.

**METHODS:** Eighty-four mother-infant and father-infant dyads were observed interacting and measurements of the infants' vagal regulation were recorded. We specified a first SEM model to investigate the bidirectional associations between observer-coded synchrony and the infant's RMSSD, an index of vagal regulation, during dyadic mother-infant and father-infant interactions. Via bidirectional correlation analysis, we selected covariates. In our study, the mother-infant and father-infant dyads began their interactions in a counterbalanced order (mother or father interacting first). Thus, we conducted a multigroup analysis in a second SEM model to investigate the bidirectional associations between mother- and father-infant synchrony and infants' RMSSD in two groups based on the order-of-interaction control variable.

**RESULTS:** The results of the first SEM model showed that none of the two dyadic synchrony has bidirectional associations with the infant's vagal regulation when interacting in the other dyad. The results of the second SEM model showed bidirectional associations only in the group in which fathers interacted first, namely between father-infant synchrony and the infant's RMSSD during interaction with the mother.

**CONCLUSIONS:** Our study highlights that the interdependencies between mother- and father-infant interactions depend on the order of interaction. Indeed, when fathers interact first, what happens in the interaction with the infant seems to affect the infant's vagal regulation when she subsequently interacts with the mother. On the other hand, when mothers interact first, there is no link with the infant's vagal regulation in the subsequent interaction with the father. The meaning and implication of these results, the limitations of the study, and future research that could clarify our findings will be discussed.

**237**

## **Parent- and teacher-reported mental health among 5-year-olds: Convergent and discriminant validity of the Early Development Instrument**

Magdalena Janus<sup>1</sup>, Marc Jambon<sup>2</sup>, Eric Duku<sup>1</sup>, Kathy Georgiades<sup>1</sup>

<sup>1</sup>McMaster University, Hamilton, Canada. <sup>2</sup>Wilfrid Laurier University, Waterloo, Canada

### **Abstract (max 500 words)**

#### Objective

Teacher ratings on the Ontario Child Health Study Emotional-Behavioral Scales (OCHS:EBS) have been validated as equivalent to diagnostic tools. Our objective is to validate a widely used teacher-report measure of kindergarteners' development (Early Development Instrument, EDI) against the parent- and teacher-reported OCHS:EBS scales to establish whether population-based assessment of development can be used to inform prevalence of mental health issues among kindergarten-age children.

#### Methodology

The 2014 Ontario Child Health Study (OCHS, Georgiades et al. 2019) was designed to estimate the prevalence of common mental health conditions in children and youth aged 4-17 years in Ontario. Data collection from youth and their primary caregivers, teacher-reported surveys of emotional and behavioural difficulties among elementary school-aged children, and linkage with administrative data held by the Ontario Ministry of Education, including the Early Development Instrument (EDI, Janus & Offord 2007). The EDI is a population-wide teacher assessment of five domains (sixteen subdomains) of child development in kindergarten that includes three subdomains relevant to mental health: anxious and fearful behaviour, aggressive behaviour, and hyperactive/inattentive behaviour. The EDI has been administered in schools for all kindergarten children in most Canadian provinces and territories. There is strong evidence for the psychometrics of the OCHS:EBS scales (reliability and validity internal and external as assessed against MINI-KID). First, the OCHS:EBS scales as reported by parents and teachers will be validated against the three mental health EDI subdomains. Next, we will examine cross-informant effects using both parent and teacher assessments on the OCHS:EBS.

#### Results



Full sample included 508 children (M<sub>age</sub> = 5.66 years, SD = 0.28; 47% male) from OCHS with EDI data. Mean parent age was 36.85 years (SD = 5.90). Approximately 88% of parents were female, 81% were married or in domestic partnership, 44% had bachelor's level or higher education, 12% received government assistance, and 20% lived at or below the poverty line. A subsample of 225 children (M<sub>age</sub> = 5.65 years, SD = 0.27; 51% male) had EDI and teacher reported OCHS data, of which n = 221 had both parent and teacher reports. Consistent with prior studies, agreement between parents and teachers on OCHS:EBS was moderate to strong (rs 0.11-0.46; Table 1). As evidence of convergent validity, teacher-reported EDI subdomain scores were strongly correlated with conceptually similar teacher-reported OCHS:EBS scores (rs 0.10-0.39; Table 1); teachers' ratings on both measures showed virtually identical patterns of association with parent ratings on the OCHS:EBS.

## Conclusion

Our study took advantage of a unique collection of data on the same children for two related studies and demonstrated that teacher reports of kindergarten children's mental health on EDI were correlated with parent rating on OCHS:EBS scales in a similar pattern to the teacher reports on the OCHS:EBS scales. As the EDI is used routinely for population-wide assessment of children's development in Canada and other countries, the results of this study give credence to the interpretation of its scores as estimates of children's mental health.

**241**

## Assessing the impact of LEGO® construction training on spatial and mathematical skills

Emily McDougal<sup>1</sup>, Priya Silverstein<sup>2,3</sup>, Oscar Treleaven<sup>1</sup>, Lewis Jerrom<sup>1</sup>, Katie Gilligan-Lee<sup>4,5</sup>, Camilla Gilmore<sup>6</sup>, Emily Farran<sup>1,4</sup>

<sup>1</sup>University of Surrey, Guildford, United Kingdom. <sup>2</sup>Ashland University, Ashland, USA. <sup>3</sup>Institute for Globally Distributed Open Research and Education, Preston, United Kingdom. <sup>4</sup>Centre for Educational Neuroscience, University of London, London, United Kingdom. <sup>5</sup>University College Dublin, Dublin, Ireland. <sup>6</sup>Loughborough University, Loughborough, United Kingdom

### Abstract (max 500 words)

**Objective:** There is a known association between LEGO® construction ability, spatial thinking and mathematical abilities. The aim of this study was to determine whether this relationship is causal, by measuring the impact of Lego construction training on Lego construction ability and a range of spatial and mathematical abilities. On account of the digital revolution, we also compared the impact of physical vs. digital Lego training.

**Methodology:** Children aged 7 to 9 years (N = 195) took part in one of three training packages: physical Lego training; digital Lego training; and control training (craft activities). Each training package comprised twelve 30-minute sessions, delivered as a lunch time activity at school. Participants

completed a range of tasks two weeks prior to taking part, and repeated these no more than two weeks after completing the training. These tasks included: Lego construction ability, spatial skills (disembedding, visuo-spatial working memory, spatial scaling, mental rotation, and a number line task) and mathematical abilities (geometry, arithmetic, and mathematical problem solving). The study was preregistered and received In Principle Acceptance as a Stage 1 Registered Report (see <https://osf.io/9f8v6>).

Results: To compare performance at post-test across the three training groups, a one-way ANCOVA was conducted for each dependent variable, controlling for pre-test performance on the same dependent variable. Post-test arithmetic performance significantly differed between training groups when controlling for pre-test score,  $F(2, 191) = 6.01, p = .003$ . Pairwise comparisons revealed that the digital Lego group had significantly higher post-test arithmetic scores compared to the other two groups, suggesting increased improvement in arithmetic as a result of the digital Lego training. Furthermore, post-test disembedding performance significantly differed between training groups when controlling for pre-test scores,  $F(2, 189) = 4.6, p = .01$ . Pairwise comparisons revealed that the digital Lego group had significantly lower post-test disembedding scores compared to the other two groups. The groups did not differ on post-test scores for the remaining dependent variables. Exploratory within-group t-tests revealed improvements from pre-test to post-test for all three groups in disembedding, overall mathematics achievement, geometry and Lego construction ability (all p-values < .005). Furthermore, only the digital group demonstrated improvements in arithmetic and mental rotation.

Conclusion: Improvements in mathematics measures are interpreted in relation to expected improvement based on curriculum instruction. The findings have important implications for designing school-based and teacher-led spatial training programmes.

**245**

## **Take It Slowly - Developmental and Cognitive Understanding of Adjusting Motor Response to Environmental Requirements in Preschool Children - Pilot Study**

Dominik Lech, Natalia Józefacka

Pedagogical University, Krakow, Poland

### **Abstract (max 500 words)**

The aim of this study is to analyze the developmental trajectory of motor control among preschool age children. Motor control involves use of cognitive processes to organize perception and action (Utley, Astill, 2018). Motor control falls under the area of inhibition, which belongs to a wide self-regulation concept (McCabe et al., 2004). It is defined as an ability to slow down, and helps with initiation or inhibition of motor response in arousal (Kochanska et al., 2000). The study was conducted within a quantitative paradigm. The participants ( $n = 41$ ) were selected from a day care center. They performed two tasks: one based on gross motor control - Walk-a-Line (Kochanska et al., 1996), and the other based on a fine motor control Truck Task (Lee et al., 1988). Assessments were conducted in two different contexts: individually and in small groups. The analysis was aimed at inter- and intrapersonal

differences. Informed consent was verbally negotiated with all participants. Children could withdraw from the study at any time. In the interest of children's comfort, assessments took place in environmentally valid settings. The results show that children performed better in accelerating than slowing down, in terms of both fine and gross motor control. In addition an insignificant upward trend of performance through age was observed. Important finding is that our results show correlation between gross motor task and theory of mind. This could be because the procedure of the Walk-a-Line task contained instruction referring to mental state of others given to a child. We suggest that conducting the Walk-a-Line task should be followed by controlling the theory of mind variable. Other research shows that the ability to slow down motor response was positively associated with cognition development (McCabe et al., 2004), however the finding was not confirmed in this study, suggesting that more research is necessary in this area.

**246**

## **Mathematics anxiety and fraction arithmetic knowledge: The role of a misconception**

Hilma Halme, Jo Van Hoof, Minna Hannula-Sormunen, Jake McMullen

University of Turku, Turku, Finland

### **Abstract (max 500 words)**

Mathematics anxiety is negatively associated with performance in different types of mathematical knowledge (Namkung et al., 2019). However, most of the research in primary school has focused on the relation between trait mathematics anxiety and whole number related knowledge. This is problematic because since recent studies on older students highlight that task characteristics, such as task difficulty, can influence the relation between mathematics anxiety and performance (e.g., Demedts et al., 2022; Trezise & Reeve, 2018). For instance, fractions are a challenging topic, because they require students to expand their number concept from natural numbers to fractions (Van Hoof et al., 2017; Vamvakoussi & Vosniadou, 2004). Thus, many students make systematic errors of inappropriately applying natural number strategies when solving fraction tasks (e.g.  $1/2 + 1/4 = 2/6$ ), referred to as the natural number bias (NNB; Ni & Zhou, 2005). Thus, the main aim is to examine trait and state mathematics anxiety (i.e. general and situation/task-specific) in relation to fraction arithmetic knowledge development.

The participants were 412 fifth and sixth grade students (50% female, mean age 11.89 years), who completed a digital test battery twice (six months in between). The measures included trait mathematics anxiety (questionnaire), whole number arithmetic knowledge, and fraction arithmetic knowledge. As a measure of state anxiety, students were prompted after each task to rate "how anxious were you during the previous task?". To investigate the role of the NNB, we focused on two groups of low performers with or without the NNB. Participants were categorised as belonging to the NNB group (n = 60) or No-NNB group (n = 59) according to their answers on the fraction arithmetic task at Time point 1. Students who answered all the fraction items incorrectly with a natural number based reasoning (e.g.  $1/3 + 1/3 = 2/6$ ) were categorized into the NNB group. Students who answered all fraction items incorrectly due to some other reasoning (e.g.  $1/2 + 1/4 = 2/4$ ) were categorized into the No-NNB group.

The results show that trait and state mathematics anxiety have different relations with fraction arithmetic knowledge. Furthermore, the NNB group had significantly lower state anxiety compared to the non-NNB group ( $p = .006$ ), even though both groups had low performance. This contrasts with previous literature, as generally low performance relates to high mathematics anxiety. Interestingly, the groups did not differ in their trait mathematics anxiety. In addition, the NNB group reported significantly lower state anxiety on the fraction task than the whole number task, while the No-NNB group had the opposite (Group  $\times$  Task  $p < 0.001$ ). The latter is in line with fractions being more difficult than whole numbers. Preliminary longitudinal analyses show that increased performance relates to increased state anxiety in the NNB group and reduced state anxiety in the No-NNB group.

This study highlights that mathematics anxiety-performance relations are influenced by a fraction misconception, namely the NNB. Students with a NNB may have lower initial perception of task difficulty; hence, the lower fraction state anxiety and the increase in state anxiety with increased understanding of fractions.

255

## Change in General Psychopathology from Adolescence to Adulthood: Emotion Regulation Strategies as a Moderator or Mediator of Stressful Life Events

Emily Gabriela Vira<sup>1,2,3</sup>, Siri Saugestad Helland<sup>2</sup>, Espen Røysamb<sup>4,1</sup>, Ragnhild Bang Nes<sup>1,5</sup>, John Kjøbli<sup>2</sup>, Jannike Kaasbøll<sup>6,7</sup>

<sup>1</sup>Norwegian Institute of Public Health, Oslo, Norway. <sup>2</sup>Regional Center for Child & Youth Mental Health, East and South, Oslo, Norway. <sup>3</sup>PROMENTA Research Center, Department of Psychology, University of Oslo, Oslo, Norway. <sup>4</sup>PROMENTA Research Center, Department of Psychology, University of Oslo, Oslo, Norway. <sup>5</sup>PROMENTA Research Centre, Department of Psychology, University of Oslo, Oslo, Norway. <sup>6</sup>Department of Mental Health, Norwegian University of Science and Technology, Trondheim, Norway. <sup>7</sup>Regional Centre for Child and Youth Mental Health and Child Welfare, Trondheim, Norway

### Abstract (max 500 words)

The general psychopathology factor ( $p$ -factor) captures comorbid symptomology and has revolutionized the way we approach and understand diagnoses. However, questions remain as to what explains the  $p$ -factor – and what can explain change in  $p$ . Identification of transdiagnostic factors that can explain the underlying mechanisms or moderators of change in  $p$  are particularly needed. Stressful life events (SLE) are major risk factors for developing symptoms of psychopathology, across developmental periods throughout the lifespan. Emotion regulation (ER) has been identified as a malleable transdiagnostic factor that functions either as a protective, promotive or risk factor, that may buffer or exacerbate change in psychopathology, dependent on the specific ER strategies. ER has been tested as both a moderator and mediator of adversity on psychopathology. The objective of this study is to test whether ER strategies differentially moderate or mediate the association between SLE and change in  $p$ . This study uses data from the Youth and Mental Health Study (YAMHS; Kaasbøll et al., 2021), a longitudinal study investigating various correlates of mental health outcomes. The data consist of three waves with 2464

adolescents participating in 1998 (T1), 2432 adolescents a year later in 1999 (T2), and 1266 in 2012 (T3), 12 years later. The analysis plan is as follows; first, we will run bi-factor confirmatory factor analyses to confirm the factor structure of p in the adolescent and adult samples. These models will be correlated to a sum score of overall symptoms across internalizing and externalizing problems, thought problems and attention difficulties. If the general p factor and sum score are correlated above .90, then we will proceed to use the sum score as our observed p-factor in subsequent analyses. A change score is then estimated by regressing p T1 onto p T2 to indicate the standardized residual change in p for adolescents, while p T2 is regressed onto p T3 to indicate the standardized residual change in p for adults. SLE is operationalized as a sum score from a list of stressful events that occurred within the past year of each assessment. We examine six ER strategies, including Rumination, Reactive Impulsivity, Non-acceptance, Problem-solving, Proactive Behaviour, and Social Support. Descriptive statistics will be provided. While controlling for gender, we will use Hayes Process model in R, to test whether each ER strategy moderates the association between SLE and change in p, both concurrently at T2 and T3, and prospectively (from T1 to T2, and from T2 to T3). Then we will run mediation models testing each ER strategy as a mediator between SLE and change in p. The implications of this study will provide more evidence for the transdiagnostic nature of ER strategies, in addition it will shed light onto whether ER is an underlying mechanism between SLE and p, or a moderator of the relationship, or whether it should be treated as both. This will benefit theory development of ER as a transdiagnostic process. We also provide evidence of what predicts change in p. Hence, our study also has important clinical implications.

257

## Turning Points in Processes of Career Goal Construction During the Post-High School Transition

Filomena Parada<sup>1</sup>, E. Saskia Kunnen<sup>2</sup>, Katariina Salmela-Aro<sup>3</sup>

<sup>1</sup>Universidade Lusófona, Porto, Portugal. <sup>2</sup>University of Groningen, Groningen, Netherlands. <sup>3</sup>University of Helsinki, Helsinki, Finland

### Abstract (max 500 words)

**Background.** During adolescence and young adulthood, young people are faced with many career transitions and decisions influencing the direction of their life course and development (Schoon & Heckhausen, 2019). The post-high school transition is one such example. It is also a challenging transition for many young people (Salmela-Aro, 2020). The career goals young people set, monitor, pursue, and renegotiate are crucial for how they navigate the post-high school transition (Parada & Salmela-Aro, 2022). Career goal appraisals – i.e., how young people think and feel about their goals – play a key role in success in goal pursuit is ascertained, therefore, in how goal (dis)engagement is steered, controlled, and regulated (Salmela-Aro, 2009).

**Study aim.** It is the aim of the study to investigate how young people going through the post high school transition navigate the complexity underlying such process. Specifically, it aims: (a) to identify turning points in the individual trajectories of the six dimensions of the career goal appraisals trajectories

(commitment, confidence, difficulty, effort, progress, and stress); (b) to verify if these turning points coincide with periods where participants stated having changed their career goals.

**Method.** Weekly, for approximately 9 months (from March to December 2019), 20 participants with 18-19 years of age that at the onset of the study attended the last year of high school received a notification in their personal mobile phones informing them it was time to fill their diary reports (see Parada & Salmela-Aro, 2022). The reports included: (a) an open-ended question asking participants to indicate if their career goal had changed during the past week – yes or no response; (b) six items asking participants to appraise their career goal, and to rate each one of the six dimensions of career goal appraisals (commitment, confidence, effort, difficulty, progress, stress) from 1 (not at all) to 100 (very) in a slide bar. Data collection used AWARE (Ferreira et al., 2015). Data analysis is ongoing. First, an overall appraisals score will be computed for each participant at each measurement by averaging their rating of the 6 dimensions of the career goals appraisals. After identifying exceptional points (points falling outside a computed confidence interval) in the trajectories of the overall appraisals score, random permutations will be performed to determine to which exceptional points corresponds a qualitative change – or turning point – in the overall career goal appraisals' trajectories. Finally, we will check for regularities between the measurements where the turning points were observed and the measurements where the participants stated having changed their goals.

**Results expected and Conclusion.** Results are expected to shed light into what constitutes a turning point in processes of career goal construction (e.g., measurements with high/low overall appraisals scores) and the extent to which these turning points are linked to the identification of a career goal change by the participants. This knowledge is expected to contribute to our understanding of change mechanisms driving the process through which career goals are (re)constructed in real-time during a major career transition, such as the post-high school transition.

259

## Supporting Parents to Reduce Child Anxiety: A Meta-Analysis of Programs and their Key Components

Karen Rienks<sup>1</sup>, Patty Leijten<sup>1</sup>, Liina Björg Laas Sigurðardóttir<sup>1</sup>, Janneke Staaks<sup>1</sup>, Elske Salemink<sup>2</sup>

<sup>1</sup>University of Amsterdam, Amsterdam, Netherlands. <sup>2</sup>Utrecht University, Utrecht, Netherlands

### Abstract (max 500 words)

**Background:** The potential of parent-focused interventions for child anxiety has been suggested in both prevention and treatment, but much remains unknown about their actual merit. Parent-focused interventions could complement existing interventions for anxiety in children. Specifically, focusing interventions on parents could target risk- and maintaining factors in the family context for anxiety in children. Moreover, child-focused interventions require high motivation and engagement of children, making parent-focused interventions more accessible for many families. However, intervention evaluation studies often test the effectiveness of interventions as a comprehensive whole, so little is known about what the most effective content of these interventions is. Knowledge on which

components are associated with better effects is crucial to understand why some interventions are more effective. Additionally examining combinations of components yields supplementary information, since components are rarely applied in isolation and may operate in interaction with each other. In the present study, we will examine the effects of parent-focused interventions on children's anxiety symptoms, at different levels of prevention (universal, selective, indicated). Subsequently, we will catalogue how often specific components are included in interventions and examine which individual components, as well as combinations of components, predict better effects in reducing child anxiety.

**Methods:** The study was conducted and reported in line with PRISMA guidelines, and preregistered on Prospero (CRD42022362983). In the autumn of 2022, we systematically searched PsycINFO, Medline, and Web of Science to identify eligible randomized controlled trials. Keywords related to children, intervention studies, parents, and anxiety were used.

This spring, we will analyze the data in R. To investigate main effects of parent-focused interventions in prevention and treatment contexts, and to examine which components are associated with stronger effects, robust variance estimation will be used. To examine whether clusters of components are associated with stronger intervention effects, a network meta-analysis will be conducted. A theory-driven approach will be used to create clusters of components.

**Expected Results:** The systematic review identified 1,542 unique hits that were screened for possible inclusion, which resulted in 152 reports for the full-text screening. Components we expect to identify are for instance psychoeducation, cognitive restructuring, and exposure. We expect to find different combinations of components. At ECDP we expect to have analyzed our data, and will be able to present our results.

**Discussion:** Findings on the effectiveness of prevention and treatment program components and their combinations can guide future intervention development, and contribute to our understanding of the role of parents in children's anxiety.

261

## Longitudinal associations between emotional well-being and subjective health in middle adulthood and the beginning of late adulthood

Emmi Reinilä<sup>1</sup>, Tiia Kekäläinen<sup>1</sup>, Marja-Liisa Kinnunen<sup>2,3</sup>, Milla Saajanaho<sup>1</sup>, Katja Kokko<sup>1</sup>

<sup>1</sup>Gerontology Research Center and Faculty of Sport and Health Sciences, University of Jyväskylä, Jyväskylä, Finland. <sup>2</sup>The wellbeing services county of Central Finland, Jyväskylä, Finland. <sup>3</sup>University of Eastern Finland, Kuopio, Finland

### Abstract (max 500 words)

**Objective of the study:** Middle adulthood and the beginning of late adulthood are times of different opportunities and challenges, such as in the areas of career, caregiving, and social relations. These could contribute to changes in individuals' well-being, for example, emotional well-being or physical health. Emotional well-being and physical health have been linked both cross-sectionally and longitudinally

during adulthood. Previous studies have suggested that different indicators of emotional well-being predict future physical health, but also vice versa. Fewer studies have investigated both directions simultaneously using multiple indicators of emotional well-being and physical health. This study aimed to investigate whether earlier emotional well-being or subjective health predicted later subjective health or emotional well-being between the ages of 42 and 61.

**Methodology:** The data used in this study was part of the Finnish Jyväskylä Longitudinal Study of Personality and Social Development (JYLS), which has followed the same participants since 1968 when they were eight years old. This study utilized data from three data collections where the participants were 42, 50, and 61 years old. The emotional well-being measures included life satisfaction, happiness, and positive and negative mood. Subjective health was assessed with questionnaires and items covering psychosomatic symptoms and self-rated health. The longitudinal relationships between emotional well-being variables and subjective health variables were investigated with a random intercept cross-lagged panel model (RI-CLPM) using Mplus. RI-CLPM enabled the investigation and differentiation of within-person (individual fluctuations) and between-person (trait-like stability) associations between emotional well-being and subjective health.

**Results:** On the between-person level, individuals who perceived higher life satisfaction, happiness, positive mood, and lower negative mood reported better health and fewer psychosomatic symptoms. Life satisfaction and negative mood were associated with self-rated health and psychosomatic symptoms also on the within-person level. More closely, cross-lagged paths were found both from emotional well-being and subjective health to subjective health and emotional well-being, respectively. The higher than the own average score on negative mood at age 42 predicted having more psychosomatic symptoms than the person typically did at age 50. Conversely, the higher than the own average score on negative mood at age 50 predicted better than own average self-rated health at age 61. In addition, better self-rated health, and fewer psychosomatic symptoms at age 50 predicted higher life satisfaction at age 61.

**Conclusions:** Emotional well-being and subjective health are linked in middle adulthood and the beginning of late adulthood also on the within-person level. The relationship seems to be bidirectional, as both emotional well-being indicators and subjective health indicators were found to predict each other even 8 to 12 years later. However, associations may vary during the lifespan and depend on the investigated variables, as the results showed that negative mood was conversely associated with psychosomatic symptoms and self-rated health during middle adulthood and the beginning of late adulthood.

263

## Examining motivation profile differences across students' mathematics identity, performance, and parents' attitudes

Pia Ilomanni<sup>1</sup>, Anu Laine<sup>1</sup>, Jelena Radišić<sup>2</sup>

<sup>1</sup>University of Helsinki, Helsinki, Finland. <sup>2</sup>University of Oslo, Oslo, Norway



**Abstract (max 500 words)**

Finnish elementary students' mathematics performance is well above average in international comparison, but research shows that it is declining. Students' motivation in relation to their mathematics performance hasn't been as strong as could be expected. This development in students' mathematics performance has highlighted the importance of additional mathematics competence and motivation research.

We used the person-centred approach to investigate Finnish third-, fourth-, and fifth-grade students' mathematics motivation profiles. In addition, we explored differences between the motivation profiles regarding students' mathematics identity, performance, and their parents' mathematics-related attitudes.

Participants were 304 Southern Finnish third-, fourth-, and fifth-grade students from five separate schools and their parents/guardians (N=241). The surveys were conducted during spring of 2021 in the pilot stage of an international research project focusing on students' mathematical motivation.

A latent profile analysis (LPA) based on 304 third, fourth, and fifth-grade students revealed three distinct types of math-related motivation profiles: highly motivated, non motivated and indifferent. Further investigation of the profiles showed that students' higher mathematics identity is represented strongly in highly motivated group, as are students' mathematics performance scores. Parents' self-reported low mathematics competence is highly represented among students belonging to the non motivated profile.

264

## **Overt and Subtle Discrimination and Psychological Well-Being: Examining the Mediating and Moderating Role of Ethnic-Racial Identity among Emerging Adults**

Tuğçe Aral<sup>1</sup>, Chiara Ceccon<sup>2</sup>, Elisabeth de Moor<sup>3</sup>, Yixin Tang<sup>4</sup>, Mariëlle Osinga<sup>5</sup>, Mariam Fishere<sup>6</sup>, Moin Syed<sup>7</sup>

<sup>1</sup>University of Potsdam, Potsdam, Germany. <sup>2</sup>University of Padova, Padova, Italy. <sup>3</sup>Tilburg University, Tilburg, Netherlands. <sup>4</sup>Utrecht University, Utrecht, Netherlands. <sup>5</sup>University of Groningen, Groningen, Netherlands. <sup>6</sup>Goethe University, Frankfurt, Germany. <sup>7</sup>University of Minnesota, Minnesota, USA

**Abstract (max 500 words)**

Ethnic-racial discrimination is a risk factor for psychological well-being (e.g., Benner et al., 2018; Pascoe & Smart Richman, 2009). Different forms of ethnic-racial discrimination (i.e., overt and subtle) have been separately associated with poorer psychological well-being among ethnic-racial minoritized groups (Jones et al., 2016; Lui & Quezada, 2019). Ethnic-racial identity has been hypothesized and reported as a mediator and moderator of the relation between discrimination and psychological well-being. However,

it is still unclear 1) how different forms of discrimination (i.e., overt, subtle) predict well-being over time, and 2) whether ethnic-racial identity functions as a mediator or moderator in this association.

In this study, we addressed these gaps in the literature by analyzing the different longitudinal associations of overt and subtle discrimination with psychological well-being (i.e., depression, substance use, and life satisfaction) and with a longitudinal design in a sample of ethnic-racial minoritized emerging adults. We also examined the role of two ERI dimensions (i.e., exploration and commitment) by testing their mediating and moderating roles in this relation. The aim was to provide some clarity on the association of discrimination with psychological well-being outcomes and the role of ERI therein, and to help guide future research on this topic.

This preregistered study explored the associations of overt and subtle discrimination with well-being using a sample of 323 ethnic-racial minoritized youth (Mage W1 = 18.03, 62.7% female) from a Midwestern public university in the US. Ethnic-racial identifications of the participants were Asian/Asian American (53.9%), Black and African/African American (18.3%), and Latinx (7.1%). All other participants reported more than one self-identification (18.9%). The surveys included three measures of psychological well-being (depression, substance use, and life satisfaction), two measures of ethnic-racial discrimination (overt and subtle discrimination) and two subscales of ethnic racial socialization (exploration and commitment).

Results from path models across three waves indicated no effect of overt discrimination, but emerging adults experiencing more subtle discrimination at the beginning of college reported more depressive symptoms after four months. Ethnic-racial identity did not function as a mediator or moderator in these associations. These findings indicate a more nuanced understanding of the role of ethnic-racial identity during emerging adulthood is needed.

266

## **Setting the Stage: A longitudinal analysis of the developmental and social influences of child self-regulation and sustained student engagement throughout primary and post-primary schooling in the UK**

Ioannis Katsantonis<sup>1</sup>, Jennifer Symonds<sup>2</sup>, Niall Costello<sup>2</sup>, Ryan Alberto Gibbons<sup>2</sup>

<sup>1</sup>University of Cambridge, Cambridge, United Kingdom. <sup>2</sup>University College Dublin, Dublin, Ireland

### **Abstract (max 500 words)**

#### Objective of the study

Recent longitudinal research has uncovered that early childhood self-regulation impacts educational outcomes in late adolescence and adulthood (Schoon et al., 2021). However, the mechanisms by which prior self-regulation impacts later school outcomes are not well studied nor understood. School engagement is viewed by researchers and practitioners as a gateway to learning and achievement, and has emotional, cognitive, and behavioural components joined by a self-regulatory core. In the current

study we tested whether school engagement could explain the link between early childhood self-regulation and late adolescent school persistence using a nationally representative British cohort sample. Furthermore, we examined the impact of parental education in this process to identify how educational resources at home might help children to develop better self-regulatory and school engagement competencies and encourage school persistence.

### Methodology

Accessing five waves of data from the British Millennium Cohort Study (N = 8,333), we used longitudinal structural equation modelling in Mplus version 8.0 to examine 1) the role that early childhood self-regulation plays in determining trait school engagement in adolescence, 2) how trait student engagement in adolescence impacts the probability of persisting in post-compulsory education, 3) whether trait school engagement in adolescence mediates the impact of early childhood self-regulation on late adolescent school persistence, and 4) the role of parental education in this process. We computed a trait-state-occasion model to disentangle trait and occasion specific variance from the school engagement measurements. This permitted us to evaluate the impact of early childhood self-regulation on trait engagement with schooling across three timepoints in adolescence.

### Results

Fitting with previous research findings, the model results demonstrated that early childhood emotional and behavioural self-regulation had a significant influence on trait engagement across the years of secondary schooling. Likewise, trait school engagement had a positive influence on persistence in post-compulsory schooling. Parental education was also positively associated with trait school engagement. In the first model without school engagement, early childhood self-regulation predicted late adolescence school persistence. However, after adding the state-trait-occasion engagement structure to the model, we found that trait school engagement fully mediated the impact of early childhood self-regulation on adolescent school persistence.

### Conclusion

Early childhood self-regulation is an important competence that aids the development of trait engagement in secondary school in adolescence. On first inspection, early childhood self-regulatory competencies are also important for late adolescent school persistence. However, this impact can be fully explained by the contribution of early childhood self-regulation to trait school engagement in adolescence. Enhancing school engagement through self-regulation therefore presents policy makers and educators with an important target for intervention. Our findings also indicate that greater parental education can provide children with a greater 'top down' capacity to regulate their emotions and behaviour, which in turn establishes greater capacity to maintain engagement throughout their school lives.

### References

Schoon, I., Nasim, B., & Cook, R. (2021). Social inequalities in early childhood competences, and the relative role of social and emotional versus cognitive skills in predicting adult outcomes. *British Educational Research Journal*, 47(5), 1259-1280. <https://doi.org/10.1002/berj.3724>

269

## Can Attachment and the Quality of Parents' Marital Relationship Prevent Adolescents Frequent Exposure to Sexually Explicit Materials?

Suha Daw<sup>1</sup>, Miri Scharf<sup>2</sup>

<sup>1</sup>University of Haifa, Haifa, Israel. <sup>2</sup>University of Haifa, Haifa, Israel

### Abstract (max 500 words)

Parents can play a crucial role in preventing online risk behaviors and harmful experiences. Studies regarding parental influence on adolescents' exposure to sexually explicit material have focused primarily on parental monitoring and family communication on sexuality. In conservative and traditional cultures, such as the Arab culture in Israel, engagement in sexual content before marriage is forbidden, and topics related to sexuality are rarely discussed with adolescents. Therefore, examining other family characteristics that are more relevant to conservative cultures is necessary. The present study examined the relation between attachment to both parents and perceptions regarding parents' marital relationships, and adolescents' exposure to sexually explicit material. Gender and developmental stage (grade) were expected to moderate the relation between attachment and quality of parents' marital relationship, and exposure to sexually explicit material.

Participants were 462 eighth and eleventh-grade students (59.31% females; Mage =14.98, SD=1.63) from Arabic-speaking secondary schools in Northern Israel. Participants completed questionnaires on attachment orientation with both parents, the quality of parents' marital relationship (levels of intimacy and conflict), and the frequency of exposure to sexually explicit material. Results indicate that participants who experienced greater/higher attachment anxiety and attachment avoidance in their relationships with parents, and greater conflict or less intimacy in parents' marital relationship reported higher levels of exposure to sexually explicit material. In the study, significant differences were found in exposure to sexually explicit material according to gender and grade, with males and eleventh graders being exposed to these materials at a higher rate than females and eighth graders. Furthermore, gender and grade moderated some of the associations between attachment dimensions and exposure to sexually explicit material. Among males, the association between anxiety and avoidance in attachment to fathers and exposure to sexually explicit material was stronger than among females. Further, there was a stronger association between avoidance in attachment to both parents and exposure to sexually explicit material among eleventh graders than among eighth graders.

In conclusion, secure attachment and better quality of parents' marital relationships appear to play a protective role from frequent exposure to sexually explicit material among adolescents. Adolescents with insecure attachment orientations might have difficulties maintaining close relationships, resulting in feelings of rejection and abandonment. To cope with these feelings, adolescents might turn to sexually explicit material. Moreover, parents who have conflictual marital relationships and less intimacy within their relationship might be mentally and emotionally distracted and, consequently, unable to supervise, and communicate with their children effectively. Thus, adolescents from families experiencing high levels of conflict and low levels of intimacy may seek out sexually explicit materials more than others. In addition, the findings of our study are consistent with previous findings regarding gender and grade differences in the frequency of exposure to sexually explicit material. Further studies

of the role of the media in the sexual development of adolescents, especially those from a conservative culture, would provide additional insight into which adolescents, and under what circumstances, sexually explicit material might pose a risk to their healthy development.

**279**

## **Italian and Japanese at kindergarten: a cross-cultural investigation of executive functions**

Giulia Giordano<sup>1</sup>, Marianna Alesi<sup>1</sup>, Kyoko Matsumura<sup>2</sup>

<sup>1</sup>University of Palermo, Palermo, Italy. <sup>2</sup>Bukkyo University, Kyoto, Japan

### **Abstract (max 500 words)**

#### Objective of the study

Executive functions (EFs) refer to the top-down neurocognitive processes involved in goal-directed control of thoughts, emotions, and behaviors. Self-regulation is the outward manifestation of EFs in adaptive behaviors (McClelland & Cameron, 2012). The development of EFs starts in childhood, with changes during preschool years (Diamond, 2013). The development of EFs is shaped by both biological factors, with neural changes in the cortical and subcortical regions (Fiske & Holmboe, 2019), and environmental factors as culture, which are crucial in shaping structural and functional brain organization (Chiao et al., 2013). A consistent amount of literature examines whether cultural differences exist in EFs during preschool years, highlighting that preschoolers from Eastern cultures outperform their Western counterparts on EFs (Ellefson et al., 2017; Sabbagh et al., 2006; Schmitt et al., 2018). The aim of the current study was to investigate the cross-cultural variations in Italian and Japanese preschoolers' performance on EFs tasks.

#### Methodology

A total of 98 kindergarteners (Italy:49 of which 49% girls; Japan:49 of which 63% girls) were included in the study. Italian and Japanese children were aged between 61-74 months (Italy: Mage=68.4 months; SD=3.08; Japan: Mage=68.5 months; SD=3.26).

EFs were assessed using Day-Night Stroop test (from the FE-PS 2–6: Batteria per la valutazione delle Funzioni Esecutive in età Prescolare - Usai et al., 2017) to test cool inhibition. Working memory battery (Lanfranchi et al., in press) to assess working memory. Gift Wrap and Snack Delay (from the FE- PS 2–6: Batteria per la valutazione delle Funzioni Esecutive in età Prescolare - Usai et al., 2017) to evaluate delay of gratification and hot inhibition, respectively.

#### Results

To investigate cultural differences between Italian and Japanese kindergarteners' performance on EFs tasks, a MANOVA was performed. Results showed a significant multivariate effect of group [Wilks'

$\lambda=.752$ ,  $F(6,88)=4.84$ ,  $p<.001$ ;  $\eta^2=.55$ ]. Univariate ANOVAs indicated that Japanese children showed higher scores on cool and hot inhibition and delay of gratification tasks. No differences were found for working memory.

## Conclusion

There is considerable evidence that preschool children from East countries outperform their Western counterparts on EFs tasks (Ellefson et al., 2017; Sabbagh et al., 2006; Schmitt et al., 2018). Findings from the current study are in line with previous studies showing that the Japanese children outperform the Italian counterpart, in particular on inhibition and delay of gratification but not in working memory tasks. Marked contrasts between East and West in fledgling EFs might be ascribed to differences in cultural values and educational settings. Early education policies in Eastern cultures stress the role of self-regulation in preschoolers' daily life (Wang et al., 2016). Classroom practice in Eastern countries adopts intensive training on skills as inhibition and attention (Lan et al., 2009). More proactive task-related instructions are given (Lan et al., 2011), which provide opportunities for children to practice self-regulation skills (Sabbagh et al., 2006). Whereas, Western educational practice encourages children free choice and self-expression. Starting from cross-cultural differences, future research should identify common features among cultures to foster a generalizable educational style to promote EFs development.

288

## Teaching beyond knowledge: How teachers influence Chinese children's executive function in preschools

Jiayin Zheng<sup>1</sup>, Chengyi Xu<sup>2</sup>, Michelle Ellefson<sup>1</sup>, Claire Hughes<sup>3</sup>

<sup>1</sup>Faculty of Education, University of Cambridge, Cambridge, United Kingdom. <sup>2</sup>Department of Psychology, Tsinghua University, Beijing, China. <sup>3</sup>Department of Psychology, University of Cambridge, Cambridge, United Kingdom

### Abstract (max 500 words)

#### Objective of the study

A wealth of studies conducted in Western countries have indicated that the quality of dyadic teacher-child relationships is associated with preschoolers' executive function. However, few studies have been carried out in other socio-cultural contexts, such as mainland China where educational practices are quite different from the West. Moreover, previous studies yield inconsistent findings regarding the impact of teacher-child relationships on preschoolers' executive function, with contrasts perhaps attributable to between-study differences in sample characteristics (e.g., gender ratio and family socioeconomic status). Therefore, the present study aims to (1) revisit the link between teacher-child relationships and executive function in early childhood in mainland China, which is a typical Confucian context; (2) identify the potential moderating effects of children's gender and family socioeconomic status, to elucidate how parents and teachers jointly impact children's executive function development.

## Methodology

Situated in mainland China, this cross-sectional study involved 406 preschoolers (Mage = 5.17 years; SDage = 0.61; 193 girls) who completed measures of selective attention, working memory, and self-regulation (Fish Flanker, Backward Animal Span, and the Head-Toes-Knees-Shoulders tasks). These tasks were administered by trained researchers remotely via recorded sessions on Tencent Meeting (performing the function of Zoom). The children's parents provided family socioeconomic status and children's demographic information in questionnaires, and their teachers reported on their relationships with the children using the Student-Teacher Relationship Scale (Pianta, 2001). The varying parental education and family income indicate a high level of demographical diversity in the current sample. This study will build structural equation models to explore the associations between teacher-child relationships and preschoolers' executive function as well as the potential moderators, with children's age and verbal ability included as control variables.

## Expected results

This study expects to find that the quality of teacher-child relationships is positively associated with preschoolers' executive function in mainland China. In addition, preschoolers' gender and family socioeconomic status can moderate this association: girls benefit from teacher-child closeness more than boys, and children from "at-risk" socioeconomic background benefit from teacher-child closeness more than children from "advantageous" socioeconomic background.

## Conclusion

Despite that only the teacher-report measure of teacher-child relationships is utilised, this study will add to the scarce literature in the East to explore whether preschoolers' executive function is associated with teacher-child closeness and conflict in mainland China and whether this association varies by child characteristics. In comparison to the previous literature situated in the Western context, this exploration may interestingly unveil a different school ecology in mainland China.

## Reference

Pianta, R. (2001). Student-Teacher Relationship Scale-Short Form. Lutz, FL: Psychological Assessment Resources, Inc.

**291**

## **Profiles of discrepancies in self-evaluated social competence relative to peer and teacher reports during adolescence and links with depressive symptoms.**

Pamela Zoe Topalli<sup>1</sup>, Emmanuel Acquah<sup>2</sup>, Eero Laakkonen<sup>1</sup>, Koen Veermans<sup>1</sup>, Niina Junttila<sup>1</sup>

<sup>1</sup>University of Turku, Turku, Finland. <sup>2</sup>Åbo Akademi, Vaasa, Finland

**Abstract (max 500 words)**

We examined discrepant self-views of social competence (SC) relative to peer and teacher evaluations and their associations with depressive symptoms. We also investigated the transitions of profile membership throughout three years. The participants were 390 Finnish pupils of lower secondary school. Latent profile analyses identified five profiles; adolescents with quite congruent (toward positive) perceptions and positively discrepant perceptions reported the lowest scores of depressive symptoms. Adolescents with quite congruent (toward negative), negatively discrepant, and extremely positively discrepant perceptions of SC reported the highest depressive symptoms. Almost half of the sample remained in the same profile from the first to the third year of lower secondary school. Results suggest that systematic discrepancies (either negative or extremely positive) might be particularly useful indicators for depressive symptoms throughout adolescence. Despite the transient nature of this developmental phase, negatively or extremely positively discrepant SC views seem to persist throughout time. Intervention efforts should consider this subset of the population whose self-views remain far from others' evaluations to prevent the establishment of dysfunctional cognitive patterns. Teacher's role seems particularly useful in recognizing students that require attention.

**294**

### **A novel intervention for supporting social-emotional development – evidence from the Puppetry and Emotional Resilience programme.**

Joanna Wincenciak, Órla Bracken, Eve Esteban

University of Glasgow, Glasgow, United Kingdom

#### **Abstract (max 500 words)**

The COVID-19 pandemic and associated lockdowns have had a documented impact on children's social-emotional wellbeing and development (e.g. Linnavalli & Kalland, 2021). The acute outcome of school closures and increased parental stress resulted in more disruptive behaviour, and a decline in prosocial actions and cognitive reasoning. Less is known, however, about the longer-term impact on child social-emotional and cognitive development, and consequently on their school readiness. Here, we measured the developmental changes in social-emotional skills including empathy, emotion regulation, and emotion recognition in 4-6 year old children, following participation in a school-based social-emotional learning programme utilising puppetry. The Puppetry and Emotional Resilience programme (P&ER) has been developed to address the growing need for a holistic and embodied approach to wellbeing education, and to offer children ecosystems to support the development of their social-emotional skills, communication, and ultimately learning. Based on Zins et al. (2007) framework for Social and Emotional Learning (SEL), the programme utilised the power of puppetry and storytelling to promote five broad clusters of competencies in children: self-awareness, self-management, social awareness, relationship skills, and decision making.

The six-week long programme has been delivered between October 2021 and September 2022 in seven schools and nurseries across rural and urban areas in Scotland, reaching over 300 children from low socio-economic backgrounds. In a mixed-methods, quasi-experimental design, we evaluated the impact of the programme collecting data from teachers (n=11), and parents and children (n=15) at two time



points, 8-12 weeks apart. To measure key social and emotional competencies in children we obtained: 1) teachers' assessment of children's behaviours, emotions and relationships with peers and adults (SDQ); 2) parents' assessment of children's affective and cognitive empathy (GEM); 3) children's emotion recognition and Theory of Mind (ToM) skills using a computer-based emotion authenticity detection task (Wincenciak et al., 2022). The results of the study show a positive impact of the programme on children's social-emotional development. Analysis of within-individual changes in empathy, showed an increase in empathy in all but 1 of the participating children (n=9). On average, children showed 15% more empathy following the programme, with particular benefits being observed for an affective component of empathy with an increase of 22%.

Children's social-emotional competencies, emotion regulation and behaviour also improved, with teachers reporting 26% less negative symptoms (e.g. less tearfulness), 26% less peer problems (e.g. bullying), and 10% more pro-social behaviour (e.g. helping and sharing). Accuracy in emotion recognition increased by 16%. Children's ability to self-regulate emotion and their social competence, including successful interpretation of emotional states of others, strongly underpin their ability to establish positive and trusting relationships, their school readiness, and future educational outcomes. Here, we present evidence that art-based interventions using puppetry have the potential to contribute to the development of social-emotional skills and wellbeing in young children. Such interventions might mitigate the psychological and social impact of the COVID-19 pandemic, and provide a therapeutic tool for children who are at a higher risk of developing emotional dysregulation and behavioural problems.

**310**

## **Early mathematical interventions for multilingual children – A meta-analytic review**

Katri Luomaniemi<sup>1</sup>, Andreas Gegenfurtner<sup>2</sup>, Sanni Kankaanpää<sup>1</sup>, Jake McMullen<sup>1</sup>, Minna Hannula-Sormunen<sup>1</sup>

<sup>1</sup>University of Turku, Turku, Finland. <sup>2</sup>University of Augsburg, Augsburg, Germany

### **Abstract (max 500 words)**

Multilingualism is a common phenomenon in today's early childhood education and care (ECEC). However, there is little evidence of how to best support multilingual children's early mathematical development, a crucial predictor of later life outcomes. This is problematic because multilingual children risk falling behind their peers in mathematics. The current study aims to provide a better basis for developing ECEC maths support by systematically reviewing existing empirical evidence of mathematical intervention studies for multilingual children aged 3 to 5.

We conducted a systematic literature review using explicit methods to identify, select, and critically appraise available evidence on the subject. The pool of 452 studies was narrowed down by examining the titles and abstracts of the studies, that fit the following inclusion criteria: (a) the participants were within the 3 to 5 years age range, (b) the treatment group received additional mathematical instruction above their typical ECEC experience, (c) the focus of the intervention was solely on mathematical skills,

(d) the intervention was implemented in ECEC settings, (e) children's mathematical skills were assessed, (f) the analyses focused on multilingual children either exclusively or as a subgroup, (g) the study was published in English. Finally, to be included in the quantitative analysis, the study had to provide adequate data for effect size calculation.

First, we reviewed the intervention research by summarizing the study features, mathematical content, and intervention characteristics. Second, a meta-analysis was conducted to quantitatively combine data from sufficiently homogeneous studies to determine the effectiveness of these interventions. Third, we explored the effects of moderator variables: the use of home language, non-linguistic materials, culturally responsive instructional approach and mathematical language on children's mathematical outcomes. These practices are recommended for enhancing multilingual children's early mathematical skills in the former literature.

24 studies published in 1999–2021 met the inclusion criteria for our systematic review. The preliminary analysis of the mathematical content showed: (1) all interventions included a numeracy component, (2) seven interventions focused solely in numeracy skills, (3) 17 interventions were more comprehensive covering at least two mathematical domains. In addition to numeracy, the most investigated mathematical domains were geometry, measurement, and patterns. Eight interventions included a mathematical language component. Next, we calculated the average weighted effect size of the eight studies that had adequate data to be included in meta-analysis. The average weighted effect size with one outlier removed for these numeracy interventions was small ( $g = 0.27$ , 95% CI = 0.18, 0.37). Finally, we will conduct (a) qualitative analysis by examining the use of home language, non-linguistic materials, culturally responsive instructional approach, and mathematical language in the interventions and (b) quantitative analysis on how these recommended practices affect children's mathematical skills.

The results add to the evidence base regarding the effectiveness of early mathematical interventions for multilingual children. This research provides an opportunity to advance the understanding of how to reduce the gap between mono- and multilingual children's early mathematical skills already in ECEC and provide children with more equal access to education.

**320**

## **Post COVID-19 perspectives on time trends in adolescent violence: the association with cross-national differences in COVID-related policy and perceived COVID impact**

Sophie Walsh

Bar Ilan University, Ramat Gan, Israel

### **Abstract (max 500 words)**

Objective.

Up until 2018, time trends have shown a decrease in levels of adolescent violence (bullying, cyberbullying and fighting). However, the COVID-19 pandemic and the related policy measures which impacted on young people, such as school closures, levels of isolation and mask wearing, as well as increased levels of screen use for learning and communication raise questions as to how these may have impacted on young people's levels of violence on and off the internet. Based on ecological models suggesting that young people's well-being is impacted on by both proximal and distal measures, as well as a General Aggression Model which suggests that young people's violence levels will be related to both person and situational factors, we explore the extent to which decreases in violence levels continue to decrease through the COVID period, and to what extent levels of violence can be seen to be related to person (gender, age, individual perceived COVID impact) as well as country level differences (cross-national differences in school closures and stringency policies as well as country level differences in perceived COVID impact).

### Methodology.

The study used data from five cycles of the Health behaviors in School-aged Children (HBSC) cross-national survey, from 2005/6-2021/2. In the 2021/22 survey, we have to date been able to include over 30 countries including over 200,000 adolescent boys and girls. Five individual-level outcome variables were 60-90 day bullying and cyberbullying (perpetration and victimisation) and 12-month fighting (each dichotomously coded). On a country level, the stringency index and the levels of school closures over the past year from <https://ourworldindata.org/covid-school-workplace-closures#school-closures> were merged with the HBSC data. In addition an aggregated country-level perceived COVID-19 impact measure was created. Weighted Poisson regressions estimated the relative risk of each form of violence associated with current or cumulative school closures, stringency and perceived COVID impact with controls for the fixed effects of time, age and SES, and country and school as a random effect.

### Results.

Results show gender differences in time trends, such that boys report a continued decrease in levels of violence through to 2021-22, while for girls a decrease has been slowed or stopped, in the case of physical fighting and bullying victimization. In addition, while limited effect was shown for an association between country-level policies (school closures and stringency), significant associations were found for both genders between perceived levels of COVID impact and all violence measures.

### Conclusion.

Results suggest that levels of adolescent violence over the COVID period may have been less affected per se by distal policy, such as school closures and stringent policies, but rather by the way that the COVID-19 pandemic was experienced, individually and collectively by the young person and those around them. Results also suggest that results of the COVID-19 pandemic may be different for boys and girls and also that policy recommendations should focus on how policy directions may "trickle down" to young people, such that greater emphasis can be placed on helping young people cope with how they perceive the pandemic.

323

## Oral language, cognitive and socio-emotional skills of children with diverse language profiles: A longitudinal study

ASIMINA RALLI<sup>1</sup>, Eleni Kalliontzi<sup>1</sup>, Petros Roussos<sup>1</sup>, Olympia Palikara<sup>2</sup>

<sup>1</sup>National and Kapodistrian University of Athens, Athens, Greece. <sup>2</sup>University of Warwick, Warwick, United Kingdom

### Abstract (max 500 words)

Studies on the early developmental trajectories on oral language, cognitive and socio-emotional skills of children with diverse language profiles aged 4-6 years old are limited. The aim of the present longitudinal study was to: (a) compare the performance on oral language, cognitive and socio-emotional skills of typically developing children (TD) and children with Developmental Language Disorder (DLD) in two time points (at the age of 4-5 and at the age of 5-6 years old); and (b) examine similarities and differences in the developmental trajectories between the two groups. One hundred and fifteen participants, 53 children with DLD (M.age = 4.5 years) and 62 children with TD (M.age = 4.5 years) were assessed at two time points with a battery for oral language skills (phonological and morphological awareness, oral language comprehension, vocabulary knowledge, narrative speech and pragmatics), a series of tasks tapping short term memory (repetition of digits, words and pseudowords) and verbal and nonverbal EFs skills (updating-accuracy, inhibition –accuracy and reaction time-, and cognitive flexibility). Also, their socio-emotional skills (emotional symptoms, conduct problems, hyperactivity, peer problems, and prosocial skills) were assessed by their parents and teachers.

Children with DLD performed statistically significantly worse across all oral language and cognitive measures compared to the TD children at both assessment points, except for inhibition in which both groups had similar performance. Furthermore, both groups had the same level on their socioemotional skills at the age of 4-5 years old, except for hyperactivity in which children with DLD had significantly more difficulties compared to the TD children. One year later, socioemotional skills of both groups we assessed within normal range, however children with DLD had statistically significant more difficulties in prosocial skills and presented more emotion symptoms and conduct problems, compared to the TD children.

Regarding similarities and differences in the developmental trajectories across time, TD children increased their performance across all developmental domains. Children with DLD showed an improvement across all oral language skills except from morphological awareness, repetition of digits and words, as well as updating (accuracy), inhibition (accuracy and reaction time), and cognitive flexibility. They also exhibited more emotion symptoms, conduct problems, difficulties in prosocial skills and peer relations and lower levels of hyperactivity.

Our findings also highlighted that across time, children with DLD had a slower improvement in phonological awareness and narrative speech, repetition of digits and words, as well as verbal and non-verbal cognitive flexibility, compared to the TD children. A different developmental pattern was observed for morphological awareness and repetition of pseudowords. Regarding socioemotional skills, TD children demonstrated faster improvement in prosocial skills and a faster decrease in their emotion

symptoms compared to the children with DLD. In contrast, children with DLD showed a faster elimination of hyperactivity in comparison to the TD children. The results are discussed in terms of the: (a) developmental profiles children with different language skills exhibit, (b) range of challenges children with DLD face across different developmental domains (c) similarities and differences observed in the developmental trajectories between the two groups.

**324**

### **Different cognitive appraisals of the Covid-19 pandemic by three adolescent age groups from the Czech Republic**

Lenka Štěpánková, Jana Fikrlová, Andrea Albrechtová, Jakub Brojáč, Jan Šerek, Petr Macek

The Psychology Research Institute, Brno, Czech Republic

#### **Abstract (max 500 words)**

Objective: Covid-19 pandemic was an unknown situation for all, some adapted better than others. Lazarus (e.g.: Lazarus, 1991) defines a process of evaluating a certain situation by primary cognitive appraisal, focused on evaluating benefit, harm and threat of that situation, and a secondary cognitive appraisal, focused on finding available resources to handle the situation and ways to cope. As the pandemic situation was such a drastic change in everyday lives of Czech citizens, this contribution will provide a unique opportunity to explore their experience and perception of the situation.

Results from three adolescent age groups will be introduced, comparing their cognitive appraisal of the pandemic.

Methodology: We conducted six online focus groups altogether with adolescents of different age, 11-12 y., 14-15 y. and 18-19 y., two focus groups within each age group. We collected data from 28 participants (13 males, 15 females; Mage: 14.36). Data were analysed using reflexive thematic analysis (Braun & Clarke, 2019)

Results: We constructed several themes that capture Covid-19 pandemic from our participants' perspective. The youngest age group at first perceived the "pandemic as an adventure", while this theme appeared also in the middle age group. The adventure was mostly related to the online teaching, not going to school and it seemed like a holiday for some of our participants. But later on, many participants' feelings of an ease of new adventure were changed for a feeling of "pandemic as an isolation", where many talked about missing their friends. The 18-19 age group mentioned "pandemic as a cabin fever", which referred to the necessity to spend all the time in a day with family members and not have an option to leave home. Also, they perceived "pandemic as a lack of old habits", which referred to known and loved free time activities, such as travelling, sports and culture. Furthermore, the oldest age group experienced "pandemic as an uncertainty", where they mentioned the feeling of not knowing what was going on balanced by the need to look for information on their own, by themselves. The interesting theme that emerged in the two oldest age groups was "pandemic as an opportunity",

where participants mentioned that they tried new hobbies, found new motivation to get better at certain things and/or try to find a new way of living.

Conclusion: Our attempt to understand how adolescents had perceived Covid-19 pandemic revealed that the older our participants were, the more they perceived the pandemic as a threat, as possibly harmful. It is possible that older age groups realize the worldwide consequences of such pandemic into more detail than the younger cohort. The younger participants also expressed negative thoughts and feeling, mostly related to missing their friends and activities, but they also mentioned positive aspects, certain benefits of such situation, such as no school, possibility of cheating during online tests, fun with friends during online lessons at a separate chat and so on.

326

## Can adolescents Satisfy Their Basic Psychological Needs on Social Media? Social Media Quality and Quantity in the Prediction of Sleep and Well-being Using a daily-diary study and smartphone monitoring

Marlies Van de Castele<sup>1,2</sup>, Koen Ponnet<sup>2</sup>, Bart Soenens<sup>1</sup>, Maarten Vansteenkiste<sup>1</sup>

<sup>1</sup>Ghent University - Developmental Psychology, Ghent, Belgium. <sup>2</sup>Ghent University - Media Innovation and Communication Technology, Ghent, Belgium

### Abstract (max 500 words)

As today's adolescents are maturing in a digitized society, concerns have been raised about the impact of the widespread use of social media on adolescents healthy psychological development (e.g., negative emotions) and physiological functioning (e.g., poor sleep). Yet, the exact relationship between social media use (SMU) and adolescents' health remains rather inconclusive due to several conceptual and methodological challenges<sup>1</sup>. Therefore, the **objective** of the present is to overcome these challenges by (1) operationalizing and examining *the quality of SMU* relying on the well-defined Basic Psychological Needs Theory (BPNT), a mini-theory within Self-Determination Theory (SDT<sup>2,3</sup>), (2) using a smartphone application to objectively register adolescents' *social media quantity*, and (3) adopting a *daily-diary design* to capture how naturalistic daily fluctuations in SMU.

**Methodology.** The present 7-day diary-study investigates the interplay between qualitative and quantitative aspect of adolescents' SMU in the prediction of emotional states, vitality and sleep outcomes on a daily level. Adolescents reported on their BPN-experiences when using social media, their vitality and emotional states twice a day (4 P.M. and 8 P.M.). Each morning, participants filled out a short diary regarding their sleep the previous night. To have objective measures of social media quantity, participants installed MobileDNA4 on their smartphones which tracked their social media activity. A summary of the study design and survey measures can be consulted in *Figure 1*.

**First results.** In total, 179 adolescents (Mage = 15.24, range: age 12-18, 54.5% female) participated in the study. The means, standard deviations and within- and between person correlations are displayed in

*Table 1 and 2.* In line with our hypotheses, BPN-satisfaction online yielded positive (within & between person) correlations with more positive emotions and sleep outcomes, while BPN-frustration and more time on social media (self-reports) were associated with negative emotional states and worse sleep outcomes. Note that the MobileDNA data is not yet included in the tables, as it is currently being processed. Primary analyses will be carried out in the upcoming months.

**Conclusion.** SDT provides a refreshing insight in number of key issues in the research field of SMU today. *First*, because social media are considered *unique developmental contexts*<sup>5</sup> which not only engender BPN-frustration, but also offers opportunities for BPN-satisfaction. This need-perspective helps to counter the dominantly negative perspective on adolescents' SMU. As such, the notion of needs helps to provide a theory-driven account for heterogeneous effects of SMU. *Second*, the landscape of social media is inherently diverse and fluid, making it essential to pinpoint *key underlying mechanisms* (i.e., BPN-satisfaction and -frustration) that hold across changing social media platforms and features. *Third*, BPNT opens the door to examine whether adolescents can learn to differently use social media. Rather than focusing merely on a quantitative reduction, the question raises whether adolescents can learn in targeted interventions to use social media in *a qualitative different way*, that is, in the service of getting their BPN met. *In addition*, this study is *methodologically renewing* as combines objectively logged data with diary techniques to examine naturalistic daily SMU in adolescence.

**328**

## **Cross-cultural differences in executive function: Do assessment contexts matter?**

Laure Lu Chen, Jean Anne Heng, Claire Hughes

University of Cambridge, Cambridge, United Kingdom

### **Abstract (max 500 words)**

**Objectives.** On average, children in East Asia appear to outperform their Western counterparts on executive function (EF) tasks: indeed, a recent systematic review indicates this advantage persists from preschool to adolescence (Schirmbeck et al., 2020). Our paper includes two studies, of which the first is a meta-analysis of this literature, aimed at quantifying overall contrasts and between-study heterogeneity.

Challenging traditional models of EF development that highlight endogenous influences, recent models put contextual factors centre-stage. For example, Doebel (2020) portrays children as becoming increasingly adept at using control in the service of specific goals, which are shaped by preferences, beliefs, and values. From this perspective, conclusions about contrasting competencies are likely to be premature, as existing studies appear almost exclusively classroom-based, such that cultural contrasts in school norms may underpin differences in task performance. The COVID-19 pandemic led to mass school closures, requiring new approaches to assessing children that provide an unexpected opportunity to test this posited context effect. Study 2 thus examines whether the expected East-West EF contrast is sustained when home-based zoom visits are used to assess EF.

## Methodology.

**Study 1.** Extending prior systematic review work, we will search seven databases for peer-reviewed articles published since 2000 with titles that contain “executive function”, “working memory”, “selective attention”, and “inhibitory control”, using the following inclusion criteria: (1) English language peer-reviewed journal articles; (2) Quantitative study design; (3) Cross-cultural comparison between Western and Eastern Asian children.

**Study 2.** Adopting a virtual approach to assessing children’s EF skills during home-based zoom visits conducted out of school hours, we have gathered data from 240 HK Kindergarten children (Mean age = 5.02; SD = .316; 120 girls) and 260 UK Reception Year children (Mean age = 5.40; SD = .310; 135 girls). On both sites, children completed three EF tasks measuring working memory, selective attention and inhibitory control. Based on a well-established codebook, these data were then scored for multi-group confirmatory factor analysis. Covariates include child verbal ability and family socioeconomic status.

**Expected Results.** For Study 1, alongside obvious moderators (e.g., year of publication, size of sample, number of tasks) our analyses will include contextual setting to confirm whether existing evidence for cross-cultural contrasts is restricted to the classroom context. For Study 2, the Wald test of latent means will indicate whether EF differences between the two participant groups exist outside the class context.

**Conclusions.** One limitation of Study 2 is the insufficient diversity of participants to represent the respective Western and Eastern demographics in the empirical design, in which only the UK and HK children were included. Despite this limitation, this study makes a methodological contribution and implies possible contextual influences on assessment.

## References

Doebel. (2020). Rethinking Executive Function and Its Development. *Perspectives on Psychological Science*, 15(4), 942–956. <https://doi.org/10.1177/1745691620904771>

Schirmbeck, Rao, N., & Maehler, C. (2020). Similarities and differences across countries in the development of executive functions in children: A systematic review. *Infant and Child Development*, 29(1), e2164. <https://doi.org/10.1002/icd.2164>

**337**

## Family communication and children’s problematic behaviours: Can technoference in parent-child interaction be a clamp?

Matea Bodrožić Selak<sup>1</sup>, Marina Merkaš<sup>1</sup>, Ana Žulec<sup>1</sup>, Vanesa Varga<sup>1</sup>, Marina Kotrla Topić<sup>2</sup>, Katarina Perić Pavišić<sup>2</sup>

<sup>1</sup>Catholic University of Croatia, Zagreb, Croatia. <sup>2</sup>Institute of Social Sciences Ivo Pilar, Zagreb, Croatia

**Abstract (max 500 words)**



It is not unusual that digital device use interrupts everyday interactions between family members in the family context. This is referred to as “technology interference” or “technofence” in literature (McDaniel & Coyne, 2016). Previous research has found that digital device use in a family context interferes with cohesion and connection between family members (Stockdale et al., 2018). Therefore, the aim of this study was to examine the role of technofence due to parents’ use of smartphones in the relationship between family communication and children’s internalizing problems, externalizing problems, and hyperactivity. The data comes from the third wave of a longitudinal study on smartphone use among Croatian children within the research project “Digital technology in the family: patterns of behavior and effects on child development”. Children (N = 228, mean age = 12.64) completed the Family Communication Subscale of the Family Functioning Scale (Merkaš, 2020), the Internalizing Problems, Externalizing Problems, and Hyperactivity subscales of the Social Skills Improvement System (Gresham & Elliott, 2008), and a newly constructed scale for measuring technofence in parent-child interactions due to the parent’s use of the smartphone. The results showed good psychometric properties of the scale for measuring technofence in parent-child interactions. The mediation analysis showed that technofence due to parents’ smartphone use during parent-child interactions mediates the relationship between family communication and children’s internalized problems, externalized problems, and hyperactivity. Poorer family communication is associated with more frequent technofence in parent-child communication due to parents’ smartphone use, which is then associated with higher levels of internalized and externalized problems, and hyperactivity in children. In addition, poorer family communication was found to contribute directly to more pronounced internalized and externalized problems and hyperactivity in children. The findings are discussed in the context of sociotechnological model and the media displacement hypothesis.

**338**

### **Family determinants of positive youth development in Croatia**

Toni Maglica<sup>1</sup>, Gabrijela Vrdoljak<sup>2</sup>, Miranda Novak<sup>3</sup>, Lucija Šutić<sup>3</sup>, Darko Roviš<sup>4,5</sup>, Josipa Mihić<sup>3</sup>, Hana Gačal<sup>3</sup>

<sup>1</sup>Faculty of Humanities and Social Sciences Split, Split, Croatia. <sup>2</sup>Faculty of Humanities and Social Sciences Osijek, University of J.J.Strossmayer Osijek, Osijek, Croatia. <sup>3</sup>Faculty of Education and Rehabilitation Sciences, University of Zagreb, Zagreb, Croatia. <sup>4</sup>Faculty of Medicine, University of Rijeka, Rijeka, Croatia. <sup>5</sup>Teaching and public health institute of Primorsko-goranska county, Rijeka, Croatia

#### **Abstract (max 500 words)**

Positive youth development is a well accepted and researched agenda, while the 5C model has been the most empirically tested. The core ideas in PYD stress the dynamic relationships between the individual and the context. In the same time, supporting developmental settings and relationships are needed to create opportunities and resources for an adolescent. There is a body of evidence indicating that a stable and supportive home environment, positive relationships, open communication, parental warmth, but also parental monitoring and family satisfaction form a protective environment that promotes and protects healthy youth development. Studies from the PYD framework are indicating that

adequate parental monitoring and control delays initiation in risk activities, decreases adolescent substance use, diminishes risk sexual and other delinquent behaviour.

The aim of this paper is to examine how family demographics and parenting determinants predict 5C's of positive youth development. The research was conducted within the broader project: Testing the 5C framework of positive youth development: traditional and digital mobile assessment - P.R.O.T.E.C.T. funded by Croatian Science Foundation (UIP-2020-02-2852). Sample of 3559 adolescents were students in the first year of secondary school (Mage = 15.12, SD = .39) from eight cities in Croatia (54% female, 3% would not declare their gender). To answer the objective, Parental Monitoring questionnaire examined five dimensions – Parental knowledge, Youth disclosure, Parental solicitation, Parental and Overcontrol. Positive youth development was measured by Short Measure of the Five Cs, PYD-SF, to examine Competence, Confidence, Character, Connection and Caring. Demographic variables included family socioeconomic status and family structure.

First of all, results show an important moderator effect of socioeconomic status: youth from families with better income have higher competencies, confidence and connection dimension. Also, youth from families with lowest income report upon better parental practices. Hierarchical regression analyses have shown that youth disclosure and parental solicitation are positive predictors of all PYD characteristics. Parental knowledge is a positive significant predictor of Caring, Connection and Character. Parental control is a positive significant predictor of Character and Caring and negative significant predictor of Competence, Confidence and Connection. Overcontrol significantly negatively predicts all PYD characteristics except Competence.

In terms of practice, these findings suggest that societies should ensure adequate living conditions and quality leisure resources for all families, in order to support positive youth development and quality parenting as well. Results indicate that parental practices enable adolescents to feel safe, protected, and important to their parents. At the same time, parents should be encouraged to increase their engagement in students' lives, offering more support and opportunities for participation.

**341**

## **Associations of Individual and Contextual Factors and Internalizing Problems of Croatian Adolescents**

Miranda Novak<sup>1</sup>, Toni Maglica<sup>2</sup>, Josipa Mihić<sup>1</sup>, Darko Roviš<sup>3,4</sup>, Hana Gačal<sup>1</sup>, Lucija Šutić<sup>1</sup>

<sup>1</sup>Faculty of Education and Rehabilitation Sciences, University of Zagreb, Zagreb, Croatia. <sup>2</sup>Faculty of Humanities and Social Sciences, University of Split, Split, Croatia. <sup>3</sup>Faculty of Medicine, University of Rijeka, Rijeka, Croatia. <sup>4</sup>Teaching and public health institute of Primorsko-goranska county, Rijeka, Croatia

**Abstract (max 500 words)**

Positive development depends on appropriate and timely support and engagement of youth to foster the development of their individual strengths. However, adolescents may encounter individual, social and environmental factors that lead to poorer mental health. Global data clearly show deteriorating adolescent mental health: it is estimated that more than 15% of adolescents have a diagnosable mental illness, with anxiety and depression being the most prevalent. This paper examines the individual, family, and school contexts of Croatian adolescents in terms of their association with symptoms of internalized problems. The work highlights the prevalence of depression, anxiety, suicide, and eating disorders symptoms and examines the impact of individual and contextual factors.

The research was conducted as part of the broader project: Testing the 5C framework of positive youth development: traditional and digital mobile assessment - P.R.O.T.E.C.T., funded by the Croatian Science Foundation (UIP-2020-02-2852). A cross-site survey was conducted among 3559 adolescents residing in the five most populous cities in Croatia to investigate the relationship between different contexts and internalizing symptoms in adolescents. Participants were 54% female, 3% did not specify their gender, and were on average 15.12 years old. The main measures assessed depression, anxiety, stress, symptoms of suicide, eating disorder symptoms, coping, parental monitoring, and school climate. The associations of interest were examined using structural equation modeling.

Results showed that increased internalized symptoms were associated with lower emotional and problem coping ability, lower openness to communication with parents, greater parental overcontrol, and poorer school climate. The results also showed important gender differences. It appears that parent-initiated communication, asking questions, and prompting, which are often associated with monitoring and rulemaking, should not be intrusive, as adolescents may perceive them as overly controlling and threatening, which in turn may have negative consequences for their mental health. It seems that parental control could be seen as psychological control, which can lead to various internalizing problems. School climate is one of the most important determinants of mental health promotion.

The paper clearly shows the extent to which schools can prevent internalized symptoms in adolescents. Parental practices are also important, especially good balance of monitoring and caring communication. It appears that adolescent-inspired, voluntary communication and disclosure of information by adolescents is also one of the strongest protective factors for adolescent mental health. Mental health promotion and prevention programs should consider both school and family contexts and may be more effective if they take gender differences that bring different developmental contexts into consideration.

**343**

## **The impact of parental involvement in violent extremist groups on child development and wellbeing**

Joana Cook<sup>1,2</sup>, Lynn Schneider<sup>1,2</sup>

<sup>1</sup>Leiden University, Leiden, Netherlands. <sup>2</sup>International Centre for Counter-Terrorism, The Hague, Netherlands

## **Abstract (max 500 words)**

Children in Europe are increasingly exposed to violent extremism (VE) in their families. The EU-funded PREPARE Project – which stands for Promoting Collaborative Policies of Inclusion Relating to Children of Far Right and Islamist Parents in Western Europe – addresses the knowledge gap related to the impact of parental involvement in VE on children’s general development, which goes beyond features associated with radicalisation. Specifically, our study captures the unique experiences of children raised in VE families in Europe and abroad, assesses the prevalence of adverse childhood experiences, and evaluates its impact on children’s development. The major aim of this study is to identify the risk and protective factors that exist for children in VE family environments.

PREPARE draws on an extensive systematic literature review and empirical data derived from interviews with a wide range of front-line practitioners and individuals concerned with supporting the children of VE parents in various national contexts. Our multilingual literature review captures over 100 publications in German, French, English, Spanish and Dutch. We found that an emerging body of literature focuses on radicalisation processes among children and young adults growing up in families with extremist influences. However, research rarely captures the impact of extremist exposure in their home environment on children’s wellbeing and development. Correspondingly, research concerned with the impact of parental involvement in VE groups on their children predominantly focuses on the intergenerational transmission of ideology and not on children’s general wellbeing. Children raised in families associated with VE groups are not a homogeneous group. They include boys and girls of various ages who are raised in jihadist and right-wing extremist families in Europe and those who were taken to live under ISIS in Syria or Iraq by their parents or who were born there. These children are likely exposed to extremist ideology and to unique life experiences that result from their parents’ affiliation with violent extremist organisations. Moreover, they may face a wide range of unique stigmas and vulnerabilities that can lead to social exclusion. While these experiences are likely to impact their development, most evaluations focus on violent extremism and radicalisation as the primary social developmental outcome.

Drawing on Bronfenbrenner’s Ecological System Theory, we were able to analyse the impact of parental involvement in terrorist organisations on children’s development in multiple contexts. Our research draws out how parental involvement with ISIS and other domestic Islamist and right-wing extremist organisations shapes their encounters within the immediate setting of the family, school, and neighbourhood, as well as with the broader cultural values, laws, and customs of their home countries. We found extensive new evidence concerning both the adverse childhood experiences and the high levels of adaptability and resilience of children exposed to violent extremism through their families. My presentation will focus on the approach we developed for this, and early findings from our research. I would also be keen to discuss with participants if/how our approach and findings aligns with children exposed to adverse childhood experiences in other contexts.

**348**

**Within-person processes of co-rumination, depressive symptoms, and friendship quality in early and late adolescence**

Esther Bernasco<sup>1</sup>, Jolien van der Graaff<sup>1</sup>, Rebecca Schwartz-Mette<sup>2</sup>, Susan Branje<sup>1</sup>

<sup>1</sup>Utrecht University, Utrecht, Netherlands. <sup>2</sup>University of Maine, Orono, USA

### **Abstract (max 500 words)**

It has been argued that co-rumination has adjustment trade-offs: If adolescents report more co-rumination with a close friend, they report more depressive symptoms, but also more friendship quality. This is likely because co-rumination, like rumination, involves a repeated focus on negative aspects of problems, while it also involves self-disclosure, which is related to higher levels of friendship closeness (Rose, 2002). Some empirical evidence for these trade-offs exist, with studies showing that adolescents who report more co-rumination experience higher levels of depressive symptoms, but also better friendship quality (e.g., Bastin et al., 2014; Rose et al., 2007). However, it is unknown whether these between-person associations also apply at the within-person level. In other words, we do not know whether individuals' increases in co-rumination are also associated with and predictive of increases in depressive symptoms and friendship quality. Furthermore, we do not know whether the associations between co-rumination, depressive symptoms, and friendship quality are bidirectional or whether one direction of effect is stronger than the reverse. Importantly, these adjustment trade-offs imply a suppression effect, where the overall effect of co-rumination on depressive symptoms may be weaker or even disappear because the direct effect is positive, whereas the indirect effect through friendship quality is negative. Lastly, friendships may differ between boys and girls, and change over time, so the trade-offs of co-rumination may not be the same across gender and age.

The current study aimed to: (1) test the associations between co-rumination, depressive symptoms, and friendship quality longitudinally and bidirectionally in a within-person framework, (2) examine adjustment trade-offs by testing whether the effect of co-rumination on depressive symptoms is mediated by friendship quality, and whether the effect of friendship quality on depressive symptoms is mediated by co-rumination, and (3) examine the effect of age and gender on these associations.

The following pre-registered hypotheses were tested: First, we expected moderate between-person and correlated change effects, and small predictive effects between co-rumination, friendship quality, and depressive symptoms. Second, we expected that the effect of co-rumination on depressive symptoms is mediated by friendship quality, characterized by a positive direct effect and a negative indirect effect. Similarly, we expect that the relationship between friendship quality and depressive symptoms is mediated by co-rumination, characterized by a negative direct effect and a positive indirect effect. Third, we expect that the hypothesized links between depressive symptoms, co-rumination, and friendship quality are stronger for girls than boys, and for late adolescents than early adolescents.

We tested these hypotheses using random-intercept cross-lagged panel models in a 4-wave longitudinal study. A total of 510 Dutch adolescents, of which 290 younger adolescents (approx. 12 years old), and 220 older adolescents (approx. 18 years old) reported on their own depressive symptoms, as well as friendship quality and co-rumination with a close friend.

Although analyses are still in progress, preliminary results show that the adjustment tradeoffs found in between-person designs do not translate to within-person processes. Results from this study, will further unravel the complex processes surrounding co-rumination that may take places at the intraindividual level.

349

## Collaborative Problem-Solving in the Educational Context: The Role of Emotional Intelligence

Tijana Nikitović, Kristina Mojović Zdravković, Ana Altaras Dimitrijević

University of Belgrade, Faculty of Philosophy, Belgrade, Serbia

### Abstract (max 500 words)

The development of soft skills, especially those required for collaborative problem-solving (CPS) and teamwork, is vital for both individual and societal progress in the contemporary world. Among other factors, CPS may be greatly facilitated by team members' ability to accurately perceive and understand, and effectively manage emotions—in short, by their emotional intelligence (EI) abilities. Therefore, the objective of our study was to provide a systematic review of current empirical research on the effects of emotional intelligence on CPS in the education context. The standardized literature search was conducted in March 2022 in three electronic databases: PsycINFO, PubMed, and World of Science. The review was performed according to the PRISMA 2020 guidelines, using the following inclusion/exclusion criteria: Study variables included at least one ability/skill from the domain of EI; the collaboration involved a small group of peers and took place within an educational context (school, university); a scientifically valid method was used to explore the possibility that EI affects the quality of CPS. Our final sample consisted of 40 publications, reporting the results of 43 single studies. Only two of these studies involved school-aged participants, as the vast majority of research has been conducted with university students. Also, experimental (n=8) and qualitative studies (n=7) were less represented, with the bulk of relevant research employing a correlational design (n=28). Studies involving experimental manipulations (i.e., induction, facilitation, or training) of EI abilities were all conducted with university students. These studies confirm that enhancing EI abilities can directly or indirectly improve performance in CPS. All but one qualitative study focused on emotion regulation skills, two of which were conducted in the school context. Overall, there is consistent and robust evidence that students' EI abilities contribute to better team performance and positively affect relational aspects of CPS, most notably team cohesion, team trust and conflict resolution, and moderate effects of other group variables. In particular, EI abilities moderate the effects of team diversity on CPS by minimizing its negative and bolstering the positive effects. Studies focusing on how emotional abilities affect individual-level outcomes in CPS are scarce, and the findings are less consistent. Based solely on correlational evidence, some findings suggest EI abilities positively affect individual performance in CPS, while others report non-significant correlations. It is important to note that the relationship between EI abilities and CPS has been explored much more comprehensively in higher education compared to basic or secondary education. Apart from several qualitative studies with preadolescents, there are virtually no studies on the given topic with participants from the high-school population, though this might be the right age to focus on EI abilities and collaboration skills. Even at the university level, students of business have been recruited as participants disproportionately more than students from other fields, which thus remain underrepresented. This imbalance calls upon future studies to recruit students from other domains, especially since the present findings demonstrate the general importance of EI abilities for CPS.

351

## **Tell me how you sleep, and I'll tell you who you are: the longitudinal associations between identity processes and sleep quality in adolescents.**

Francesca De Lise, Valeria Bacaro, Martina Grimaldi, Alice Andreose, Vincenzo Natale, Lorenzo Tonetti, Elisabetta Crocetti

University of Bologna, Bologna, Italy

### **Abstract (max 500 words)**

**Background and objectives.** Adolescence is conceived as the stage of life where individuals face multiple changes, marking the transition between childhood and adulthood. Being in the middle of a crucial transitional age leads to dramatic changes in adolescents' sleep, as developmental tasks and the demands of relevant social contexts (e.g., family, school, peers) may increase their stress levels and affect their sleep habits. Moreover, adolescents face the important task of answering the question "Who am I?" and building their identity in different domains, such as the educational and interpersonal ones. Recently, increasing literature has been focusing on the connection between these two dimensions, both relevant for adolescents' well-being, mostly focusing on particular domains such as ethnic identity (Yip et al., 2020), leaving unexplored the associations with other identity domains shared by all adolescents. This study aims to fill this gap, disentangling the longitudinal associations of adolescents' objective and subjective sleep quality (i.e., subjective sleep problems, objective sleep efficiency, and duration) with their identity processes (i.e., commitment, in-depth exploration, and reconsideration of commitment; Crocetti et al., 2008) in educational and interpersonal domains.

**Methodology.** Participants were drawn from the ongoing ERC-Consolidator project IDENTITIES (G.A. 101002163). This longitudinal research involved 1st and 3rd year students (at the first assessment) from several high schools located in the northern part of Italy. For the present study, data from the wave collected in January-February 2022 (T1), April-May 2022 (T2), and September-October 2022 (T3) were used. Participants (1,367 adolescents; Mage=15.73; 50% females) were invited to wear the actigraph Micro Motionlogger Watch around the non-dominant wrist for seven consecutive days, 24-h per day. At the end of the actigraphic recording, participants filled in questionnaires assessing their identity processes (U-MICS; Crocetti et al., 2008) and subjective sleep quality (Mini Sleep questionnaire; Natale et al., 2014) during class hours. Models were tested in Mplus 8.6 (Muthén & Muthén, 1998-2017) to estimate reciprocal associations between identity processes and objective and subjective sleep quality over time.

**Results.** Results of cross-lagged panel models highlighted significant reciprocal associations between identity processes in both educational and interpersonal domains and objective and subjective sleep quality. Specifically, poor sleep quality was associated with higher levels of in-depth exploration in the interpersonal domain, and with higher levels of reconsideration of commitment in the educational domain at a later time-point. Moreover, a reciprocal association between diurnal sleepiness and interpersonal in-depth exploration was found. Additionally, diurnal sleepiness were also found to be associated with lower levels of educational commitment. Regarding objective sleep efficiency and duration, the first one was associated with higher levels of in-depth exploration and lower levels of reconsideration of commitment in the interpersonal domain. Sleep duration, in contrast, was associated

with lower levels of educational reconsideration of commitment, while commitment in the same domain was linked to higher sleep duration over time.

Conclusion. Both subjective and objective sleep quality assessments are associated with identity processes, showing that it is of utmost importance to further explore these links and to consider them within an identity domain-specific approach.

**353**

### **Is adolescents' educational identity processes influenced by their chronotype? A longitudinal study.**

Francesca De Lise, Martina Grimaldi, Alice Andreose, Valeria Bacaro, Vincenzo Natale, Lorenzo Tonetti, Elisabetta Crocetti

University of Bologna, Bologna, Italy

#### **Abstract (max 500 words)**

Background and objectives. During adolescence, important changes in biological and environmental factors may lead to dramatic changes also in youth's sleep schedules (Tarokh et al., 2019). Given the importance of sleep for cognitive, emotional, and physical health in adolescence, the high prevalence of sleep loss in this population has been increasingly deepened in recent studies. Particularly, research has focused on the associations between sleep schedule and sleep/wake cycle with several issues related to the school context (e.g., school start time, Yip et al., 2022; school learning, Valdez et al., 2014; academic performance, Alfonsi et al., 2020), showing a strong impact of school features on sleep dimensions and vice-versa. Moreover, school is one of the most important contexts in which adolescents are embedded while they are building their identity. In this vein, the purpose of the present study is to explore if adolescents' chronotype (i.e., evening, intermediate, and morning type) can be associated with different levels of educational identity processes (i.e., commitment, in-depth exploration, and reconsideration of commitment; Crocetti et al., 2008, 2022).

Methodology. Participants were 1,367 adolescents (Mage=15.73; SD=1,22; 50% females) involved in the ongoing project IDENTITIES (G.A. 101002163). They completed questionnaires at three time-points in 2022 (T1: January, T2: May, T3: October), assessing their circadian typology (Reduced version of the Morningness - Eveningness Questionnaire for Children and Adolescents – rMEQ-CA; Tonetti et al., 2006) at T1, and educational identity processes (Utrecht-Management of Identity Commitments Scale; Crocetti et al., 2008) at T1, T2, and T3. Latent growth curve models were tested in Mplus 8.6 (Muthén & Muthén, 1998-2017) to model the development of educational identity processes, then multi-group analyses were tested whether identity developmental trajectories differed across the three groups of circadian type.

Results. Multigroup analyses revealed significant differences between the circadian typology groups in the associations with educational identity processes. Particularly, educational commitment was found to be higher for both the intermediate and the morning types compared to the evening type (respectively,



Wald = 18.921;  $p=0.000$ ; and Wald = 16.445;  $p=0.000$ ). Regarding educational in-depth exploration, it was found to be higher for intermediate and morning types compared to evening type (respectively, Wald = 4.473;  $p= 0.0344$ ; and Wald= 14.189;  $p= 0.0002$ ). Additionally, levels of educational in-depth exploration were slightly significantly higher for the morning type compared with the intermediate type. Regarding educational reconsideration of commitment, this dimension was found to be higher for the evening type, compared with both intermediate and morning types (respectively, Wald= 6.350;  $p = 0.0117$ , and Wald= 7.683;  $p= 0.0056$ ).

Conclusions. Overall, this study highlights that the chronotype influences educational identity processes, showing the importance of putting a spotlight on considering individual differences in circadian rhythm as a crucial factor in adolescents' development to improve their adjustment and general well-being.

**362**

## **Socio-emotional competencies in early adolescence: Developmental pathways and comparison of before and during-pandemic age cohorts**

Juuso Repo, Sanna Herkama, Christina Salmivalli

University of Turku, Turku, Finland

### **Abstract (max 500 words)**

Given the importance of socio-emotional competencies for academic and emotional adjustment, little is known about their development during adolescence. The current study aims to explore how these competencies evolve across early adolescence, and how the COVID-19 pandemic affected their development. Specifically, the study focuses on three competencies critical for resilience in later life: academic self-efficacy, perseverance, and positive reappraisal.

The pandemic provides a unique context to the study. The radically transformed school and interpersonal environment may have hindered socioemotional development for many, but also offered new realms to connect, learn, and grow. As mediators of socioeconomic inequality in education outcomes, it is important to understand whether pandemic conditions like remote schooling have exacerbated the interindividual differences in the competencies under study.

The study is based on a developmental comparison of two age cohorts. The first cohort, representing normative development, went through grades 6 to 9 before the pandemic in 2016-2019, and the second during the pandemic, in 2019–2022. The data comes from the Wellbeing and Engagement Collection (WEC), which is based on an annual survey conducted in over 80% of South Australian schools. For example, in 2019, the WEC captured information on more than 95,000 students from 526 schools.

The study contrasts before- and during-pandemic cohorts with latent growth curve modeling and examines the age-related change in the socioemotional competencies. Further, the study explores how sociodemographic factors, such as prior problems in peer/teacher relations, and the initial level of the competencies moderated the competence development in both cohorts. The findings will provide new

insights into patterns of developmental change in academic self-efficacy, perseverance, and positive reappraisal, and how peer and teacher relations are associated with that development in two different contexts – before and during the pandemic.

**363**

## **Spontaneous focusing on numerical order: Capturing a novel aspect of early numeracy skills**

Heidi Harju, Jo VanHoof, Cristina Nanu, Jake McMullen, Minna Hannula-Sormunen

Department of teacher education, University of Turku, Turku, Finland

### **Abstract (max 500 words)**

Understanding both the cardinal and the ordinal properties of numbers are crucial for children's early and later mathematical development (Fuson, 1988). Moreover, children's tendency to spontaneously notice mathematical features in their surroundings supports their mathematical development (for a review, see Verschaffel et al., 2020). Especially relevant for cardinality recognition skills of young children is their tendency to spontaneously focus on numerosity (SFON) (Hannula & Lehtinen, 2005).

So far, most research on early numerical development has concentrated on cardinal skills. Less researched is young children's understanding of the ordinal properties (e.g. numerical order) of numbers, that build the basis for grasping the logic behind our number system (Sarnecka & Carey, 2008). Moreover, ordinal skills are shown to predict later mathematical achievement (Lyons et al., 2016; Malone et al., 2021), and might even exceed cardinal skills as a predictor of mathematical skills later in life (e.g. Lyons et al., 2014). However, most studies concerning ordinal skills have focused on school-aged children or adults, leaving out the crucial phase wherein ordinal skills develop. Furthermore, studies of spontaneous mathematical focusing tendencies have not specifically looked into the role of children's spontaneous focusing on numerical order in their mathematical development.

The current research aims to investigate whether children have individual differences in spontaneous focusing on numerical order (SFONO), and how these individual differences are associated with their other early numerical skills. This study includes 3.5 – 4.5 -year-old children ( $N = 152$ ). Here, we report the data of the first measurement point of a longitudinal study. To measure children's SFONO, three novel tasks were developed. In these tasks, children were presented with play situations that offered possibilities to recognize and produce a numerical order from sets of items, but the children were not specifically asked to do so. This is important, since the children should not be aware of the mathematical nature of the activities, to be able to capture their spontaneous (i.e. self-initiated) focusing on numerical aspects. Apart from SFONO, children's SFON, cardinality recognition, numerical ordering, ordinal number word understanding, and number sequence production were measured.

Preliminary results show that children had individual differences in their SFONO tendency ( $M = 1.84$ ,  $SD = 1.86$ ). These differences were significantly related to cardinality recognition ( $r = .57$ ,  $p < .01$ ), numerical ordering ( $r = .49$ ,  $p < .01$ ), ordinal number word understanding ( $r = .43$ ,  $p < .01$ ), and number sequence

production ( $r = .57, p < .01$ ). Moreover, hierarchical regression analysis shows that SFONO explains 2 % unique variance in children's numerical ordering skills after controlling for number sequence, cardinality recognition, and SFON. Together, these findings suggest that SFONO is a relevant, distinguishable component of early numerical development.

364

## Stability of Personality Traits across 28 Years in Adulthood

Katja Kokko<sup>1</sup>, Lea Pulkkinen<sup>2</sup>, Tiia Kekäläinen<sup>1</sup>

<sup>1</sup>Gerontology Research Center and Faculty of Sport and Health Sciences, University of Jyväskylä, Jyväskylä, Finland. <sup>2</sup>Department of Psychology, University of Jyväskylä, Jyväskylä, Finland

### Abstract (max 500 words)

**Objective of the study:** Personality traits show some general trends across time in adulthood, namely, towards less neuroticism and more conscientiousness and agreeableness. However, still most of these conclusions are based on cross-sectional studies where the cohort- and age-effects may be compromised. Further, cross-sectional studies cannot analyze the relative stability of the traits. More longitudinal studies, covering various adult phases of life, are needed. The main aim of the present study was to investigate both the absolute and relative stability of personality traits among the same individuals (women and men together) across 28 years, from age 33 to 61.

**Methodology:** The analyses were based on the Jyväskylä Longitudinal Study of Personality and Social Development (JYLS) where the same, initially 8-year-old, participants (N = 369) have by now been followed until age 61 (N = 206). At age 61, the participants still represented well the original random sample and their respective Finnish age cohort (born 1959). In this study, we utilized information about personality traits collected when the participants were 33, 42, 50, and 61 years (303 participants had at least one measurement available). They were measured using the NEO Five-Factor Inventory (Costa & McCrae, 1989) with 60 items (12 for each personality trait). Mixed methods analysis was used to examine changes in the levels of the traits over time and Pearson correlations were used to preliminarily analyze the rank-order stability of the traits.

**Results obtained:** In all traits, there were statistically significant changes in the mean levels from age 33 to 61. Neuroticism steadily decreased whereas conscientiousness and agreeableness steadily increased from age 33 to 42 to 50 to 61. Conversely, extraversion increased from age 33 to 42 but, after that, decreased to age 50 and, further, to age 61. Finally, openness increased from age 33 to 42 but then decreased until age 61. The participants retained statistically significantly their rank-order in the traits from age 33 to 61. The correlations from the previous age to the next ranged from .62 (conscientiousness from age 33 to 42) to .84 (openness from age 50 to 61) and from age 33 to 61 from .49 (neuroticism) to .78 (openness).

**Conclusion:** The present longitudinal analyses confirm previous findings of the absolute changes towards decreased neuroticism and increased conscientiousness and agreeableness. Less consistent

changes were observed in extraversion and openness, and it should be further studied whether their development follows a non-linear trend. Our findings also reveal considerable relative stability, although varying between the traits, within adulthood. In the future, it would be important to study whether there are developmental differences in the traits between women and men as well as between those either high or low in the trait in question. Further, it would be interesting to analyze the factors which might explain observed absolute and relative stability.

**379**

## **Math identity and motivation of elementary school students**

Ksenija Krstić<sup>1</sup>, Barbara Blažanin<sup>1</sup>, Katarina Mičić<sup>1</sup>, Aleksandar Bauca<sup>1</sup>, Jelena Radišić<sup>2</sup>

<sup>1</sup>University of Belgrade, Faculty of Philosophy, Belgrade, Serbia. <sup>2</sup>Faculty of Educational Sciences, University of Oslo, Oslo, Norway

### **Abstract (max 500 words)**

The concept of identity opens a new space for the study of learning in a cultural context. This concept is gaining more and more importance in the milieu of education because it can contribute to an alternative explanation of why some children disengage and underachieve in a certain domain. For example, beliefs about whether one is a "math person" can have important implications for student engagement and performance in math-related activities. Math identity (MI) can be defined as a student's mathematics-related self-concept that encompasses a student's self-understanding, and the perception of how significant others see them in the context of doing mathematics. MI is influenced by various sources - input from significant others, objective performance feedback, social and intraindividual dimensional comparison, etc. In this paper, we focus on motivation for learning math, exploring how is students' MI in primary school related to their motivation for learning mathematics, in particular perceived competence, and task values, aligned to the Expectancy-value theory. Also, we investigated potential gender and grade differences in relative to MI. The research is part of an international, longitudinal project, and the results presented here are based on the first wave of national data from Serbia.

Participants were 2160 primary school students, from 3rd (n=1139, 50,1% female, Avg.= 9.24 years) and 4th grade (n=1021, 49.5% female, Avg.=10.23 years). The research was conducted in schools, during regular classes, when students filled in three paper-and-pen questionnaires. The Expectancy-Value Scale (Peixoto et al., 2022) was used to assess 4 dimensions of students' motivation in learning and doing math - interest, utility, attainment, and perceived competence. The mathematics identity scale, measuring students' math-related self-concept, consisted of 6 items, with a 4-points Likert scale, created for this study. Finally, a mathematics test covering major curricular topics for each grade was used for measuring achievement. To analyze the relationship between observed constructs, we used MPLUS 8.8 in testing regression models, with motivational dimensions and math achievement score as predictors, and math identity as a criterium variable. Since motivational dimensions were highly correlated, we tested four separate models for each dimension. Students' grade and gender were introduced in models as control variables. Results revealed that all four models fit the data well. All predictors were significant for students' math identity except gender, with motivational dimensions having a stronger association

than math achievement. Among motivational dimensions, interest and perceived competence have the strongest association with students' MI. Regarding the students' grade, our results showed that older students perceive themselves less as "math persons" than younger students. These results contribute to our better understanding of the relationship between identity and motivation in primary school students. Also, they indicate that the lower achievement of students, as they progress from grade to grade, may not be the result of the lack of abilities but due to the lack of more positive self-relevant beliefs regarding how competent they are at math.

**380**

### **Avoiding being affiliated with unpopular peers: An overlooked yet impactful motivation driving youth's aggression**

Tessa Lansu, Yvonne van den Berg

Behavioural Science Institute, Radboud University, Nijmegen, Netherlands

#### **Abstract (max 500 words)**

Whereas research on aggression and status motivation in youth has predominantly looked at a promotion focus (striving for something desirable), also a prevention focus (wanting to avoid something undesirable) can be an important determinant of social behavior (Shah et al., 2004). Youth who may fear ending up at the bottom of the peer status hierarchy may resort to using (proactive) aggression to secure their own position. As qualitative studies show that youth indeed think that motivation to avoid low status can drive aggressive behavior such as bullying (Spadafora et al., 2020; Strindberg et al., 2020), the current study examines how both striving for high popularity and wanting to avoid low popularity are associated with aggression toward classmates. It does so from a person-centered as well as a variable-centered perspective.

Participants were 1177 Dutch secondary school students (M age = 14.4 years, 48% girls). They completed 3 items regarding striving for high popularity based on existing questionnaires (Li & Wright, 2014; Ojanen et al., 2005;  $\alpha = .90$ ), and 3 items on avoiding low popularity consisting of a mirrored version of the high popularity items, of which 2 items on not wanting to be affiliated with unpopular peers were most reliable ( $\alpha = .78$ ). The correlation between both status motivation measures was .51, indicating that these are related but distinct motivations. Aggressive behaviors were measured through peer nominations.

The person centered cluster analyses showed there is a group unconcerned with status (39%) and a group both concerned with having high status and avoiding affiliation with unpopular peers (44%). A small but still substantial group (17%) does not strive for high popularity at all, but is motivated to avoid being affiliated with unpopular peers. ANOVAs with cluster membership as between-subject variable showed that youth not concerned with status were less likely to gossip than other youth  $F(795,2) = 6.04$ ,  $p = .003$ , and less likely to exclude others than youth high in both types of status motivation  $F(670,2) = 6.15$ ,  $p = .002$ .

The variable centered regression analyses with both motivations as predictors showed that physical aggression, name calling, gossiping, excluding, proactive aggression and bullying were all significantly positively predicted by the motivation to avoid being affiliated with unpopular peers, whereas the motivation to strive for high popularity was not uniquely related to any of these aggression outcomes (see Table 1).

The person centered approach validates that distinguishing between both motivations is meaningful, as it shows that individuals exist who want to avoid being affiliated with unpopular peers, but do not care for having high popularity. Moreover, results from the variable centered approach clearly demonstrate why motivation to avoid being affiliated with unpopular peers should be included in future research on aggression instead of (or in addition to) striving for high popularity. Although both status motivations are moderately positively correlated, only motivation to avoid affiliation with unpopular peers predicted a large set of aggression variables - relational aggression in particular - whereas motivation to strive for high popularity did not.

**385**

## **Age dynamics of Peer Social Status in Elementary School Students in Inclusive Education**

Tatiana Yudina

HSE University, Moscow, Russian Federation

### **Abstract (max 500 words)**

The study investigates the distribution of peer social status and its age dynamics in students of the second, third and fourth grades in inclusive education. As inclusive classes constitute heterogeneous groups of students with different educational needs, the distribution of sociometric statuses is expected to have a specific character with a decrease of the extreme social positions such as popular and isolated. The study sample consists of 328 students aged 7 to 11 years, including 18 children with special educational needs, studying in two inclusive schools in Moscow. The special educational needs of the 18 children (11 girls and 7 boys) have been confirmed by an independent medical and psychological commission. Social status in the peer groups has been assessed using sociometric tools indexing students' social preferences. To test the hypothesis about age dynamics, the data of the second, third and fourth grades were compared by using the Pearson test. The proportion of children with advantageous social statuses ("stars", "accepted") increases in third and fourth grades compared to the second grades, the difference is statistically significant ( $\chi^2 = 43,696$ ;  $p < 0,001$ ). The statistically significant differences between the distribution of sociometric statuses in inclusive classes and the age norm revealed in the conditions of traditional education were found ( $\chi^2 = 140,0$ ;  $p < 0,001$ ). The results allow to conclude about the positive quality of peer relations in studied inclusive classes. An increased number of popular students and a decreased number of socially isolated students indicate the formation of peer groups where children with different needs are accepted that corresponds to the principles of an inclusive approach in education.

386

## Links of imaginary audience and personal fable to self-conscious emotions and cognitions in adolescence and emerging adulthood

Elisavet Chrysochoou<sup>1</sup>, Evangelia Galanaki<sup>2</sup>, Salomi Tzintziloglou<sup>1</sup>, Konstantina Xanthopoulou<sup>1</sup>, Foteini Souliou<sup>1</sup>, Foteini Kokkinou<sup>1</sup>, Amalia Grentzali<sup>3</sup>, Smaragda Voutria<sup>1</sup>

<sup>1</sup>Aristotle University of Thessaloniki, School of Psychology, Thessaloniki, Greece. <sup>2</sup>National and Kapodistrian University of Athens, Department of Primary Education, Athens, Greece. <sup>3</sup>Aristotle University of Thessaloniki, School of Psychology, Thessaloniki, Greece

### Abstract (max 500 words)

The present study focuses on the imaginary audience and personal fable constructs within Lapsley's (1993) "New Look" model of adolescent egocentrism, in which Elkind's cognitive approach was integrated with Blos's (1962) psychoanalytic notion of the second separation-individuation process. From this viewpoint, imaginary audience and personal fable are adaptive coping mechanisms in the face of anxiety arising from separation and individuation, respectively. These ideations regarding conceptions of the self in relation to others have been suggested to account for typical adolescent behaviors such as self-consciousness, personal agency, show-off behavior, and preoccupation with shame (Lapsley, 1985). Yet, their links to facets of self-conscious affect (emotions and cognitions) remain understudied. Furthermore, despite the implications of self-conscious affect in both the intra- and inter-personal spheres (Tracy et al., 2007) and evidence showing its sensitivity to age-specific adaptive demands and personality development (Orth et al., 2010), we know less about its correlates and determinants beyond late childhood. Therefore, we aim at testing (a) whether imaginary audience and personal fable differentially relate to self-conscious affect facets in adolescence and emerging adulthood, and (b) whether these relations are moderated by the developmental period.

Participants were 143 adolescents (mean age: 15.27, range: 12-18; secondary school students; 96 females) and 202 emerging adults (mean age: 21.05, range: 18-25; mostly university students; 114 females). They were administered the New Imaginary Audience Scale and the New Personal Fable Scale (measuring personal uniqueness, omnipotence, and invulnerability) developed by Lapsley et al. (1989; Greek adaptation by Galanaki, 2012), along with the Test of Self-Conscious Affect-Adolescents (TOSCA-A; Tangney et al., 1991) measuring proneness to four self-conscious emotions, namely shame, guilt, alpha pride (in one's global self; hubristic), and beta pride (achievement-oriented; authentic), as well as two cognitive-affective styles, that is, externalization (of cause/blame) and detachment (unconcern), assumed to emerge when one's self-concept is threatened (e.g., in negative interpersonal events).

Preliminary analyses of variance showed that imaginary audience and the invulnerability dimension of personal fable were higher among adolescents compared to emerging adults. All other age group differences were non-significant. A set of correlation and moderated regression analyses followed. Imaginary audience was positively related to shame, with the association being stronger among adolescents compared to emerging adults. Developmental period did not significantly moderate the significant negative relations observed between overall personal fable (and the omnipotence dimension) and shame and guilt, as well as between the invulnerability dimension (personal fable) and guilt. A pattern of stability across the two periods was also observed for the significant positive relations

between imaginary audience and overall personal fable (and the omnipotence dimension) and alpha pride and beta pride, as well as externalization, and between overall personal fable and detachment.

Findings seem to indicate a relative stability in the relations studied across adolescence and emerging adulthood. The implications of the findings for the extension of Lapsley's (1993) "New Look" model of adolescent egocentrism into emerging adulthood and for the study of mechanisms underlying self-conscious emotional experiences and cognitions in adolescence and emerging adulthood are discussed.

**387**

### **Different uses of digital technology lead to different effects on preadolescents' subjective well-being: A two-wave longitudinal study**

Marina Kotrla Topić, Andreja Brajša-Žganec, Tihana Brkljačić, Marija Džida, Maja Kućar

Institute of Social Sciences Ivo Pilar, Zagreb, Croatia

#### **Abstract (max 500 words)**

The widespread use of digital technology present in recent decades additionally burdens adolescents' transition from childhood into young adulthood. Studies show that children and youth use digital technology more frequently and at a younger age than previous generations (Ofcom, 2018). As for the effect of such use on preadolescents' well-being, studies are still inconclusive.

This study aims to explore the possibility of predicting changes in preadolescents' well-being, measured as life satisfaction, and positive and negative affect, based on how often they engage in different activities using DT.

The study was conducted using self-report measures at two time points (T1 and T2) one year apart. Participants were 1379 elementary school pupils from Croatia (48% were boys), aged from 8 to 13 years of age ( $M=11.03$ ,  $SD=1.14$ ) at the first time point. Life satisfaction was assessed using BMSLSS (Seligson et al., 2003). Positive and negative affect were assessed using the PANAS-C scale (Ebesutani et al., 2012). Finally, participants indicated how often they engage in different activities using digital technology. These activities were later grouped into three factors: playing games online, passive use of digital technology (watching TV, cartoons, and videos), and use of social networks (using social networks, texting with friends, and posting online).

To test the effect of different digital technology activities on well-being measures, a latent variable structural equation modelling was conducted. Three separate models were tested, one for every measure of well-being. In each analysis, age, gender, and the results on well-being measures at T1 were added, as well as three types of digital activities at T1. Female gender predicted lower life satisfaction, less positive affect, and more negative affect at T2, while age predicted less positive and more negative affect at T2. In the first analysis, passive usage of digital technology predicted an increase in life satisfaction one year later, while the use of social media networks predicted a decrease in life satisfaction. As for positive affect, only the passive use of digital technology predicted an increase in



positive affect at T2. Finally, in the third model, none of the activities related to digital technology use predicted the negative affect at T2.

These findings point to the importance of evaluating individual contribution of different activities that preadolescents engage in with the use of digital technology to their subjective well-being.

**388**

### **Development and Everyday Manifestations of Crises in Online Diaries**

Oliver Clifford Pedersen<sup>1,2</sup>, Maeva Perrin<sup>3,2</sup>

<sup>1</sup>University of Neuchâtel, Neuchâtel, Switzerland. <sup>2</sup>NCCR-on the move, Neuchâtel, Switzerland.

<sup>3</sup>University of Geneva, Geneva, Switzerland

#### **Abstract (max 500 words)**

Virtually all spheres of life today are permeated by the notion of crises, from recurrent economic crises and climate breakdowns to mental health crises. Social scientists, politicians, and others exercise their epistemic power to classify certain societal events as crises, super-imposing a pre-given frame of understanding on people's experiences. Instead, we explore what come to constitute a crisis for people, asking what form it takes and when it might become developmentally significant. While the term crisis is commonly used to describe a temporary disruption of the status quo, perceived stability, and progress towards a future, the examples above showcase that crises can also be temporally protracted, cumulative, entangled, slow-building, and experienced vastly differently by people depending on their circumstances. We aim to shift the focus towards people's experiences and explore where and how crisis manifest in everyday life – when they become real and for whom – and add a processual element. In particular, we aim to study when these encounters with crises become developmental and change people's imaginations ongoingly.

To this end, we analyse online diaries that have been written over 20 years and through several so-called societal crises. By emphasising the everyday manifestations of crises, we obtain a clearer picture of what constitute crises for people, what triggers them, how long they last (if they stop at all), and how they unfold in time. Such approach offers a unique possibility for overcoming the issues with retrospective accounts, focusing on people's experiences, and theorising developmental processes.

**389**

### **A Cross-Cultural Examination of the Association Between Parental Self-Efficacy and Parenting Practices**

Christy Buchanan<sup>1</sup>, Şule Selcuck<sup>2</sup>, Terese Glatz<sup>3</sup>

<sup>1</sup>Wake Forest University, Winston-Salem, USA. <sup>2</sup>Hacettepe University, Ankara, Turkey. <sup>3</sup>Örebro University, Örebro, Sweden

### **Abstract (max 500 words)**

Social cognitive theory (Bandura, 2002) identifies parenting self-efficacy (PSE) as a universally important motivator of behavior. Theoretically, when parents feel their efforts can make a positive difference in their children's development, they put forth more effort toward that end, resulting in more effective parenting. Consequently, PSE ought to predict more effective parenting regardless of country or cultural values such as individualism or collectivism.

Existing data demonstrate a positive association between PSE and positive parenting practices during childhood and adolescence (e.g., Glatz & Buchanan, 2015; Walters, 2020). Yet, data from outside of the U.S. and Western Europe are limited, as are cross-lagged longitudinal data. Thus, the universality of the association remains untested, and although social-cognitive theory predicts that PSE has a causal association with parents' behavior – and vice versa – there are almost no true tests of this prediction.

We examined the associations between PSE and several parenting practices (e.g., warmth, monitoring, psychological control) longitudinally and across cultures. We predicted bidirectional associations between PSE and parenting that exist across cultures.

Data came from four waves of a longitudinal cross-cultural study, and included 1338 children who averaged 9.7 years of age at T1 (51.2% girls), 1281 mothers and 1160 fathers. Participants were from nine countries (12 ethnic/cultural groups), which were categorized into those with a predominant collectivistic (i.e., China, Kenya, Philippines, Thailand, Colombia, and Jordan) or individualistic (i.e., Italy, Sweden, and USA) cultural orientation based on Hofstede's Individualism Index (Hofstede Insights, 2021).

We examined cross-lagged associations between parenting self-efficacy (PSE) and parenting practices for mothers and fathers separately. Parental education was controlled. For mothers, both baseline and multigroup path models (Figure 1) provided an adequate fit. Across more individualistic and collectivistic countries, for mothers (1) warmth at age 9 predicted PSE at age 10, (2) PSE at age 9 predicted warmth and monitoring at age 10, (3) warmth at age 9 predicted monitoring at age 10, (4) PSE at age 10 predicted warmth and monitoring at age 13, (5) PSE at age 13 predicted warmth at age 14 and (less) psychological control at age 14. Some paths differed in strength between individualistic and collectivistic countries.

For fathers, the baseline model tested for the full sample (Figure 2) provided an adequate fit to the data, but the multigroup model did not. Therefore, we report the results of the father model only for the full sample, and the results need to be evaluated with caution. The model indicates that for fathers: (1) PSE at age 9 predicted warmth and monitoring at age 10, (2) monitoring at age 10 predicted PSE at age 13, (3) PSE at age 13 predicted warmth and monitoring at age 14.

Results of this rare cross-lagged study support bidirectional associations between PSE and parenting. Especially for mothers, PSE at the transition into adolescence predicts later warmth, monitoring, and psychological control; warmth in pre-adolescence predicts greater PSE during adolescence. Results

affirm the predictions of social cognitive theory regarding bidirectional associations across cultures with more individualistic and more collectivistic orientations.

**392**

## **From adolescence to young adulthood: exploring the role of individual characteristics on Photo Investment**

Camilla Chiara Colombo, Gaia Cucci, Daniela Villani, Emanuela Confalonieri

Università Cattolica del Sacro Cuore, Milan, Italy

### **Abstract (max 500 words)**

Photo investment (PI) is a newly theorized construct that reflects people effort and investment in choosing photos of themselves to share on social media and their concern about such posts and their quality (McLean et al., 2015). The literature on the theme is at the outset and studies were mainly conducted in sample of adolescents and young adults. It emerged that PI is higher in both adolescent and young adult females (Mingoia et al., 2019; Lonergan et al., 2020). However, age differences are still understudied. Research on PI clearly showed that it is associated with less body satisfaction (McLean et al., 2015; Cohen et al., 2018; Lonergan et al., 2019) while there are no studies on PI and its association with self-esteem and narcissism. This study aimed at investigating the role of age, body esteem, self-esteem and grandiose narcissism in explaining PI, controlling for gender.

A total of 507 participants (55% males) aged 14-30 (MAge=20.25) participated in the study. After providing their informed consent participants completed an online survey. Participants completed: the Photo investment scale (McLean, et al., 2015; 10 items,  $\alpha=.80$ ) to measure individual emotions and concerns about self-photo posting; the Body-esteem scale (Confalonieri et al., 2008; 23 items) to assess self-perceptions of one's own body in terms of Appearance (general feelings about appearance;  $\alpha=.83$ ), Attribution (others' evaluation of one's own body  $\alpha=.66$ ) and Weight (weight satisfaction  $\alpha=.88$ ); the Rosenberg Self-esteem Scale (Prezza et al., 1997; 10 items,  $\alpha=.87$ ) to measure self-perception one's own value; the Italian adaptation (Fossati et al., 2008) of the abbreviated version of the Narcissistic Personality Inventory to assess grandiose narcissism (16 items,  $\alpha=.74$ ).

We conducted preliminary bivariate correlations between PI and the other constructs distinguishing between males and females and we found several associations. Then a hierarchical multiple regression was conducted, controlling for gender, with PI as the dependent variable. We only included the variables that resulted to be correlated with PI among males or females. We entered gender in the first step as the controlling variable, Age in the second step and Appearance, Attribution and Self-Esteem in the third step. Results showed that gender ( $\beta=.219$ ,  $p < .001$ ), Age ( $\beta=-.268$ ,  $p < .001$ ), Appearance ( $\beta=-.357$ ,  $p < .001$ ) and Attribution ( $\beta=.141$ ,  $p < .001$ ), significantly explained PI ( $F(4,499)= 48.698$ ,  $p < .001$ ;  $R^2=.281$ ).

Findings suggest that the body-related factors are crucial in explaining PI. People with a good general feeling about their appearance and a more positive perception of other's evaluation of one's own body are less concerned about their photo posting. Adolescents seem to be more influenced by PI and this

may suggest that social media are a new context where the process of body revision and mentalization, typical of adolescence, may take place. At the same time, we believe that for young adults, photo posting may enhance body concerns and prolong the process of body revision.

**393**

## **Supraordinate Identify Integration in Childhood: Intergroup Implications of National and European Identification in Three Divided Societies**

Isabelle Nic Craith<sup>1</sup>, Bethany Corbett<sup>2</sup>, Jasmina Tomašić Humer<sup>3</sup>, Ana Tomovska<sup>4</sup>, Edona Maloku<sup>5</sup>, Jocelyn Dautel<sup>2</sup>, Laura K Taylor<sup>1</sup>

<sup>1</sup>University College Dublin, Dublin, Ireland. <sup>2</sup>Queen's University Belfast, Belfast, United Kingdom.

<sup>3</sup>University of Osijek, Osijek, Croatia. <sup>4</sup>University American College Skopje, Skopje, Macedonia, the former Yugoslav Republic of. <sup>5</sup>Ministry of Education, Pristina, Ireland

### **Abstract (max 500 words)**

Being raised in society divided by conflict has negative implications for children's outgroup attitudes and behaviours, potentially perpetuating intergroup hostility. However, children can also break the cycle of violence. For example, positive intergroup contact across ethnic lines may be stronger in childhood than as adult, and children's early experiences with outgroup members have the potential to shape their cross-group interactions in later years.

Research on supraordinate identities suggests that an overarching, common identity (such as European or national identity), can enhance intergroup relations if individuals recategorize ingroup and outgroup members into one, unified group. Yet, in conflict-affected societies, supraordinate identities, such as European and national, may act in opposing directions, where the former may promote more inclusivity and reconciliation, and the latter more negative intergroup attitudes and behaviours. The effects of these identities in combination has yet to be explored in childhood.

The current study assesses supraordinate identity integration as a predictor of high-quality intergroup contact and cross-group friendships among the post-accord generation in Croatia, Kosovo and Republic of North Macedonia (RNM). These three sites were chosen because they each have a relatively recent conflict, but varying relationships to the EU.

We had three aims:

Aim 1: Examine (a) the validity of the superordinate identity integration scale in children and (b) if children entertain the concept of an integrated national/European identity.

Aim 2: Examine differences in children's supraordinate identity integration as a function of site and minority/majority group status.

Aim 3: Examine the associations between children's national/European identity integration and positive intergroup outcomes, specifically quality contact and cross-group friendship.

Data was collected from 382 children aged 7-11 ( $M = 9.01$ ,  $SD = 1.31$ , 51.9% female), split evenly by minority and majority status: 90 from Croatia (52.22% Croat, 47.78% Serb), 107 from Kosovo (50.47% Albanians, 49.53% Serb), and 185 from RNM (53.51% Macedonian, 46.49% Albanian).

First, there were no statistically significant differences in correlation coefficients between minority and majority children within each site, indicating that European and national identity were not more or less incompatible in either group.

Second, we examined differences in children's national/European identity integration as a function of group status and site. There was no effect of group status, or a status  $\times$  site interaction; however, children in Croatia reported significantly more identity integration than children in RNM.

Finally, identity integration was positively and significantly associated with the amount of high-quality of outgroup contact (Figure 1) and the number of cross-group friends (Figure 2). Children in Kosovo reported having lower quality contact and fewer cross-group friends than children in Croatia.

In summary, a European identity does not undermine the importance of, or threaten, national identity, and integrated supraordinate identities have positive implications for future intergroup relations and potential peacebuilding.

395

## Measurement of self-regulation in an environmentally valid settings

Natalia Józefacka, Łukasz Krzywoszański

Pedagogical University of Krakow, Krakow, Poland

### Abstract (max 500 words)

**Objectives:** Self-regulation is defined as voluntary self-control of attention, emotions and behaviour, which facilitates the achievement of goals considered important by the individual. It is a predictor of many important social competencies as well as academic success (Duckworth and Carlson, 2013). Measurement of self-regulation in preschool and early school-age children primarily takes place in controlled laboratory conditions (individual sessions). The accuracy of tools utilized in such measurements is the subject of ongoing discussion. The goal of the study is to develop accurate and reliable tools to measure self-regulation in an environmentally valid context, expressly during interactive situations where children are engaged in kindergarten group activities among their peers. **Methodology:** The intention is to examine four aspects of self-regulation: motor control, persistence, inhibition and emotional control. These four aspects will be examined twice in each child, once in a group setting and once individually. Each aspect will be examined by means of at least two tasks. The study will utilize experimental procedures described in the publication edited by DelCarmen-Wiggins and Carter (2004),

adequate to specific constructs: motor control (Walk-a-line; Truck-Task), persistence (Make-a-Card; Puzzle-Box), inhibition (Hop-like-a-Bunny; Bear-Dragon) and emotional control (Snack-Delay; Gift-Wrap). The research group consisted of 25 children with disabilities, attending the therapeutic kindergarten. **Results obtained:** Tasks performed in a group setting were assessed using the "peer judges" method. Reliability analysis using the ICC 2-way random effect method showed high reliability of the measurements. Children were less able to demonstrate self-regulation in the peer group context as compared to individual assessments. Although, differences in performance between the individual and group settings were not statistically significant for most of the tasks. **Conclusion:** These findings represent only a first step in developing self-regulation measures appropriate for use with young children in ecologically valid settings. The results of the study indicate that the analyzed tasks can be performed in a group setting with equal reliability as in the individual. Development of such measures will fill a methodological void, as well as shed further light on the development of self-regulation in young children.

396

## Peer Victimization in School and Online Context: Two Multiple Mediation Model

Laura Menabò<sup>1</sup>, Grace Skrzypiec<sup>2</sup>, Phillip Slee<sup>2</sup>, Annalisa Guarini<sup>1</sup>

<sup>1</sup>University of Bologna, Bologna, Italy. <sup>2</sup>Flinders University, Adelaide, Australia

### Abstract (max 500 words)

**Theoretical framework:** Being involved in episodes of victimization and/or cybervictimization has been shown to affect the subjective experience of well-being in past research. However, there is still uncertainty regarding the variables that explain these associations.

**Research goal:** The present study examined how peer networks, teacher support, and school connectedness could mediate the relationship between victimization and well-being. To address the research goal, we developed two mediation models, considering respectively victimization (Model 1) and cybervictimization (Model 2) as predictors, well-being as the outcome, and peer networks, teacher support, and school connectedness as parallel mediators in both models. In addition, we used gender as a covariate variable.

**Hypothesis:** A significant and direct effect of the predictor (victimization and cybervictimization) was hypothesized on the outcome in both models. In addition, significant and indirect effects from all three mediators involved were also expected in both models.

**Sample:** The sample consisted of 563 students (308 males, 55%; 255 females, 45%) attending the first and second year ( $M_{age} = 11.50$ ,  $SD_{age} = 0.63$ ) of seven lower secondary schools in Italy.

**Method and analysis:** Students filled out a questionnaire investigating victimization and cybervictimization, the peer networks, the perceived teacher support, the school connectedness and subjective well-being. A section about demographic information was also included. Regarding the

analysis, two parallel multiple mediation models using PROCESS macro were run. Finally, we considered the potential effect of gender as a covariate.

**Results:** The two models were significant both for victimization [ $F(8,562) = 34.35, p \leq .001, R^2 = 0.34$ , Model 1] and cybervictimization [ $F(8,562) = 40.13, p \leq .001, R^2 = 0.34$ , Model 2]. Gender showed a significant effect in both models as females experienced a lower level of well-being compared to males. Concerning the direct effects, victimization and cybervictimization did not reveal a significant impact on well-being (Figure 1 and 2, Table 1 and Table 2). However, both predictors presented significant and direct effects on peer networks, teacher support, and school connectedness (Figure 1 and 2). Concerning the indirect effects, victimization and cybervictimization showed significant effects through peer networks and school connectedness but not through teacher support (Figure 1 and 2, Table 1 and Table 2). Thus, the relationship between victimization and cybervictimization and well-being was fully mediated. In addition, both models observed significant contrasts between peer networks and school connectedness showing that peer networks represented the strongest mediator.

**Conclusions:** The present research showed that peer networks and school connectedness had a fully significant mediation effect for both victimization and cybervictimization while teacher support did not show to be a significant mediator. In other words, adolescents who reported more victimization and cybervictimization perceived less support from their peers and less connection with their school which in turn, affected their well-being. We think that our results have clear implications for bullying and cyberbullying prevention. Indeed, it is necessary to help youth foster high-quality relationships with their peers and strengthen their connections to their schools.

404

## Diversity climate in schools and adolescents' critical consciousness: A multi-informant, multi-level study in Thuringia, Germany

Judith Kehl<sup>1</sup>, Maja Schachner<sup>2</sup>

<sup>1</sup>Martin-Luther University Halle-Wittenberg, Halle (Saale), Germany. <sup>2</sup>Martin-Luther-University Halle-Wittenberg, Halle (Saale), Germany

### Abstract (max 500 words)

Critical consciousness (CC) describes how youth become aware of systemic oppressive forces (critical reflection), develop agency to address oppression (critical motivation) and initiate action against oppression (critical action) (Heberle et al., 2020). While most research has focused on the development of CC as a resource for marginalized youth, in order to work toward more equitable societies, CC is specifically mandatory also for more privileged youth. Schools may be particularly important opportunity structures for the development of CC (Seider et al., 2017). Specifically, how schools and teachers approach diversity and reflect on and act upon social inequities may impact adolescents' development of CC (e.g. Schwarzenhal et al., 2021). Based on previous research, four main approaches to diversity can be identified: assimilation (rejecting diversity), color-evasion (ignoring diversity, downplaying differences), multiculturalism (valuing diversity), critical consciousness (reflection on and

action upon social inequities) (e.g. Celeste et al., 2019; Schachner et al., 2021). Drawing on this background this study examines how the school diversity climate (i.e. schools' diversity-related norms and practices) as perceived by teachers and the classroom diversity climate (i.e. teaching practices and relationships between students and teachers) as perceived by students relate to adolescents' CC about racial inequity. Specifically, we expect that a more assimilationist and a more color-evasive classroom and school climate are negatively, and a more critically conscious classroom and school climate are positively related to adolescents' critical reflection, motivation and action. Depending on its specific implementation, a multicultural school/classroom climate may either contribute to increased awareness of discrimination or reinforce stereotypes (Schwarzenthal et al., 2021). Therefore, the relationship between a multicultural school/classroom climate and adolescents' critical reflection, motivation, and action will be examined in an exploratory fashion. To test these hypotheses, we will draw on cross-sectional survey data currently collected as part of a larger research project focusing on how schools can reduce the drop-out rate of students without German citizenship in Thuringia, Germany. Our target sample includes (1) teachers (anticipated sample size N = 200) and (2) 9th grade students (anticipated sample size N = 800) in 23 secondary schools throughout Thuringia, Germany. Data will be analyzed with MPlus using multilevel structural equation modeling. Findings will be related to current research and theoretical concepts on CC development as well as school and classroom diversity climate. By including both teachers' and adolescents' perspectives on diversity-related practices in schools and classrooms and connecting it to adolescents' CC, this study contributes to the current debate on how schools can support adolescents' CC development.

**412**

## **Language difficulties and mental health problems in children and adolescents – genetic overlap and bidirectional effects**

Sinziana-Ioana Oncioiu, Kate Nation, Lucy Bowes

University of Oxford, Oxford, United Kingdom

### **Abstract (max 500 words)**

**Background:** About half of children and adolescents accessing help for symptoms of mental health problems have moderate to severe language difficulties, i.e., significant impairment in the ability to understand and produce spoken native language, despite otherwise typical development. To date, we do not know if language difficulties are a risk factor for mental health problems (i.e., cause) or their co-occurrence is merely correlational and explained by third factors (i.e., confounders) which increases the risk for language difficulties and, separately, for mental health problems. Moreover, there could also be a bidirectional relationship between language difficulties and mental health problems, such that early signs of mental health problems (i.e., irritability, aggression or emotional problems) increase the risk of language difficulties, which in turn exacerbate the underlying mental health problem. Disentangling these alternative hypotheses is necessary to inform the design of preventative interventions.



**Objective:** The objective of this study is to investigate the overlap and possible direction of causation between language difficulties and internalizing and externalizing symptoms in childhood and adolescence.

**Methodology:** We use data from the Twins Early Development Study (TEDS), a longitudinal population-based study of twin pairs born in England and Wales. Repeated measures on language difficulties and mental health are available in childhood (ages 4, 7 years) and adolescence (ages 12, 16 years). Language was assessed via tests and composite scores averaging the Z scores of different language measure (e.g., vocabulary, syntax, pragmatics). Mental health problems were assessed using the internalizing (i.e., emotional and peer subscales) and externalizing (i.e., conduct and hyperactivity subscales) subscales of the Strengths and Difficulties Questionnaire. We will use the identical twin (MZ) model. We will regress within-twin pair differences in language difficulties on within-twin pair differences in mental health problems and vice versa. We will also test whether longitudinal MZ twin intrapair differences (i.e. differences in individuals' changes) in language difficulties over time are associated with intrapair differences in individuals' changes in mental health problems over time and vice versa.

**Expected results:** We expect that at population level, children and adolescents with language difficulties will experience higher levels of externalizing and internalizing symptoms compared to their typically developing peers. We also expect to find a bidirectional effect between language difficulties and symptoms of mental health problems (i.e., internalizing and externalizing) both in childhood and adolescence. Most likely, in MZ analyses, these bidirectional associations between language difficulties and mental health problems will be at least partially explained by genetic and shared environmental factors.

**Conclusion:** Future studies should explore the modifiable factors that explain the association at population level between language difficulties and mental health problems. Mental health interventions which rely heavily on language competence should be adapted to meet the needs of children and adolescents with language difficulties.

426

## The moral profile of the bullying defenders

Ana Bravo, Antonio Camacho, Rosario Ortega-Ruiz, Eva Romera

University of Cordoba, Cordoba, Spain

### Abstract (max 500 words)

Bullying is an immoral dynamic that occurs within the peer group. Peers who defend their peers play an essential role not only in the well-being of the victims but also in the reduction of bullying. Previous studies underlined that not all defending behaviours are equal, as behaviours of comforting victim or reporting to authority would have a lower exposure within the peer dynamic than behaviours aimed at directly confronting the bullying, either aggressively or assertively. Therefore, understanding the psycho-social and moral characteristics associated with each of these defending behaviours is essential.

According to the Bystander Intervention Model the different elements that conform the individual morality could play a differential function in each of the five steps in the decision-making process of the defenders. However, studies on this line are still scarce. **Objectives:** The present study has a double objective first, to explore whether there are different moral profiles based on moral anger (associate to stage 1 of the model), moral courage (stage 5) and the type of motivation for defending (intrinsic or extrinsic; stage 3); and second, to examine whether there are differences between these profiles in their involvement in four different forms of defending (reporting to authority, comforting victim, aggressive behaviour, and assertive defending). **Methodology:** From a total of 2,008 secondary school participants, 332 (54.4% girls; M = 13.12 years; SD = 0.96) participants who reported that they had witnessed bullying situations were selected. Latent class analysis and three-step method using a multinomial logistic regression approach was conducted to address research aims. **Results:** Latent class analysis confirmed that different moral profiles could be defined among defending adolescents. Multinomial logistic regressions were significant for the four types of defending. Together the results of these analyses underlined that: adolescents with moderate levels in all moral components (Profile 1; 36%) were more associated with aggressive defending; adolescents with low levels in all moral components (Profile 2; 14%) showed moderate-low levels in all forms of defending; adolescents with high levels of moral anger, moral courage, and intrinsic motivation, but moderate-low in extrinsic motivation (Profile 3; 43%) showed a greater association with indirect defending, but also in assertive direct defending (showing moderate levels), and adolescents high in all moral components but moderate in courage moral (Profile 4; 7%) showed the highest or very high levels in all types of defending, including aggressive defending. **Conclusion:** Taken together, these results highlighted the significant role played by moral anger, moral courage, and intrinsic motivation in engaging in more positive forms of defending. Whereas extrinsic motivation might play a differential role in engaging in more aggressive defending behaviours. As this type of motivation is associated with the seeking of personal benefits or cost avoidance, future studies should explore what individual and relational characteristics might play a differential role in such motivation. Finally, this study offers clues as to which elements of morality should be included in future bullying prevention programs.

428

## The Impact of Distance Learning Policies during the COVID-19 Pandemic on Sleep Duration and Quality.

TZU-HSUAN YEH, WEN-CHI WU

National Taiwan Normal University, Taipei, Taiwan

### Abstract (max 500 words)

Previous studies indicated that adequate sleep is related to the healthy development of teenagers. Good sleep quality and quantity can improve students' learning ability and academic performance. However, no studies have yet demonstrated whether students are affected by distance learning at home and change their sleep habits.

This study attempted to investigate whether distance learning policies during the COVID-19 pandemic have affected the sleep duration and quality of junior and high school students in northern Taiwan and explored whether the background factors were related to sleep status.

Participants were 1208 students in grades 7-12 from 25 junior schools and nine high schools in northern Taiwan. The study used a Chinese version of the "Insomnia Severity Index" to measure cases of seven insomnia-related symptoms and their degree of influence. Each question would be evaluated on the status in the past two weeks with the Likert scale. The scores on the scale will be totaled, and the higher the score, the more severe insomnia.

This study used the paired T-test to test whether there were differences in sleep duration and sleep quality during physical classes and distance learning. The differences in sleep duration and sleep quality were used as dependent variables. The six background factors of gender, school level, living area, parents' education level, parents' work status, and parent's marital status were used as independent variables. Firstly, the T-test and single-factor analysis of variance was used to test the bivariate relationship between background factors and changes in sleep status. Second, multiple linear regression models were used to analyze the multivariate relationship between background factors and sleep duration and quality.

The results showed that the average sleep time during the distance learning period significantly increased by 0.12 hours compared with the physical class period. Distance learning also significantly reduced the level of sleep problems, and females' sleep duration and problems are more than males'. The change in sleep duration was related to the parent's education level and working status. Last, sleep problems were related to school-level factors.

Distance learning can indeed improve students' sleep quality and quantity, which means that distance learning has a positive impact on students' sleep status. Moreover, personal background factors that affect the change in sleep duration and quality have existed. In summary, this study can provide a reference for relevant personnel in the future when implementing distance learning policies for students.

**429**

### **For whom does it work? The differential effects of targeting moral disengagement and social norms in bullying prevention on different profiles of early adolescents**

Chloé Tolmatcheff

University of Groningen, Groningen, Netherlands

**Abstract (max 500 words)**

School bullying is considered a serious public-health issue worldwide. While some anti-bullying programs have showed positive outcomes, meta-analyses reveal mixed results and overall limited effectiveness (Gaffney et al., 2019). This heterogeneity in program outcomes may be due to variation in the components of the programs (Farrington & Ttofi, 2009) but also differential effects of these components on different subgroups of youth (e.g., Garandeau et al., 2014). Most evaluation studies have assessed programs as whole packages (Eisner & Malti, 2012) and used a variable-centered approach (Spilt et al., 2013). As a result, we lack insights into the effects of specific components and how they affect different student profiles (Hensums et al., 2022). In particular, levels of bullying and victimization (e.g., Yanagida et al., 2016) and perceived popularity (Garandeau et al., 2014) have been suggested as potential moderators of students' susceptibility to interventions. With respect to program components, both moral disengagement and social norms have been suggested as relevant theoretical frameworks and promising directions for prevention (e.g., Hymel & Bonanno, 2014; Menesini et al., 2015).

**Goals of the study:** Expanding upon our previous work, this study aims to examine the differential effects of two distinct anti-bullying program components —moral disengagement and social norms— on different subgroups based on students' role in bullying and level of popularity.

**Methods:** We conducted a three-armed Randomized Controlled Trial in a sample of 1,200 elementary school students (Grades 4-6) from 57 classrooms in nine Belgian schools. Students' moral disengagement, perceived injunctive class norm towards bullying, bullying, victimization, defending, and outsider behaviors were self-reported. Popularity was peer-reported. In our previous work, we ran a mediation path analysis using latent change scores on the total sample to examine the distinct effects of both interventions on bullying, defending, and outsider behaviors through the hypothesized mediators (see Tolmatcheff et al., 2022). For the present study, we will first conduct latent profile analysis (LPA) using factor scores at pretest of bullying, victimization, and popularity. We will combine multiple fit indices (CAIC, BIC, SABIC, aLMR, BLTR, and entropy) and qualitative interpretation to select the best profile solution. Then, we will use that latent class variable as a moderator in our initial model to test the slope equivalence across profiles (paths from X to each mediator and from X to the distal outcomes). We will perform pairwise comparisons of the regression slopes where appropriate.

**Results obtained or expected:** We expect to find the traditional victim, bully-victim, and uninvolved profiles. Among bullies, we expect to find both a highly-popular and regular-popular profiles. Regarding the moderation model, we make the assumption that bullies, and popular bullies in particular, will respond less to the moral disengagement intervention than non-bullies. On the other hand, we hypothesize that popular bullies will be particularly susceptible to the social norms intervention by fear of risking their social status.

**Conclusion:** To fully assess the cost-effectiveness ratio of anti-bullying program components and develop more effective programs, we need insights into the differential effects of specific components on different subgroups of youth.

435

## Does mind-mindedness mitigate socioeconomic disparities in Chinese preschool children's cognitive and affective aspects of perspective-taking?

Chengyi Xu<sup>1</sup>, Jiayin Zheng<sup>2</sup>, Zhen Wu<sup>1</sup>, Claire Hughes<sup>3</sup>

<sup>1</sup>Department of Psychology, Tsinghua University, Beijing, China. <sup>2</sup>Faculty of Education, University of Cambridge, Cambridge, United Kingdom. <sup>3</sup>Centre for Family Research, Cambridge, United Kingdom

### Abstract (max 500 words)

Objective of the study: Parental mind-mindedness, defined as the proclivity to view one's child as a mental agent with independent thoughts, feelings and desires (Meins et al., 2002), robustly correlates with theory of mind (ToM) in preschoolers living in Western countries, but has been little studied in much more populous areas of the world, such as mainland China. Although ToM and empathy are often intertwined and contribute to cognitive and affective aspects of perspective-taking respectively, the link between parental mind-mindedness and children's empathy has been largely overlooked (for an exception, see Centifanti et al, 2016). Addressing these gaps, we conducted two studies on parental mind-mindedness as a potential buffer for mainland Chinese 4- to 6-year-olds at risk for delayed perspective-taking abilities.

Methodology: Participating parents in both studies are asked to talk about their children, enabling transcripts of parents' 5-min speech samples to be coded for (i) mind-mindedness (indexed by the proportion of child-focused descriptions that are mental rather than behavioural, physical, or general) and (ii) positivity (indexed by the proportion of child-focused descriptions that are positive rather than neutral or negative). Study 1 involved 103 parent-child dyads (50 boys; child Mage = 4.84 years, SD = 0.57), with each child completing a story-telling task to assess trait empathy. Study 2 involves a socially diverse sample of over 150 parent-child dyads living in underdeveloped areas of mainland China; here we will assess family adversity (indexed by rural migrant status, low parental education, and financial strain) and ToM development (indexed by a 3-task battery).

Results obtained and expected: Study 1 indicated a moderate association between parental mind-mindedness and Chinese preschoolers' empathy (affective perspective-taking) that persisted even when individual differences in child demographics and family socioeconomic status (SES) were taken into account. Drawing on previous findings (Hughes et al., 2017), we expect Study 2 results to show that parental mind-mindedness (rather than positivity) mitigates the impact of low SES on ToM (cognitive perspective-taking).

Conclusion: Study 1 provides an opportunity to examine whether there is a meaningful correlation between Chinese mothers' mind-mindedness and their children's empathy. Study 2 will provide evidence for the promise of mind-mindedness in explaining SES-related contrasts in ToM. Taken together, our findings confirm the importance of parental mind-mindedness for low-SES preschool-aged children's ToM and empathy, even in Confucian cultures where mind-minded parenting is not particularly prominent.

438

## Solitude, Social Withdrawal, and Individual Dispositions in Childhood and Adolescence: A Latent Profile Analysis

Matilde Brunetti<sup>1</sup>, Stefania Sette<sup>1</sup>, Fiorenzo Laghi<sup>1</sup>, Emiddia Longobardi<sup>1</sup>, Concetta Pastorelli<sup>1</sup>, Antonio Zuffianò<sup>1</sup>, Robert J. Coplan<sup>2</sup>

<sup>1</sup>Sapienza University of Rome, Rome, Italy. <sup>2</sup>Carleton University, Ottawa, Canada

### Abstract (max 500 words)

*Objective of the study.* During the transition between late childhood and early adolescence, seeking solitude may be particularly maladaptive, given the heightened importance placed on peer relationships (Rubin et al.,2015). Children may seek solitude for different underlying motivations (Coplan et al.,2021). For example, shy children appear to seek solitude because their desire to be with others is overcome by feelings of social anxiety and fear that, in turn, may lead to loneliness (Coplan et al.,2015; Wang et al., 2020). In contrast, unsociable children may seek solitude because they enjoy being alone, and tend to engage in intrinsically motivated solitary activities (Coplan et al.,2021). The main aim of the present study is to individuate different profiles based on children's experiences of solitude, social/asocial dissatisfaction (i.e., loneliness, aloneliness), and motivations for social withdrawal in the critical period between late childhood and early adolescence. To our knowledge, previous studies have not used a person-oriented analysis to identify groups of children who spend time alone for different motivations in this critical developmental period.

*Methodology.* Participants were  $N = 561$  ( $n = 307$  girls, 55%) children ranging from 8 to 14 years ( $M = 11.32$ ,  $SD = 1.63$ ). Children completed an online self-report questionnaire to assess the time spent alone ( $\alpha = .76$ ), solitary activities, and positive/negative affect experienced during solitary activities (Hipson et al.,2021;  $\alpha = .72 / .80$ ), shyness (Crozier,1995;  $\alpha = .87$ ), unsociability (Burger,1995; Coplan et al.,2019;  $\alpha = .64$ ), loneliness (Asher et al.,1984;  $\alpha = .83$ ), aloneliness (Coplan et al.,2019;  $\alpha = .86$ ), social anxiety (La Greca & Stone,1993;  $\alpha = .93$ ), depression (Kovacs,2003;  $\alpha = .85$ ), and individual dispositions (e.g., openness, Barbaranelli et al.,1998;  $\alpha s = .75-.88$ ).

*Results.* Results from a Latent Profile Analysis (LPA) conducted with *Mplus* 8.4 identified the three-profile solution as the best fitting model (Entropy = .84). The largest group was labeled *Sociable* ( $n = 395$ , 70.4%) because they were characterized by less time alone, high positive affect, and low motivations for social withdrawal (shyness, unsociability). The remaining two groups spend comparatively more time alone but different in their motivations for social withdrawal. The *Unsociable* group ( $n = 120$ , 21.4%) reported more time alone, high unsociability, high positive affect, but also high aloneliness. Finally, the smallest group was labeled *Shy* ( $n = 46$ , 8.2%) and reported high time alone, but also high shyness, loneliness, and negative affect. A series of ANOVAs revealed some differences in individual dispositions and internalizing difficulties (i.e., social anxiety, depression) among the three groups. Among the results, (1) shy children reported high levels of emotional instability, social anxiety, and depression; (2) sociable children group reported high levels of agreeableness, consciousness, extraversion, and openness; and (3) unsociable children reported average scores in all individual dispositions and internalizing difficulties.

*Conclusion.* Overall, findings confirmed a heterogeneity in how children experience solitude and spend their time alone. Future intervention programs should consider children's experiences of solitude to prevent negative consequences, especially for the shy group, which might be considered the most at-risk group.

**444**

## **Healthy context paradox: Peer acceptance and peer rejection of victimized early adolescents in different classrooms**

Lenka Kollerová<sup>1</sup>, Tomáš Lintner<sup>2,3</sup>, Adam Klocek<sup>1</sup>, Ivan Ropovik<sup>4,3</sup>, Jaroslav Hlinka<sup>5</sup>, Dagmar Strohmeier<sup>6,7</sup>

<sup>1</sup>Institute of Psychology, Czech Academy of Sciences, Brno, Czech Republic. <sup>2</sup>Masaryk University, Brno, Czech Republic. <sup>3</sup>National Institute SYRI, Brno, Czech Republic. <sup>4</sup>Charles University, Prague, Czech Republic. <sup>5</sup>Institute of Computer Science, Prague, Czech Republic. <sup>6</sup>University of Applied Sciences Upper Austria, Linz, Austria. <sup>7</sup>University of Stavanger, Stavanger, Norway

### **Abstract (max 500 words)**

Past research showed that victimized students experience lower levels of maladjustment in classrooms with higher numbers of victimized students. This phenomenon has been called the healthy context paradox and its underlying mechanisms are assumed to include opportunities for friendships. To better understand how numbers of victimized students in classrooms promote or restrict opportunities of victimized students to form friendships, we need to know whether classroom victimization rate interacts with individual victimization in prediction of subsequent peer status. Understanding these effects would be especially beneficial in early adolescence, because in this developmental period, peers are particularly important for individual adjustment. To gain a complex insight into opportunities of victimized early adolescents to befriend with classmates, a longitudinal role of varying classroom contexts should be examined on both the key facets of peer status: peer acceptance (i.e., being liked) and peer rejection (i.e., being disliked). Therefore, based on the healthy context paradox model, the present study verified the hypotheses that in early adolescents, classroom victimization rate would weaken the negative association between victimization and peer acceptance and the positive association between victimization and peer rejection over a half year interval. To better understand the underlying mechanisms, the study will also examine classroom social networks, specifically whether over time victimized students receive less acceptance and more rejection ties from classmates, but in lower extent from the side of defenders and other victimized students. The sample consisted of 751 elementary school students (51% female, Mage = 12.93±.41) clustered in 39 classes (with average class size of 24±4 students). The participants filled paper-pencil peer-report measures of victimization, defending, and peer status indicators at two measurement points (6 months apart) in classroom settings. First, linear mixed models with separate models for different outcomes were used to test the main hypotheses. Each final model included a cross-level interaction of individual victimization and classroom victimization rate. The main effects were controlled and fixed effects of time (measurement waves), age, and gender were included. Random effects were specified as students nested in classrooms. The results confirmed the expected interactive effects of individual victimization and classroom victimization rate on peer acceptance and peer rejection. The found interactive effects

indicated that victimized students became less accepted and more rejected over time, but these associations were weaker in classrooms with higher victimization rate. Further, the findings from the linear mixed models will be complemented by insights from social network analysis. Stochastic actor-oriented modeling will be applied to investigate the role of defenders and other victimized students in the changes of peer status of victimized students. In sum, the study brought longitudinal support for the healthy context paradox for both peer acceptance and peer rejection. Future considerations of opportunities of victimized students to form friendships with classmates should take into account development of both the positive and negative facets of peer status and also the role of classmates' participant role in bullying.

459

### **An exploratory study of behavioural patterns in a mother-infant interaction interrupted by smartphone use**

Eszter Remete<sup>1</sup>, Petra Schröter<sup>1</sup>, Vivien Hartmann<sup>1</sup>, Gabor Aranyi<sup>1,2</sup>

<sup>1</sup>Institute of Education and Psychology at Szombathely, Eötvös Loránd University, Budapest, Hungary.

<sup>2</sup>Faculty of Psychotherapy Science, Sigmund Freud Private University, Vienna, Austria

#### **Abstract (max 500 words)**

*Background and objectives.* Frequent use of digital technology by parents of young children are associated with sub-optimal parent-child interactions. These interruptions, referred to as technofeference, have been reported to have adverse effects on children's health and development (McDaniel & Radesky, 2018). The present study investigates behavioural details of technofeference episodes to explore (a) patterns of mothers' mobile phone use, and (b) infants' reactions to interrupted interactions.

*Methods.* Twelve mother-infant pairs participated in a laboratory study (infant age: 4-9 months), where an initial free-play episode was replaced by the mother tasked with completing an online questionnaire on her mobile phone, followed by a restoration phase. Ecological validity was promoted by instructing parents to play with their child and complete the questionnaire at their convenience after they have received the link. Video recordings were transcribed using a continuous scheme coding for the presence/absence of behaviours for each second of 12-minute-long sessions. The coding system consisted of mutually exclusive categories; 10 for mothers (e.g., initiate, participate, and attention split) and 8 for infants (e.g., cooperate, explore, and seek contact).

*Results.* We found marked differences in mothers' responses to their children's behaviour patterns between free-play and technofeference episodes, most notably a larger responsiveness to cooperative and attention-seeking infant behaviour during free play. Mothers differed considerably in the proportion of time spent on their phones during technofeference. We identified maternal strategies to maintain interaction using active and passive attention sharing behaviours, which affected infant behaviour. For example, passive monitoring behaviour during technofeference (i.e., mother periodically glancing up) elicited more contact seeking by infants than split behaviour (e.g., mother's gaze locked at phone while strokes child), resulting in more interactions. Mothers scoring above risk level on the Edinburgh



Postnatal Depression Scale (Cox et al., 1987) showed fewer interactive behaviours, while a high degree of mother interaction with the infant during technofence was negatively related to the structure dimension of the Baby Care Questionnaire (Winstanley & Gattis, 2013).

*Conclusions.* The simultaneous consideration of parent and infant behaviours allows for a deeper understanding of interaction during technofence. We found that patterns of mobile-phone use by mothers during technofence episodes elicited different reactions from infants. The reported amount of daily mobile phone use was only moderately related to the dominance of telephone use during technofence, suggesting that parental strategies may mitigate the potentially deleterious effects of heavy smartphone use on the quality of their interaction with their children. Our findings indicate that this is especially important for mothers at high postnatal depression risk, with parenting attitudes (conceptualised as structure and attunement) also bearing demonstrable impact. As technofence is expected to remain a persistent, possibly even increasing influence on parent-child interactions, a focus of future work should consider identifying and promoting patterns of technology use most suitable for optimal child development.

460

### **The Importance of Classroom Peer Relationships: The Classroom-level Associations Between Bullying Victimization and Both Perceived Friendship Quality and Class Climate.**

Mattias Kloo, Robert Thornberg, Linda Wänström, Björn Sjögren

Linköping University, Linköping, Sweden

#### **Abstract (max 500 words)**

According to the social-ecological theory, children's development and social interactions, including bullying, are influenced by individual and contextual factors. Children's more proximal everyday microsystems can, therefore, include both risk and protective factors. For the individual student supportive friendships may lower the risk of bullying victimization, whereas conflictual friendships may increase the risk of being bullied. Furthermore, the microsystem of the classroom peer ecology is a significant context for school-aged children and, accordingly, a few studies have examined role of the class climate (i.e., social climate among peers within classrooms) and found that a positive class climate is associated with less bullying victimization. The current study aimed to further examine whether both friendship quality at the individual level and class climate at the classroom level were associated with bullying victimization.

A self-report questionnaire was administered to 520 Swedish upper elementary school students ( $M_{age} = 11.63$ ) across 52 classrooms. Students answered questions related to the degree to which they had experienced bullying victimization in the past three months, their experienced friendship quality with their closest friends across five domains, and their perceptions of the class climate.

Due to the hierarchical nature of the dataset with individual students nested in larger classrooms, a two-level multilevel analysis was conducted featuring bullying victimization as the dependent variable, and friendship quality and class climate as independent variables. Gender, grade-level and immigrant background were included as control variables.

The result showed that 14.23% variance in bullying victimization was found at the classroom-level and while none of the control variables had any significant association to victimization, two of the five friendship dimensions, Conflict and Help, were significantly associated with more and less victimization for the individual student, respectively. Likewise, the addition of a positive peer climate was found to be associated with less victimization. Furthermore, despite only being measured on an individual level, the addition of friendship quality helped explained 39.97% of classroom-level variance in bullying victimization, with class climate then explaining an additional 22.23% of the remaining variance.

These findings suggest that students who experienced conflictual friendships had an increased risk of experiencing bullying victimization while students who reported having friends who helped them if they were to be attacked by others or when they felt troubled were less likely to be victimized. Furthermore, the fact that the effect of friendship quality here extended beyond the individual and explained a large portion of classroom-level variance in bullying victimization may reflect either how individual experiences of friendship quality are shared in larger friend groups or speak to a common classroom attitude towards friendships. This, together with the classroom-level variance explained by the class climate highlight the social nature of bullying and the importance of addressing the classroom context in bullying research.

The findings have some practical implications. First, teachers need to instruct and facilitate students to develop caring and supportive friendships. Second, they have to establish and maintain a positive class climate to decrease the risk of bullying victimization.

**463**

## **How do Emerging Adults Perspective their Future? The Role of Romantic Attachment and Self-regulation**

Joana Reis<sup>1</sup>, Filipa Nunes<sup>2</sup>, Paula Mena Matos<sup>3</sup>, [Catarina Pinheiro Mota](#)<sup>3</sup>

<sup>1</sup>University of Trás-os-Montes and Alto Douro, Vila Real, Portugal. <sup>2</sup>Faculty of Psychology and Education Sciences at University of Porto, Porto, Portugal. <sup>3</sup>Faculty of Psychology and Education Sciences at University of Porto, Porto, Portugal

### **Abstract (max 500 words)**

**Introduction:** Currently, Western societies are characterized by high levels of uncertainty, which can lead young people to embrace new paths and opportunities. Nevertheless, these society features can challenge how emerging adults perspective their futures. To better understand emerging adults' future expectations, we need to draw attention to their relational context and self-determined behaviors.

**Objective:** In the present study, we analyzed the links between romantic attachment (trust,

dependence, avoidance, ambivalence), self-regulation (setting goals, decision-making, learning from mistakes), and future expectations (optimism, pessimism, hope). We also sought to clarify if self-regulation moderated the links between romantic attachment and emerging adults' future expectations. Methodology: The sample consisted of 571 emerging adults aged between 18 and 30 years ( $M = 23.31$ ;  $SD = 3.35$ ). Self-report instruments were used to collect data for this study, on a cross-sectional design, and data were analyzed through structural equation models. Results: Results showed that dependent, avoidant, and ambivalent romantic relationships are associated with pessimism about future. Furthermore, our findings clarify that self-regulation dampens these associations. More specifically, we found that higher levels of goal setting are associated with lower pessimism, regardless of the degree of avoidance and dependence that young adults reveal towards their romantic partner. These findings suggest that setting goals reduces the negative association between dependent and avoidant romantic relationships, and pessimism about future. Discussion: We discuss these findings based on attachment theory, considering the relevance of secure emotional bonds and self-regulatory processes to future planning.

**464**

### **The interplay between selected mechanisms of change in an antibullying program, victimization, bullying, and well-being: Psychological network perspective.**

Adam Klocek<sup>1,2</sup>, Lenka Kollerová<sup>1</sup>, Jan Netík<sup>3,2</sup>, Egle Havrdová<sup>2</sup>

<sup>1</sup>Institute of Psychology, Czech Academy of Sciences, Brno, Czech Republic. <sup>2</sup>Schola Empirica, z.s., Prague, Czech Republic. <sup>3</sup>Institute of Computer Sciences, Czech Academy of Sciences, Prague, Czech Republic

#### **Abstract (max 500 words)**

Objective: The KiVa anti-bullying program has been assumed to be effective in reducing bullying and victimization and increasing well-being due to several key mechanisms of change, including positive changes in attitudes against bullying, social self-efficacy, and school belonging. The purpose of this study was to investigate the interrelatedness between these selected mechanisms of change and outcomes from a longitudinal psychological network perspective that allows exploratory scope into complex relations between multiple variables. Methods: The sample comprised 671 students (50% of whom were girls) from 24 primary schools in the Czech Republic who participated in the pilot KiVa effectiveness evaluation study for one academic year either in KiVa intervention group or in the wait-list control group. Data was collected in three measurement waves; at baseline, after 5 months, and at the end of the intervention (10 months after baseline). Two lag-1 longitudinal vector auto-regressive cross-lagged panel network models were employed to analyze the panel data separately for both the intervention and control groups, yielding acceptable model fits for both. The final models of both groups were pruned for parsimony; three networks were computed per group, including within-person (temporal and contemporaneous) and between-person networks. Results: The preliminary results showed slightly different dynamics between both groups in a rather unexpected manner. In the wait-list control group,

students who had stronger attitudes against bullying in one measurement wave, demonstrated increased well-being, school belonging, and social self-efficacy in the following measurement wave. On the other hand, in the KiVa group, the relationship between well-being and attitudes was in the opposite direction. KiVa group students with higher well-being in one measurement wave demonstrated stronger attitudes against bullying (and social self-efficacy) in the following wave. Moreover, in the KiVa group, students with strong attitudes against bullying in the first wave, reported more victimization in the following wave, potentially leading to the vicious circle between victimization and bullying. On the contemporaneous level, networks appeared to be more similar between both study groups being separated into two clusters representing 1) victimization and bullying, and 2) the rest of the network, with one important difference in the KiVa group depicting a negative association between victimization and social-self-efficacy. In conclusion, hypothesized mechanisms were not related to hypothesized outcomes in an expected manner potentially indicating the differential role of attitudes against bullying depending on the study group – being a mechanism of change in the control condition, or potentially strengthening the interplay between victimization and bullying. The use of network methodology to model panel data may be useful in generating novel hypotheses for future research and practice of antibullying programs.

**475**

### **Promoting psychological well-being in preschool children: Randomized controlled trial of a mindfulness- and yoga-based socio-emotional learning intervention**

Ophélie Courbet<sup>1</sup>, Quentin Daviot<sup>2</sup>, Victoire Kalamarides<sup>1</sup>, Marianne Habib<sup>3</sup>, Marie-Carmen Castillo<sup>1</sup>, Thomas Villemonteix<sup>1</sup>

<sup>1</sup>Paris VIII - Paris Lumières University, Saint-Denis, France. <sup>2</sup>Abdul Latif Jameel Poverty Action Lab [J-PAL], Paris School of Economics, Paris, France. <sup>3</sup>DysCo Laboratory, Paris Lumières University, Saint-Denis, France

#### **Abstract (max 500 words)**

Background: Mental health issues in youths have cascading negative effects on school outcomes, professional life, and physical health. Psychological well-being (P-WB) is an important protective factor against mental illness. Preliminary research suggests that mindfulness- and yoga-based socio-emotional learning (SEL) interventions can have a positive impact on preschoolers P-WB. The objective of our study is to evaluate the effect of a 24-weeks combined mindfulness- and yoga- based SEL intervention in 761 preschool children from 59 classrooms in a French socio-economically disadvantaged area. Methods: The P-WB promotion intervention is compared to a wait-list control condition in a cluster randomized controlled trial (RCT). Core P-WB components (connection, insight, engagement and positive relationship), self-management capacity, mental health, and executive functioning are assessed through teacher questionnaires, standardized observations of children in school context and experimental tasks at baseline and at the end of intervention. Results: As expected, our intervention has positive effects on children mental health, with a reduction of emotional, conduct and peer relationship problems, and a

reduced impact of these problems on children functioning after intervention compared to control. Effects on mental health are stronger for boys, and for children with greater mental health issues at baseline. Intervention also shows effectiveness on promoting positive relationship and self-management as measured by teacher questionnaires but not standardized observations nor experimental tasks. However, the intervention shows no effect on the other core P-WB components nor executive functioning. Conclusion: This trial shows mixed but encouraging results. Discrepancies between informants reports, and implications for future P-WB promotion policies in preschool children are discussed.

**482**

### **"Whatever it takes, try harder every day". Use of Symbolic Resources in the educational experience of students in a Chilean Vocational-Technical Education institution.**

Gonzalo Gallardo<sup>1,2,3</sup>, Fernanda Goñi<sup>2</sup>, Constanza Lobos Guerrero<sup>3</sup>, Daniela Morras<sup>2</sup>, Pablo Reyes<sup>4</sup>, Macarena Sanhueza<sup>2</sup>, Maximiliano Silva<sup>2</sup>, Vicente Lazo<sup>3</sup>, Maximiliano Alviña<sup>2</sup>

<sup>1</sup>Universidad Pablo de Olavide, Sevilla, Spain. <sup>2</sup>Pontificia Universidad Católica de Chile, Santiago, Chile.

<sup>3</sup>Universidad Alberto Hurtado, Santiago, Chile. <sup>4</sup>Universidad de Chile, Santiago, Chile

#### **Abstract (max 500 words)**

Higher education in Latin America is a growing field (Mato, 2018). At this level, the expansion of institutions that provide Vocational-Technical Education stands out. In the case of Chile, these institutions typically receive students who are the first in their families to reach higher education, youngsters and adults from middle or low-income households who usually combine work and studies. Despite the increase in coverage of higher education, there is scarce research about the experience and perspectives of students in the Chilean Vocational-Technical Education.

This presentation will offer findings from a qualitative study developed in a Chilean institution of Vocational-Technical Education. The objective of the study was to gain in-depth knowledge of the educational trajectories, needs, challenges and projections of the institution's students. This paper in specific will focus on the testimonies that we collected about the use of symbolic resources by students on their transitions and experiences of being in higher education.

From a sociocultural psychology perspective, which “recognizes that people are positioned within different and intermeshed symbolic streams in the socio-cultural world” (Zittoun, Duveen, Gillespie, Ivinson & Psaltis, 2003, p.2), educational experiences represent an interesting space where investigate the use of symbolic resources, which allow human beings to mediate their experience through ruptures and transitions (Zittoun and Gillespie, 2015).

Methodologically, this research was developed through a multiple case study (Stake, 1998). We contact 18 students, being every one of them a case, doing for each one two in-depth interviews and including

interviews with family members referred by them. Participants from different socioeconomic background, gender and careers were included in this research. In total, we developed 51 interviews, with a duration of 45 to 90 minutes. Each case was analyzed separately and then contrasted with the other cases collected.

As a result, we found on the discourse of students the predominance of guiding principles oriented to highlight the resilience and capacity for effort as a resource to face the difficulties of training and life, useful to persist and resist. Some words were recurrent between students as resources (with the exception of upper-class students), appealing to the effort, the resistance, and the value of work. Family examples of effort were included as inspiration or support in complex moments, and also the appropriation of tools linked with their future profession, like hard hats, books or tools.

The over emphasis on the individual strength and capability of endurance were recurrent. This was similar to a phenomenon observed in England in working class higher education students (Reay, Crozier & Clayton, 2009). They have internalized the meritocratic discourse, where effort and hard work represent the keys to success, without having in their background the support experiences that middle and upper class students would have at their disposal. The predominance of this type of discourse, especially among first-generation family students can become an obstacle to the request for academic help (Lobos Guerrero, Gallardo and Valenzuela, 2021), as well as a mandate for resistance that threatens their well-being and mental health.

**483**

### **Individual differences in gaze patterns to social and affective video stimuli in 1.5–15-year-old children**

Heini Saarimäki, Kseniia Konopkina, Hilla Hirvaskoski, Terhi Helminen, Elina Lehtonen, Oleg Spakov, Fiia Takio, Anneli Kylliäinen, Jari K Hietanen

Tampere University, Tampere, Finland

#### **Abstract (max 500 words)**

Naturalistic stimuli, such as movies, provide a powerful means for inducing emotions in laboratory settings and have been shown to reduce children's discomfort and fatigue. Here, we tested how individual differences in autism-related behavior, empathy, and feelings of loneliness affect gaze patterns to social and affective videos.

In Study 1, we recruited 32 toddlers (20 males, mean age 18 months, range 13–31 months) for the longitudinal Gaze@Toddler project (Tampere University, Finland) from child welfare clinics. Eye-tracking data and ADOS-2 (toddler module) scores were collected to measure gaze patterns to social video stimuli and to quantify autism-related behaviors, respectively. Participants passively viewed a video stimulus (dur. 5:10min) consisting of eight video clips from children's TV shows. Four clips had social content (people, conversation), and four had non-social content (vehicles, animals). In Study 2, we recruited 74 children (30 males, mean age 10.6 years, range 8–15 years) and 19 young adults (3 males,

mean age 22.1 years, range 19–29 years) as part of the Decoding Emotions Across Life-span study (Tampere University, Finland). Eye-tracking data were collected to measure gaze patterns to affective social video stimuli. Participants viewed 42 positive and negative emotional video clips (dur. 0:30-1:00min) with varying social content. We also measured individual differences in self-reported empathy and experienced loneliness. In both studies, we investigated the effects of individual differences (Study 1: high vs. low autism-related behaviors; Study 2: high vs. low empathy, high vs. low experienced loneliness) and video content (social vs. non-social vs. fixation) on the percentage of gaze on screen with a 2 x 3 mixed-effects ANOVA. To investigate the within-group similarity of gaze patterns, we calculated dynamic inter-subject synchrony during the videos using pairwise gaze heatmap correlations. We estimated group differences in mean inter-subject correlations for each clip using Cohen's *d* and bootstrapping to estimate distribution parameters.

**Results:** In Study 1, more autism-related behaviors in toddlers were associated with less gaze on screen ( $F(1,30)=8.27, p=.007, \eta_p=.22; M_{high}=71.7\%, SD_{high}=14.6; M_{low}=85.2\%, SD_{low}=7.9$ ). Groups also differed in the effect of video category on the percentage of gaze on screen ( $F(2,60)=5.17, p=.009, \eta_p=.15$ ): toddlers with less autism-related behaviors (low ADOS group) gazed more on screen during social videos than during fixation or nonsocial videos, but this effect was absent in toddlers with more autism-related behaviors. The low ADOS group also had higher within-group gaze synchrony during both social and nonsocial videos (Table 1), indicating more homogeneous gaze patterns. We identified higher synchrony within the low ADOS group to scenes with people and intentional actions, and higher synchrony within the high ADOS group during scenes with objects (Figure 1). In Study 2, we expect the gaze to the social content of the videos to depend on the individual differences in empathy and loneliness.

**Conclusion:** Our results demonstrate social video stimuli as an effective means of inducing socio-emotional processing and studying individual differences, even in young children. The effects can be detected even with short (~5min) stimulus durations.

484

## Individual determinants of eco-anxiety in high school youth

Nessa Ghassemi-Bakhtiari<sup>1</sup>, Anne-Sophie Denault<sup>2</sup>, François Poulin<sup>1</sup>, Frédérick Philippe<sup>1</sup>

<sup>1</sup>Université du Québec à Montréal, Montréal, Canada. <sup>2</sup>Université Laval, Québec, Canada

### Abstract (max 500 words)

Eco-anxiety, understood as an adaptive and complex reaction to the existential threats engendered by global climate change, is increasingly experienced among young people. An international survey of 10 000 youth across 10 countries recently exposed that 75% of 16-to 25-year-olds are afraid of the future and nearly half say their feelings about climate change have had an impact on their daily lives (Hickman et al., 2021). In Quebec, nearly half of young adults experience one or more manifestations of eco-anxiety on a sustained basis (Généreux et al., 2021). Eco-anxiety can serve as a motivation to change, promoting civic engagement, or, on the contrary, provoke negative coping strategies such as avoidance, paralysis, or denial (Ojala, 2012). For example, pro-environmental behaviours (PEB) could decrease eco-

anxiety in young people (motivator), but maladaptive eco-anxiety could also have the effect of decreasing these behaviors (negative coping). Eco-anxiety in youth can thus have significant negative effects on their psychosocial adaptation, making them more vulnerable to experiencing difficulties such as anxiety and depressive symptoms. It is therefore essential to focus on this population to promote their well-being and encourage the transformation of eco-anxiety into a lever for collective action in the fight against climate change (Panu, 2020). However, very few studies examine eco-anxiety in adolescents, even though they experience it (Gislason et al., 2021; Hickman, 2020; Wu et al., 2021). Furthermore, no study to our knowledge identifies the determinants of eco-anxiety in this population, which is essential to develop appropriate interventions (Crandon et al., 2022). Consequently, the main objective of this study is to verify the strength of the associations between individual determinants (pro-environmental attitudes, PEB, civic engagement, youth empowerment, emotional regulation) and eco-anxiety among high school students. Our hypothesis is that determinants closest to the concept of environment (pro-environmental attitudes and PEB) will be more strongly associated with eco-anxiety than predictors less directly associated with this concept (civic engagement, youth empowerment, and emotional regulation). This study is part of a larger longitudinal research project in partnership with the Alliance for Youth Engagement on the contribution of civic activities to the academic success of high school students (Projet Réussir, 2022-2024). Data from the first data collection will be used (T1 = Winter 2023; N = 2000 students, aged 12 to 18). Following approval by principals and parents, students will complete the following scales in the classroom: Hogg Eco-anxiety Scale (13 items), pro-environmental attitudes and PEB (12 + 10 items, Leeming et al., 1995), Participation in organized civic activities (20 items); Youth Empowerment (5 items, Paxton et al., 2005); and Emotional regulation (9 items, Roth et al., 2014). A multiple hierarchical regression analysis will be performed using eco-anxiety as the dependent variable. Gender and socio-demographic variables will also be included in the analyses as control variables. This research hopes to contribute to the field of positive youth development and the collective effort to adapt to climate change by informing adapted intervention programs that promote the transformation of eco-anxiety into a driver of civic engagement during adolescence.

**487**

### **Assessing emotional regulation in children and adolescents with an intellectual developmental disorder (IDD) using a game situation: “The great ants’ race” task**

Mélanie VY<sup>1</sup>, Régis Pochon<sup>1</sup>, Nawelle Famelart<sup>2</sup>, Nicolas Dollion<sup>1</sup>, Christelle Declercq<sup>1</sup>

<sup>1</sup>Laboratoire C2S (Cognition, Santé, Société), EA6291, Université de Reims Champagne-Ardenne, Reims, France. <sup>2</sup>Laboratoire CLLE (UMR CNRS 5263), Maison de la Recherche, Université Toulouse Jean Jaurès, Toulouse, France

#### **Abstract (max 500 words)**

Emotional skills contribute to maintaining good relationships and reaching academic success (Izard et al., 2001). Among them, emotion regulation is often affected by the presence of a neurodevelopmental disorder, especially an intellectual developmental disorder (IDD). It is often related with behavior disorders: indeed, people with poor emotion regulation skills are more likely to show internalized or externalized behavior disorders (Eisenberg et al., 2016). When studying emotion regulation, a relevant



question that remains is: how can it be assessed? Some heteroquestionnaires are available and allow clinicians and researchers to collect observations concerning the efficiency of children's emotion regulation in their daily life (such as the ERC). However, emotion regulation is less easy to evaluate through direct evaluation/observation. Some researchers have attempted to develop standardized situations driving the emergence of negative emotions in order to observe how participants respond to them (Beaurain & Nader-Grosbois, 2011), but these tools can be difficult to use and are not always suitable for young people with an IDD, due for example to the instructions' complexity, or the need of a third trained person. With "The great ants' race" task, Famelart (2018) attempted to overcome these difficulties by proposing a simple game situation, during which the examiner manipulates the course and the outcome of the game. The objective was to observe participants' reactions (based on behavioral coding) when facing failure situations (that can potentially generates frustration) and success situations (that can potentially generates excitement). In this study, we were interested in the usability of this tool with a population of young people with IDD, but also in the possibility to extend the analysis of observable behaviors with the recording of a physiological measure that have already been used to assess emotion regulation: the heart rate (Adrian et al., 2011).

We therefore met children with typical development (TD) aged 4-8 and teenagers with IDD aged 10-16. They were invited to perform "The great ants' race" task in addition to other tasks dedicated to the assessment of emotional abilities (emotional facial expressions identification or denomination, emotional vocabulary comprehension and emotion comprehension). Sessions were videorecorded and participants' heart rate was recorded while achieving the tasks using a connected watch. We also asked professionals accompanying the participants to complete the ERC-vf, an heteroquestionnaire assessing emotion regulation skills in young people in the daily life. First, collected data will be analyzed in order to test for the "The great ants' race" convergence validity. We will also seek to compare the results obtained between TD and IDD groups, with the hypothesis that at same developmental age, participants with IDD will present poorer emotion regulation skills compared to TD participants.

Our ultimate goal is to offer clinicians a valid and standardized emotion regulation assessment task, that is adapted and suitable for children and adolescents with IDD. With a simpler and easier task to use, "The great ants' race" task should allow professionals to obtain interesting and important information about children's emotion regulation skills, that can be used to adapt treatments and supports.

**488**

## **Metaphor understanding in school-aged children: from a good-enough to a very good understanding?**

Sarah Ferrara<sup>1</sup>, Marc Aguert<sup>2</sup>, Christelle Declercq<sup>1</sup>

<sup>1</sup>Université de Reims Champagne-Ardenne France Laboratoire C2S ( Cognition, Santé, Société), EA6291, Reims, France. <sup>2</sup>Normandie Univ, UNICAEN, LPCN, Caen, France

**Abstract (max 500 words)**

Understanding implicit meaning, such as in metaphor, is an essential competence to language, social development and academic success. While some authors have shown that children understand metaphors from 3 years old (e.g., Pouscoulous & Tomasello, 2020), others have found a later understanding, around 8 years old (e.g., Deckert et al., 2019). This divergence could be explained by distinguishing several levels of understanding for metaphorical statements. This is in line with the “good-enough” theory of language comprehension proposed by Ferreira (2002) according to which adults process often language with heuristics which allowed them to apprehend utterances meaning in a “good enough” way. Understanding would not be either correct or incorrect: some representations incomplete and imprecise are correct enough. In the present study, we studied the development of metaphor comprehension during the school period within this theoretical framework. We investigated if the distinction between a “good” and a “good-enough” comprehension could reconcile the proponents of an early understanding of metaphors with those of a late understanding. The participants ( 350 children between 5 and 11 years old) heard short stories ending with a metaphor. Then we asked them to judge the extent to which an utterance adequately rephrased the target metaphor on a 5-point scale. For each metaphorical statement (e.g., "A butterfly is a rainbow"), two types of acceptable reformulations were distinguished: the "metaphorical" reformulations conveyed accurately the meaning of the metaphor (e.g., “butterflies are full of colors”) while the “situational” reformulations meaning was acceptable regarding the whole situation but not really accurate (e.g., “butterflies are very beautiful insects”). The results showed an interaction between the age (continuous variable, from 5 to 11 years) and type of reformulations (metaphorical vs. situational). While older children found metaphorical reformulations to be significantly more adequate in reformulations metaphors than situational reformulations, which showed a good understanding, this difference is much smaller and non-significant in younger children, which suggests that they were satisfied with a good-enough understanding of metaphors. These results suggest that metaphor comprehension not only improves during childhood, but also that it probably changes in nature, with young children less likely to engage in fine processing of metaphors meaning, the only way to enable them to distinguish metaphorical reformulation from situational reformulation. How this capacity to engage in “fine” processing of metaphors is encouraged and exploited by school learning remains to be explored.

490

## **On risks and rewards – the interplay between status and defending networks in bullying situations in elementary school**

Stefanie Richters<sup>1</sup>, Christian Steglich<sup>2</sup>, Chloé Tolmatcheff<sup>2</sup>, Maarten van Zalk<sup>1</sup>, René Veenstra<sup>2</sup>

<sup>1</sup>University of Osnabrück, Osnabrück, Germany. <sup>2</sup>University of Groningen, Groningen, Netherlands

### **Abstract (max 500 words)**

Activating bystanders to become defenders is a key aspect of many anti-bullying programs. Recent findings indicate that encouraging defending may not always be beneficial and that it could have potential risks in terms of status for defenders. Longitudinal findings on the relation between defending and status are mixed. A major gap in the previous research is that the relational nature of status and defending has not been considered. Social status is a group phenomenon and can be understood as a

directed network in which classmates provide status to some children. Similarly, defending can be operationalized as a directed network in which a defender behaves positively toward a victim. We aim to address this gap with a longitudinal multiplex social network approach to examine how defending relationships and status attributions co-evolve among middle to late-childhood students. In that way, we examine status and defending as social network phenomena.

We expect that higher status will predict increases in defending over time (Hypothesis 1) because high status may be a prerequisite that enables students to take a stance against bullies despite potential perceived risks. Moreover, we expect that defending will lead to higher status over time (Hypothesis 2). Because defending is perceived as risky, it may demonstrate courage and power and thus be rewarded with status over time. However, defending may not lead to status for all students: a certain level of status may be necessary for defending to be perceived as a powerful and socially dominant behavior leading to increased status attributions. Thus, we expect that the effect of defending on status will be moderated by the defender's status at baseline (Hypothesis 3). Finally, we expect that with increasing age, defending will be less rewarded with status (Hypothesis 4). As children grow older, they start to prioritize status above other relational goals and may therefore be more reluctant to risk losing status through defending.

Data stem from the three-wave evaluation study that accompanied the Dutch implementation of the KiVa anti-bullying program. Because we aim to analyze longitudinal changes in relatively stable networks, we included only classrooms with stable composition across the waves (83 classrooms). Two classrooms were excluded because less than 80% of the students participated in the third wave. This results in a sample of 81 classes and 2027 participants from grades 2 to 5 (Mage = 9.71, 50% girls). Defending and status networks were assessed using peer nominations (i.e., participants could nominate classmates from a roster). Longitudinal multiplex social network analysis will be carried out using RSiena, which estimates parameters of stochastic actor-based models of the (co-) evolution of (multiple) social networks over time.

This study will offer a nuanced understanding of the risks and rewards that students navigate when they decide to intervene in bullying situations. The results are expected to provide new insights into the implementation of future anti-bullying programs: how and for whom should defending be encouraged? Recommendations will be discussed with regard to developmental changes. Moreover, possible complementary pathways to reduce bullying will be discussed.

**492**

## **Harnessing youths' need to contribute to society: A naturalistic experiment**

Lysanne W. te Brinke<sup>1</sup>, Eveline A. Crone<sup>2</sup>

<sup>1</sup>Erasmus University, Rotterdam, Netherlands. <sup>2</sup>Erasmus University, Rotterdam, Netherlands

### **Abstract (max 500 words)**

#### **Objective of the study**

The developmental phase of adolescence is characterized by an elevated need to make meaningful societal contributions (e.g., demonstrating against inequality, help elderly community members). However, previous research has demonstrated that there is a disbalance between the need that adolescents have to raise their voice and help community members, and the degree to which they feel that they can actually contribute. This is unfortunate, given that denying youth the opportunity to contribute is found to have a negative impact on psychological wellbeing. Therefore, the goal of this study was to examine how youths' need to contribute can be harnessed at schools.

## Methodology

Participants were 148 Dutch high school students between 12 and 17 years old ( $M_{\text{age}} = 14.68$ ,  $SD = 1.00$ , 59% girl). Of these adolescents, 88 were selected by their teachers to be part of a prosocial challenge. The remaining 60 adolescents were recruited from the same schools, but they did not join the challenge. Adolescents in the naturalistic intervention condition received a three-step workshop. First, adolescents were encouraged to think about the societal problems (i.e., climate change, loneliness of elderly people) that interested them most. Second, they were encouraged to find out which personal talents (i.e., organizing, baking) they could use to contribute to this challenge. Third, adolescents paired up with classmates to organize a personal impact challenge. In the following weeks, they could perform this impact challenge (e.g., make a campaign to stimulate commute by bike, baking cookies for elderly). At pretest (T1), in-between test (T2; after the workshop), post-test (T3; after the impact challenge), and follow-up (T4), participants answered questionnaires (i.e., General Contribution to Society questionnaire), using Qualtrics.

## Results

Results showed that at pre-test, adolescents' need to contribute ( $M = 4.86$ ,  $SD = 1.05$ , range 1-7) was significantly higher than their perceived opportunities ( $M = 3.88$ ,  $SD = 1.36$ , range 1-7) to make valuable contributions,  $t = 9.28$ ,  $p < .001$ . Therefore, a differences score was created (need-opportunity), with higher scores indicating a larger disbalance. A repeated measure ANOVA with the difference score as within-person variable (T1-T4), and condition (naturalistic intervention versus control) as between-person variable, showed that there was a significant decrease in disbalance across time,  $F = 3.89$ ,  $p = .010$  (Figure 1). However, this decrease did not significantly differ for adolescents in the naturalistic intervention versus control group,  $F = 1.34$ ,  $p = .263$ .

## Conclusion

This study shows that it is possible to decrease the gap between youths' need to contribute and their perceived opportunities to make valuable contribution, although potential spill-over effects from intervention to control conditions should be taken into account.

493

**Creativity and Mental Well-being among University Students in Ghana**

Nora Wiium

University of Bergen, Bergen, Norway

### **Abstract (max 500 words)**

**Objective of the study:** In a recent conceptualization of positive youth development (PYD) indicators, a proposal was made to extend the 6Cs of PYD (Competence, Confidence, Character, Connection, Caring and Contribution) to include Creativity as the 7th C (Dimitrova et al., 2021). Creativity has been defined as the ability to generate new ideas, and to possess problem-solving techniques that are novel and functional. Creativity alongside the 5Cs is a thriving indicator, facilitated through a dynamic interaction between youth strengths and the resources and opportunities in their contexts. Moreover, within PYD, Creativity as a thriving indicator can protect against adjustment problems (e.g., substance use and depression). Empirically, a positive association between thriving and mental well-being has also been confirmed. In the present study, the aim is to explore the associations of Creativity 1) as one factor and 2) as two components (originality and fluency) with three dimensions of mental well-being (emotional, social, and psychological) among Ghanaian university students. Gender differences are also assessed.

**Methodology:** The sample comprised 710 students (51% females), selected through convenience sampling. The participants were 17-27-year-olds, with a mean age of 19.97 (SD = 1.93). After ethical approval, data was collected through a cross-sectional survey that included items on Creativity (Reisman et al., 2016), mental well-being (Keyes, 2005), and demographics (age and gender).

**Results:** Descriptive statistics (Table 1) indicated that university students in Ghana reported creativity skills to some extent, with mean scores of 3.53–3.83 (range: 1–5). The same applies to mental well-being, with mean scores of 4.29–4.81 (range: 1–6). In results not reported in tables, no gender difference was observed for Creativity and mental well-being. In regression analysis, Creativity as one variable was positively associated with all three dimensions of mental well-being (unstandardized coefficient: .43–.52,  $p < .001$ ), although the association with psychological well-being appeared to be the strongest. The variance explained by Creativity ranged from 8% to 14%. When Creativity was assessed as two components: originality and fluency, both were positively associated with each dimension of mental well-being (unstandardized coefficient: .14 - .39,  $p < .05$ ). However, in general, fluency was more strongly related to social and psychological well-being (Table 2). The variance explained by originality and fluency ranged from 9% to 16%. Age and gender were controlled for in regression analyses and did not show any significant associations with mental well-being.

**Conclusion:** Consistent with theory and research, Creativity as a thriving indicator was positively associated with emotional, social, and psychological well-being, suggesting that the ability to create new ideas or generate problem-solving strategies can enhance the mental health of university students, in particular, and young people, in general. Fluency, which reflect the swift invention of novel and functional ideas, appears to be more influential. While further research is needed to study the underlying mechanisms as well as third variables, policies and programmes at the university and other youth settings that effectively promote Creativity among young people may not only be boosting their mental health but also putting them on a smooth transition into adulthood.

498

## Climate change distress, coping strategies and pro-environmental behavior: A three-wave longitudinal study among Finnish comprehensive school students.

Salla Veijonaho<sup>1</sup>, Lauri Hietajärvi<sup>1</sup>, Maria Ojala<sup>2</sup>, Katariina Salmela-Aro<sup>1</sup>

<sup>1</sup>University of Helsinki, Helsinki, Finland. <sup>2</sup>Örebro University, Örebro, Sweden

### Abstract (max 500 words)

#### Introduction

Climate change is the most fundamental threat of our time. It also affects human well-being, and young people can be particularly vulnerable to its effects (Sanson et al, 2018). Previous research shows that distress caused by awareness about climate change is widespread among adolescents all around world (Hickman et al., 2021). Climate change distress can manifest as cognitive and emotional impairments in response to climate change, behavioral impairments in daily life caused by concern of climate change and cynicism towards climate change (Clayton & Karazia, 2020; Veijonaho & Salmela-Aro, 2022). Adolescents' coping strategies play a role in how they deal with climate change distress and engage in pro-environmental behavior (Ojala, 2012). These strategies can be divided into problem, emotional and meaning focused coping strategies (Ojala, 2012).

#### The aim

There is an absence of previous longitudinal studies on youth and climate change from the perspective of developmental psychology. Hence, the present study aims to investigate longitudinal relations between adolescents' climate change distress (cognitive-emotional impairment, behavioral impairment & cynicism), coping strategies (emotional, problem & meaning focused coping) and pro-environmental behavior on the within-person level.

#### Data and methods

To address the aim of the study, longitudinal data collected in three waves will be used. The data has been collected in May 2021 (N = 796), 2022 (N = 901, retention rate = 59,6%) and 2023 (expected n = over 800) from Finnish comprehensive school students born in 2005-2008. To evaluate the directions of direct and indirect longitudinal within-person effects between climate change distress, coping strategies and pro-environmental behavior, Random Intercept Cross-lagged Panel Model will be implemented.

#### Initial results

Initial results were estimated based on the first and the second waves. First, a correlation matrix was created to illustrate correlations between all variables (Table 1). Then, a normal causation model was built to illustrate the relations of the variables with cross-lagged associations on the between-persons level (Fig 1). The model showed that Time 1 problem focused coping strategy predicted Time 2 pro-environmental behavior while Time 1 emotional focused coping strategy predicted increase in Time 2 cynicism. Time 1 meaning focused coping strategy predicted decrease in Time 2 emotional coping and

behavioral impairment. There was no significant cross-lagged effect of climate change distress on coping strategies or pro-environmental behavior. The initial results endorse the key role of coping strategies in climate change adaptation. Models on the within-person level will be estimated after the 3rd wave of data is collected.

## References

Hickman, C. et al. (2021). Climate anxiety in children and young people and their beliefs about government responses to climate change: a global survey. *The Lancet Planetary Health*, 5(12).

Ojala, M. (2012). How do children cope with global climate change? Coping strategies, engagement, and well-being. *Journal of Environmental Psychology*, 32(3).

Sanson, A., Van Hoorn, J., & Burke, S. (2019). Responding to the impacts of the climate crisis on children and youth. *Child Development Perspectives*, 13(4).

Veijonaho, S. & Salmela-Aro, K. (2022). Nuoret ja ilmastonmuutos – ilmastonmuutokseen liittyvät lukiolaisnuorten hyvinvointi- ja toimintaprofiilit. *Psykologia*, 57 (04).

499

## When and why do we become adults? Perceptions of adulthood from age 18-77

Megan Wright, Sophie von Stumm

University of York, York, United Kingdom

### Abstract (max 500 words)

**Objective:** Adulthood makes up the longest period of the human lifespan, with 65% of the global population being considered adults (The World Bank, 2022). Yet, little is known about people's perceptions of adulthood. In traditional models of human development, adulthood is reached through the achievement of social milestones such as marriage, employment, and parenthood. However, adults today increasingly individualise their careers, relationships, and lives, oftentimes delaying or even forgoing these traditional social milestones. If expectations of adulthood are misaligned with the reality that young people live in, identity development and sense of belonging to the adult population are likely to be impaired, causing adverse mental health and well-being. Here, we assessed current expectations for and perceptions of adulthood.

**Methodology:** In our sample of 722 UK adults aged 18 to 77 years ( $M = 39$ ,  $SD = 13.14$ ) we measured perceptions of adulthood in four ways. First, the self-perceived adult status scale, developed for this study, assessed to what extent participants identified as adults. Second, the attitudes towards adulthood scale, also developed for this study, measured whether participants perceived adulthood as a positive or negative time of life. Third, the revised Markers of Adulthood scale (Norman et al., 2021) identified which characteristics participants deemed important for achieving adulthood status. Fourth,

the novel CARES scale (Wright & von Stumm, in prep), assessed the perceived importance of psychological characteristics of adulthood in five core qualities: cognitive maturity, sense of aging, self-reliance, eudaimonia, and social convoy.

**Results:** There were three key findings from this study. First, on the self-perceived adult status scale, participants were more likely to identify with being ‘grown-up’ ( $M = 3.97$ ,  $SD = 0.98$ ) than being ‘adult’ ( $M = 3.63$ ,  $SD = 1.01$ ), suggesting there is a reluctance across age groups to identify as an adult. Second, regression analyses revealed that self-perceived adult status was predicted by age ( $R^2 = .11$ ), parent status (incremental  $R^2 = .03$ ), and having a positive attitude towards adulthood (incremental  $R^2 = .10$ ). Third, participants endorsed psychological characteristics over social milestones to define adulthood on the Markers of Adulthood scale. For example, “accepting responsibility for the consequences of my actions” was endorsed by 79% of participants, whereas “being married” was endorsed by only 22%. Fourth, the CARES qualities were endorsed as defining characteristics of adulthood, in particular self-reliance items such as “being able to look after myself” (endorsed by 76% of participants).

**Conclusion:** Based on results from a large sample of diverse ages, modern measures of adulthood should (1) consider using alternative terminology such as ‘grown-up’; (2) focus on attitudes towards adulthood, which are malleable and predicted self-perceived adult status to the same extent as chronological age; and (3) recognise adulthood as a time of rich, rewarding, and continuous psychological development, not a fixed social state. Understanding how people perceive adulthood is crucial to advancing psychological research on adult development, improving adults’ identity development and sense of belonging, and fostering a happy, healthy, and productive adult population.

502

## Associations between physiological emotion regulation during a stressful family task and psychological symptoms during adolescence

Michaël Romet<sup>1,2</sup>, Nicolas Favez<sup>2</sup>, Rémi Duquesnoy<sup>1</sup>, Carine Haueter<sup>1</sup>, Sébastien Urben<sup>3</sup>, Hervé Tissot<sup>1,2</sup>

<sup>1</sup>Department of Psychiatry, Lausanne University Hospital and University of Lausanne, Lausanne, Switzerland. <sup>2</sup>Faculty of Psychology and Educational Sciences, University of Geneva, Geneva, Switzerland.

<sup>3</sup>Division of Child and Adolescent Psychiatry, Department of Psychiatry, Lausanne University Hospital and University of Lausanne, Lausanne, Switzerland

### Abstract (max 500 words)

Emotion regulation (ER) competences mainly develop within the family context during childhood and adolescence and are linked to a wide range of psychological outcomes including emotional problems, peer problems and hyperactivity. Although ER is a dynamical and relational process, most studies use self-report or physiological measures in static or non-relational contexts. This study aimed to present preliminary analyses exploring the links between physiological ER during a stressful family task and adolescent symptomatology. We collected electrocardiogram data in 74 adolescents (aged 10-13) during a 12-minute family conflict discussion task with their mother and father. Cardiac activity in resting state was also measured before the task as a baseline ER measure, and after the task as a recovery measure.



We derived indices of ER from the computation of root mean square of successive differences between heartbeats (RMSSD), with high RMSSD indicating higher ER capacities. In addition to the RMSSD values before, during and after the task, we also computed the differences in RMSSD values between each part of the procedure to assess the evolution of the stress experienced by the adolescents throughout the whole procedure. Adolescents completed the Strength and Difficulties Questionnaire (SDQ), which allows to assess five dimensions (emotional problems, peer problems, conduct problems, hyperactivity-inattention and prosocial behaviors) that can be combined into scores of internalized and externalized symptoms. We performed generalized linear models to test how RMSSD values before, during, and after the task, as well as differences between RMSSD values during these different parts, predicted adolescent symptoms, while controlling for adolescent gender, age, and body mass index. On the one hand, RMSSD values during the different parts of the procedure were not significantly associated with SDQ scores. On the other hand, the difference in RMSSD between pre-task resting and family discussion revealed significant associations. The adolescents that showed lower physiological ER during the stressful family discussion compared to pre-task resting presented significantly (1) higher scores of internalized symptoms and (2) higher scores of emotional problems. Based on a physiological measure of ER during a stressful family task, these results provide additional support for the link between ER competences and psychological symptoms in adolescence. Clinical and methodological implications of these results will be discussed.

## 510

### **Perceived online communication quality and e-motions disclosure among adolescents and young adults: The role of specific social media features and social anxiety**

Federica Angelini, Gianluca Gini

University of Padua, Padua, Italy

#### **Abstract (max 500 words)**

Objective of the study

This study was designed in line with the tenets of the Transformation Framework (Nesi et al, 2018a, 2018b; Nesi et al., 2021), according to which the social media context is characterized by eight specific features that may transform adolescents' social behaviors and relationships. Further research is needed that focuses on how social media experiences may differ among individuals and on whether some users may benefit from online interactions more than others because of personal characteristics. In line with the social compensation hypothesis (Kraut et al., 2002), recent research has found that adolescents and young adults with high levels of social anxiety feel more confident in communicating on social media, which allow for higher control, thus minimizing the distress experienced in face-to-face interactions. Therefore, the current study aimed to test possible differences in disclosing e-motions and perceived online communication quality among adolescents and young adults with higher, compared to those with lower, levels of social anxiety. Specifically, we examined the relative contribution of three specific social media features (i.e., asynchronicity, cue absence, and visualness) in explaining e-emotional processes

(i.e., expression and facilitating use of e-motions) and, in turn, online communication quality (in terms of perceived breadth and depth), across groups of individuals with different levels of social anxiety.

## Method

The sample included a total of 1046 Italian adolescents and young adults (61.4% females) with an average age of 17.9 years ( $SD = 3.23$ , range: 13-26). Participants completed a series of anonymous self-report questionnaires between November 2021 and September 2022. A structural equation modeling (SEM) was first tested on the whole sample, then we ran multiple latent profile analyses (LPAs) to identify groups of individuals with different level of social anxiety and we performed a multi-group analysis to test for differences across the identified group.

## Results

Results from the SEM model on the entire sample showed a good fit between the model and the data ( $\chi^2(271) = 954.089$ ,  $p < .001$ ; CFI = 0.942; RMSEA= 0.050, 90% CI [0.046, 0.053], SRMR= 0.042) and, along with the direct paths, significant indirect effects emerged (Table 1). Descriptive statistics and correlations among the study variables per profile (Socially non-anxious vs. Socially anxious) are displayed in Table 2. Multi-group analysis (Figure 1) showed significant differences between the two groups, partially confirming our hypothesis. Specifically, cue absence was positively associated with perceived communication breadth in the socially anxious group, and negatively in the socially non-anxious group, although this last association was not statistically significant. Further, the association between cue absence and perceived communication depth was positive, but not significant, in the socially anxious group, and significantly negative in the socially non-anxious group.

## Conclusion

This study supports the potential beneficial role of social media for individuals with certain personal difficulties (i.e., social anxiety) and offers important implications for the understanding of contemporary peer relationships during adolescence. Social media context provides adolescents an extension of offline interactions with peers and this may be particularly important for more socially vulnerable youths.

**518**

## **Testing Mediation in Meta-Analyses of Randomized Controlled Trials using Meta-Analytic Structural Equation Modeling**

Hannelies de Jonge, Kees-Jan Kan, Suzanne Jak

Research Institute of Child Development and Education, University of Amsterdam, Amsterdam, Netherlands

**Abstract (max 500 words)**

In developmental psychology, randomized controlled trials (RCTs) are typically applied to get more knowledge about the effect of an intervention. Many interventions also need to be proven effective before these are used in practice or before insurance companies will cover the cost. To systematically synthesize the results, RCTs are often meta-analyzed. An advantage of meta-analyzing RCTs is the increased power as compared to individual studies because of the larger total sample size. Another advantage is that even though primary studies may not specifically have investigated mediation, with meta-analytic structural equation modeling (MASEM) it is possible to investigate this at a meta-analytic level. Researchers may be interested in investigating a mediation model because this can explain the underlying mechanisms of the intervention. For instance, to investigate whether a parenting intervention has an effect on decreasing child problem behavior via positive parenting behavior. More in general, one could be interested in the evaluation of an indirect effect of the intervention ( $X$ , a dichotomous variable) on some continuous outcome variable ( $Y$ ) through a continuous mediating variable ( $M$ ). The focus in the included primary studies may have been only on the bivariate relation between  $X$  and  $M$ , between  $M$  and  $Y$ , and/or between  $X$  and  $Y$ .

Meta-analysts usually rely on an effect size based on the provided summary statistics in the primary study because it can be difficult to access the raw data. In RCTs, researchers typically report the group means and standard deviations and/or Cohen's  $d$  (i.e., standardized mean difference). However, since MASEM needs correlation (or covariance) matrices as input, the data from RCTs are not readily suited to be analyzed. A possibility to include data of RCTs is by converting Cohen's  $d$  to a point-biserial correlation. However,  $d$ -to- $r$  conversion formulas differ across publications, statistical software, and online conversion tools. Therefore, researchers are left with confusion about which conversion they can use best. By conducting a simulation study, we investigated the effect of the different conversions, as well as the effect of converting Cohen's  $d$  or Hedges'  $g$  (i.e., adjusted Cohen's  $d$ ), on MASEM results. We evaluated the conversions under different allocation ratios, number of studies, studies' sample sizes, and percentage of missing correlations.

The results show that using the 'equal-groups conversion' to convert Cohen's  $d$  to the point-biserial correlation typically results in unbiased parameter estimates and standard errors. Other conversion formulas that are often used in practice can lead to biased results. Using inappropriate conversions can have an impact on clinical practice. Suppose we incorrectly synthesize the effect of an intervention, and the results incorrectly show that the intervention does not have an effect, then children or their parents may be left untreated because the intervention is not proven effective. Concluding, RCT data can be synthesized using MASEM, but we inform researchers to use the appropriate  $d$ -to- $r$  conversion. To assist meta-analysts using this conversion, we developed a user-friendly web application that converts the users' primary study statistics into the effect size that can be included in MASEM.

**530**

## **Pupils and staff working together: The Academic Resilience Approach to building resilience across the school**

Buket Kara<sup>1</sup>, Rosie Gordon<sup>1</sup>, Sarah Wells<sup>2</sup>, Suna Eryigit-Madzwamuse<sup>3</sup>

<sup>1</sup>University of Brighton, Brighton, United Kingdom. <sup>2</sup>Blackpool Council, Blackpool, United Kingdom.

<sup>3</sup>University of British Columbia, Vancouver, Canada

### **Abstract (max 500 words)**

This study investigates the effectiveness of the Academic Resilience Approach (ARA). The ARA is a whole-school, social justice-oriented programme. It promotes resilience by focusing on existing strengths and building capacity, to meet the needs of all members of the school community (e.g., pupils, school staff, parents/carers). The programme includes six stages: 1) training staff on resilience, 2) auditing the school to identify strengths and areas of improvement, 3) co-producing an action plan to build resilience, 4) implementing projects to build resilience led by young people in Resilience Committees, 5) reviewing the progress, and 6) sharing good practice. The ARA was implemented as a part of the Resilience Revolution: Blackpool HeadStart programme, which aimed to improve young people's mental health in Blackpool, one of the most socioeconomically deprived areas in England. Between 2017 and 2022, the ARA took place within all 44 schools in Blackpool to enable them to help pupils and staff to 'beat the odds', whilst also 'changing the odds' by tackling inherent inequalities in the school system. A mixed-method approach was utilised for this research. A total of 623 pupils (Years 5 to 10) and 101 staff provided quantitative (e.g., Student Resilience Survey) and qualitative data (e.g., focus groups) about outcomes and experiences at different stages of the ARA implementation. Process findings showed that resilience training offered to staff significantly helped them build knowledge and skills around resilience, which would equip them to promote resilience across the school. Following Resilience Committee involvement, staff and pupils saw positive changes in pupils' resilience, skills, and behaviour, as well as positive changes to the school climate. After the ARA implementation, positive outcomes for pupils were observed e.g., lower emotional and behavioural difficulties, and increased levels of protective factors associated with resilience (e.g., self-esteem, problem-solving, school and community connection). In contrast, Year 7 and Year 8 groups reported lower resilience and life satisfaction at the final assessment, which could be related to the significant changes and challenges with the onset of early adolescence and the new school environment by the transition from primary to secondary. Regardless, this should not pose an immediate concern because their resilience and mental health scores were not critically low, and it may be that the ARA work buffered these negative impacts. Findings also suggested positive outcomes for school staff in various areas, e.g., resilience knowledge and confidence, and aspects of school climate, particularly in mainstream schools. However, the results revealed that there are still areas that need to be addressed in schools, especially in special needs and disability (SEND) schools. Within the limitations of being a cross-sectional study, the findings suggested that the ARA has great potential to improve the outcomes across the school community by facilitating a self-improving, resilience-building education system, which is particularly critical in socioeconomically marginalised areas. Hence, this study offers important implications for policy and practice. Schools are encouraged to adapt and self-deliver the ARA using the free resource packs available online.

**531**

### **Older people and fake news: factors predicting belief and discernment**

Vita Mikuličiūtė, Vytautas Jurkuvėnas, Antanas Kairys, Vilmantė Pakalniškienė, Viktorija Ivleva

Vilnius University, Vilnius, Lithuania

### **Abstract (max 500 words)**

Fake news related to COVID-19 was a huge challenge not only for a health care system, but also for a society as a whole. Belief in fake information was especially hazardous for older people, as they could have become more reluctant to obey health recommendations or get vaccines, even though they were in the group of highest risk. Despite high risks there is still a lack of information concerning older people and their relation to fake information. Therefore, the goal of our research is to evaluate if sociodemographic (age, education level), cognitive (processing speed, verbal fluency, short-time memory) and social characteristics (loneliness, activity in social networks, trust in others) can predict belief in fake news and discernment of information concerning COVID-19 in older people.

In total, 503 pre-retirees and retirees of Lithuania participated in the research (60,2 percent were females). The mean age was 66,3 (range from 50 to 94 years). Participants read true and false news headlines (16 in total) taken from social networks for 7s. Two measures were calculated: how much the participant believed in fake news and how much he/she could distinguish between true and fake news (discernment).

The data were analyzed with multiple regression to determine the effects of eight variables on the belief in fake news and discernment. Results show, that processing speed was the only significant factor predicting belief in fake news. None of the factors we measured were significantly predicting the discernment. Besides, small but significant positive correlations between belief in fake news and age and between belief in fake news and loneliness were found.

Results indicate, that under the high time pressure, processing speed can predict belief in fake news. Person with a higher processing speed is better at evaluating information under time pressure and probably therefore has less belief in fake information. Besides, people become more truth biased with age and increased loneliness. Discernment means that person has to perform more complicated cognitive operation in a short period of time: believe in truthful, but do not believe in fake information, therefore none of the factors we measured seems to be capable in predicting this decision under time pressure. In reality people usually encounter mixed messages (some of them are true, some of them are fake) and under time pressure all older people could make poor decisions about truthfulness despite their age, education, cognitive capabilities or social characteristics. Results also call for further studies, because there is still a lack of information what factors could predict belief in fake news and discernment.

**532**

### **Balance of Power or Threat? The relationship between classroom ethnic diversity, teacher support and peer victimization**

Olivia Spiegler<sup>1</sup>, Tibor Zingora<sup>2</sup>, [Philipp Jugert](#)<sup>3</sup>

<sup>1</sup>University of Oxford, Oxford, United Kingdom. <sup>2</sup>Czech Academy of Sciences, Prague, Czech Republic.

<sup>3</sup>University of Duisburg-Essen, Essen, Germany

### **Abstract (max 500 words)**

We investigated how classroom ethnic diversity is associated with peer victimization, effects of ethnic minority/majority status, and if individual teacher support can buffer potentially negative effects of ethnic diversity. Different theoretical perspectives appear to make conflicting assumptions about the effects of school diversity. According to the balance of power principle, social dynamics in classrooms will be more positive when multiple ethnic groups are more balanced in size. Ethnic competition theory, in contrast, assumes that ethnic majority members feel more threatened by greater numbers of ethnic minorities. We suggest that both perspectives are actually not conflicting but compatible because they refer to different diversity contexts. We hypothesized that 1) peer victimization is more prevalent at intermediate levels of ethnic diversity and less prevalent at lower and higher ethnic diversity, 2) this curvilinear link is stronger for ethnic majority than minority students, and 3) peer victimization at intermediate levels of ethnic diversity is lower when individual teacher support is high. We conducted multilevel analyses based on the first wave of the Children of Immigrants Longitudinal Survey in Four European Countries (CILS4EU). The sample included 18,716 students, nested in 958 classrooms. We found no direct support for our hypotheses. Instead, we observed an overall negative linear association of ethnic diversity with peer victimization, which was moderated by ethnic minority/majority status (see Figure 1). In addition, we observed a complex three-way interaction between diversity, ethnic minority/majority status and teacher support (see Figures 2 and 3). Closer inspection of this interaction suggested that teacher support can minimize the risk of being victimized for ethnic minority students especially when diversity is low and for ethnic majority students when ethnic diversity is moderately high. Results were supported by a number of robustness checks (e.g., separate analyses per country, different definitions of ethnic groups). Overall, results support the balance of power hypothesis among ethnic minority students only and provide no support for ethnic competition theory. Importantly, findings suggest that teachers can help to compensate potential negative effects of ethnic diversity.

**533**

### **Friendship Network and School Socialization Correlates of Adolescent Ethnic-Racial Identity Development**

Olga Kornienko<sup>1</sup>, Adriana Umaña-Taylor<sup>2</sup>, Maciel Hernández<sup>3</sup>, Thao Ha<sup>4</sup>

<sup>1</sup>George Mason University, Fairfax, USA. <sup>2</sup>Harvard Graduate School of Education, Cambridge, USA.

<sup>3</sup>University of California Davis, Davis, USA. <sup>4</sup>Arizona State University, Tempe, USA

### **Abstract (max 500 words)**

Ethnic-racial identity (ERI) development is a universal task and a cultural asset for contemporary youth; it includes exploration, resolution, and affect about the meaning of one's ethnic-racial group membership (Umaña-Taylor et al., 2004). A lifespan model of ERI emphasizes that adolescent ERI

development is catalyzed by identity-relevant experiences, such as ethnic-racial (ER) socialization and discrimination in peer relationships and within school contexts (Williams et al., 2020). Emerging studies show that adolescents' ERI development is boosted by the presence of intra-racial/ethnic friends (Derlan & Umaña-Taylor, 2015), conversations with them that transmit ethnic-racial knowledge and help make meaning and cope with experiences of racial discrimination (Hughes et al., 2016; Moffit & Syed, 2020), and friend network selection and influence processes (Rivas-Drake et al., 2017). However, studies that examine these multiple friend-related mechanisms are lacking. Further, even less is known about the role of schools in promotion of cultural competence and critical consciousness and their links to ERI development (Saleem & Byrd, 2020). Thus, our goal was to provide a comprehensive account of how multiple identity-relevant experiences embedded in peer and school contexts shape ERI development. We specifically focus on the role of the following correlates of ERI development: proportion of intra-racial/ethnic friends, own-group socialization among friends, friends' experiences of discrimination, friends' ERI dimensions, and school promotion of cultural competence and critical consciousness (Figure 1).

The sample included sixth and ninth-grade students from three public schools in the southwestern US ( $n = 659$ ; 48.1% boys;  $M$  age = 13.91; 30.3% Hispanic/Latino/x, 31.4% Multiethnic, 27.6% White, 6.5% Black, 1.5% Asian American Pacific Islander, 1.5% American Indian, and 1.1% AMENA). Participants submitted nominations of up to ten friends from their grade. They also completed measures of ethnic identity (Douglass & Umaña-Taylor, 2015), peer cultural socialization (Nelson et al., 2018), everyday discrimination (Sternthall et al., 2011), and cultural curriculum integration (Byrd, 2017).

We used a linear network auto-regressive model to test associations between reported levels of (1) focal individual's reports of racial discrimination and friend ER socialization, (2) friendship network's scores on the proportion of interracial/ethnic members, racial discrimination, ERI dimension, and (3) school ER socialization, while accounting for gender and ethnicity/race. The results indicated significant and positive associations between the friendship network's ERI dimensions and the focal individuals' ERI exploration, resolution, and negative affect among youth from predominantly ethno-racially diverse schools and for ERI resolution among students from a predominantly White school (Table 1). School promotion of cultural competence and, to a lesser extent, school critical consciousness socialization were positively associated with ERI dimensions in predominantly ethno-racially diverse schools.

These results are consistent with prior research on friendship network associations with ERI development (Rivas-Drake et al., 2017). Results indicate a potential for developmental and school ethnic-racial composition differences in the importance of friend and school socializers of ERI. This study expands our understanding of friend network and school correlates of adolescent ERI development, which can inform interventions in ERI development (Umaña-Taylor, 2018).

**534**

## **High Sensitivity and daily emotions of shame and fear in adolescents' school life**

Concetta Esposito<sup>1</sup>, Mirella Dragone<sup>2</sup>, Gaetana Affuso<sup>3</sup>, Dario Bacchini<sup>1</sup>

<sup>1</sup>University of Naples "Federico II", Naples, Italy. <sup>2</sup>University "Giustino Fortunato", Benevento, Italy.

<sup>3</sup>University of Campania "Luigi Vanvitelli", Caserta, Italy

### **Abstract (max 500 words)**

**Objective of the study.** Highly sensitive people are a unique population characterized by heightened sensory processing and increased emotional reactivity to positive and negative life experiences (Aron et al., 2005, 2012; Lionetti et al., 2018; Pluess, 2015). This makes the environment in which highly sensitive children develop, including the school context, crucial (Baryła-Matejczuk et al., 2020). Research conducted so far on the relationship between High Sensitivity and school adjustment is limited. Overall, it has been suggested that higher levels of environmental sensitivity can make it difficult for students to concentrate in a noisy and unpredictable classroom environment, leading to overstimulation, lower well-being, and poor performance. Demands such as presenting in front of the class can also challenge these students due to their strong susceptibility to criticism, propensity for harsh self-critique, and feelings of shame and fear for not meeting other people's expectations (Aron, 2002). This study aimed to examine the relationship between High Sensitivity and daily emotions of shame and fear in students' school experiences.

**Methodology.** We conducted a 10-day online diary study with 71 Italian 11th graders (79.5% females; Mean age = 16.01, SD = 0.31). The daily diary study was carried out in May 2018. At the end of each day of the study, between 7 pm and 8 pm, students received a popup notification on their mobile phones prompting them to complete the survey. They were asked to report if they had experienced shame or fear connected to their day school experience, the intensity of the emotions they had experienced, and the reason they felt such emotions. High Sensitivity was assessed at baseline through the HSC scale (Pluess et al., 2018). The inspection of the variable distribution suggested that sensitivity was normally distributed in the sample (Mean value = 3.31, SD = 0.66; Skewness = -0.19; Kurtosis = 0.19).

**Results.** Multilevel analyses were used to account for the nested structure of the data (i.e., days nested within adolescents). The results showed that High Sensitivity was associated with greater levels of students' shame and fear across days and increased variability in daily emotionality.

**Conclusion.** These results support the hypothesis that highly sensitive adolescents may face challenges in school settings and experience lower adjustment than their non-highly sensitive peers. Overall, the findings contribute to the existing knowledge on the importance of student-centered learning in school settings and have significant implications in the current debate on the need for an education that considers individual differences. Also, they highlight the need for increased awareness and understanding of High Sensitivity in the school environment to support students' successful adjustment and overall well-being.

**535**

**Trajectories of academic self-efficacy and anxiety-depression across high school years: Exploring the Covid-19 pandemic impact and the buffering role of effortful control**



Dario Bacchini<sup>1</sup>, Mirella Dragone<sup>2</sup>, Gaetana Affuso<sup>3</sup>, Lucia Di Martino<sup>1,4</sup>, Concetta Esposito<sup>1</sup>

<sup>1</sup>University of Naples "Federico II", Naples, Italy. <sup>2</sup>University "Giustino Fortunato", Benevento, Italy.

<sup>3</sup>University of Campania "Luigi Vanvitelli", Caserta, Italy. <sup>4</sup>University of Foggia, Foggia, Italy

### **Abstract (max 500 words)**

**Objective of the study.** The COVID-19 pandemic raised a global impact worldwide, and transitioning from face-to-face to online learning brought many challenges for students. Due to this unplanned e-learning environment, some cross-sectional studies have investigated students' perceived academic self-efficacy (ASE) during the pandemic, reaching mixed results. While some studies found that the pandemic negatively impacted ASE, others did not show these effects. Based on Bandura's theory, perceived self-efficacy reflects one's belief about their capabilities to execute behaviors necessary to produce specific performance attainments (Bandura, 1977, 1986, 1997). Also, the theory suggests that individuals use four major sources of information when forming self-efficacy beliefs. One source is represented by emotional and physiological states such as anxiety, stress, fatigue, and mood (Usher & Pajares, 2008). Strong emotional reactions to school-related tasks can provide cues to expected success or failure. Thus, high anxiety can undermine self-efficacy.

**Methodology.** Based on the above considerations, this study investigated how ASE changed during the pandemic in a sample of Italian high school students enrolled in grade 13 in 2020 (T5), compared with previous academic years (T1, 2016 – grade 9 - to T4, 2019 – grade 12), and how this change was linked to changes in anxiety depression during the same timeframe. Also, we examined the buffering role of temperamental effortful control in the developmental trajectories of both ASE and anxiety depression. Furthermore, we compared these trajectories with those referring to a comparable cohort of high school students participating in the study from 2013 (T1; grade 9) to 2017 (T5; grade 13). The study involved 420 students (48.3% males) for the cohort 2016-2020, and 404 students for the cohort 2013-2017 (37.2% males).

**Results.** Parallel latent growth curve analyses conducted on the cohort 2016-2020 revealed a non-linear trend of ASE and anxiety depression, with stability across T1 and T4 and a significant change at T5, when the pandemic spread out (decreasing levels of ASE and increasing levels of anxiety depression). Also, the change in self-efficacy was negatively associated with the change in anxiety depression, suggesting that a high increase in anxiety depression was related to a steeper decrease in self-efficacy. High levels of EC were linked with higher levels of ASE and anxiety depression at T1, and a slighter decrease of ASE during the pandemic. Parallel latent growth curve analyses on the cohort from 2013 to 2017 indicated relative stability across the five years of the study (from T1 to T5) for both ASE and anxiety depression.

**Conclusion.** Results showed that the pandemic had a negative impact on adolescent ASE and anxiety depression symptoms. Furthermore, they further support that negative emotional states might inform ASE beliefs. Effortful control was found to significantly mitigate the negative impact of the pandemic on academic self-efficacy, thus highlighting the importance of considering self-regulatory abilities as a crucial factor in understanding and counteracting the effects of major stressors like the COVID-19 pandemic on adolescent well-being.

538

## Measuring preschool teachers' emotion socialisation with young children

Tiril Wilhelmsen<sup>1</sup>, Veslemøy Rydland<sup>1</sup>, Elisabet Buøen<sup>2</sup>, May Britt Drugli<sup>3</sup>, Ratib Lekhal<sup>1</sup>

<sup>1</sup>Department of Education, University of Oslo, Oslo, Norway. <sup>2</sup>Regional Centre for Child and Adolescent Mental Health, Oslo, Norway. <sup>3</sup>Department of Mental Health, Norwegian University of Science and Technology, Trondheim, Norway

### Abstract (max 500 words)

**Objective:** During the first years, children need help from their close caregivers to regulate and understand their own and other's emotions to become emotionally competent, through the process of emotion socialisation. While we begin to understand the role of parental emotion socialisation, research on preschool-teachers' emotion socialisation is still in its infancy even though teachers spend much time with children during these early years. As there are crucial differences between the contexts within which parents and teachers socialise, we cannot necessarily generalise the research findings nor the measure of emotion socialisation from parents to preschool-teachers. Parental emotion socialisation is often measured with the Coping with Children's Negative Emotions Scale (CCNES). This validated 72-item scale measures parents' reactions to their children's emotional expressions, along six dimensions: distress, minimisation, and punitive reactions (non-supportive), emotion- and problem-focused reactions, and expressive encouragement (supportive). Various versions of the CCNES are used among preschool-teachers, however few examine its psychometric properties, and there is need for a shorter version. In this study we examine factorial validity, internal reliability, and concurrent validity of a short version of the CCNES adapted to the preschool context.

**Methodology:** Through the Oslo Early Education Study, 491 caregivers working in 56 different preschool-centres in Oslo, Norway, responded to the CCNES. The original CCNES includes twelve vignettes with hypothetical events of children expressing negative emotions such as frustration, sadness, or fear. Each vignette is followed by six potential reactions caregivers may have (total=72 items). In our study, we used seven vignettes adapted according to the preschool context, keeping the emotional expressions and potential reactions (total=42 items). Due to the adaptations and the difference in context, we explored the factor structure with Exploratory Factor Analysis (EFA) and will examine concurrent validity through correlations between the CCNES-factors and caregivers' self-efficacy beliefs concerning children's well-being and social development.

**Results:** The EFA with oblique rotation revealed a three-factor solution: emotion coaching (problem-focused reactions and expressive encouragement), emotion dismissal (punitive, minimisation and distress reactions), and distraction (emotion-focused reactions). One item from the distress dimension, and one complete vignette (six items) were excluded due to low or ambiguous factor loadings. Two items within the dismissal factor and two items within the distraction factor were allowed to correlate. These model specifications were executed in one random half of the sample and then confirmed with good model fit through confirmatory factor analysis in the other half of the sample. All three factors had high internal reliability ( $\alpha > .79$ ). We expect measures of self-efficacy to support children's well-being and social development to correlate negatively with emotion dismissal, and positively with emotion coaching, whereas the correlations with distraction might be more ambiguous.

Conclusion: Emotion socialisation measured with a shorter version of the CCNES adapted to the preschool context work well among preschool teachers, measuring emotion coaching, dismissal and distraction. It shows high factorial validity, internal reliability and we expect evidence of concurrent validity. This measure can aid further research to expand our understanding of emotion socialisation in preschools.

539

## Receiving Consensual and Unsolicited Sexual Images: Mental Health Correlates in a Sample of Adolescents

Mairéad Foody<sup>1</sup>, Angela Mazzone<sup>2</sup>, Beatrice Sciacca<sup>2</sup>, Magnus Loftsson<sup>3</sup>, James O'Higgins Norman<sup>2</sup>

<sup>1</sup>School of Psychology, National University of Ireland, Galway, Ireland. <sup>2</sup>Dublin City University (DCU) Anti-Bullying Centre, Dublin, Ireland. <sup>3</sup>FRIENDS, Research and Development,, Stockholm, Sweden

### Abstract (max 500 words)

#### Objective of the study

Sexting is broadly defined as the sending and/or receiving of sexually suggestive text messages or self-made nude or nearly nude images, and/or videos, via electronic devices. Consensual sexting can be framed as a normative behaviour, which is an expression of adolescents' typical sexual development. However, sexting can also include non-consensual acts, that is acts whereby sexual pictures are produced and exchanged without the consent of all the parties involved. While consensual sexting can be considered as a pleasurable activity, sending unsolicited sexual pictures is a form of abuse that pertains to the wider spectrum of sexual violence. Existing research failed to disentangle consensual from non-consensual sexting practices. As a result, little is known in relation to the associations between receiving sexual images with and without consent and its mental health correlates. To add much needed knowledge to the existing literature, the present study investigated the associations between receiving sexual images with and without consent and depressive symptoms and self-esteem.

#### Methodology

A sample of 728 high school students in Sweden filled out an anonymous survey (46.7% girls and 43% boys; Mean age: 14.35; sd: 1.29). Two items specifically developed for the present study were administered to assess the frequency with which survey respondents had received sexual pictures over the course of their lives. One item assessed the consensual reception of sexual images, and it was phrased as "Have you ever received a sexual image (e.g., nude or semi-nude) from someone (and been happy to receive it)?" The other item investigated the reception of unsolicited sexual images, asking "Have you ever received a sexual image (e.g., nude or semi-nude) from someone when you didn't want it?". Both items were answered on a four-point Likert scale, ranging from 1 = never to 4 = many times. Depressive symptoms were assessed through the Moods and Feelings Questionnaire (Angold & Costello, 1987). Respondents' self-esteem was assessed through the Rosenberg's Self-Esteem Scale (Rosenberg, 1965).

## Results

Findings showed that significantly more male adolescents (28.4%) than female adolescents (12.6%) reported having consensually received a sexual picture, while significantly more girls (48.8%) than boys (34.2%) reported having received an unsolicited sexual picture at least once in their life. Two hierarchical regressions were performed to examine the relationship between receiving sexual pictures with or without consent and depression and self-esteem levels. Consensually receiving a sexual picture was not associated with any of the investigated mental health correlates, while receiving an unsolicited sexual picture was associated with higher depressive symptoms and lower self-esteem.

## Conclusions

Receiving non-consensual sexual images can be perceived as a way through which the sender shows their power and exerts control over the receiver. This, in turn, deprives the receiver of their control and their privacy. Overall, the findings of this study show a common thread between receiving unsolicited sexual pictures, other forms of non-consensual sexting, and sexual harassment, thus reinforcing the idea that all these forms of abuse are part of the same continuum of sexual violence.

**540**

## **Executive function and problematic use of internet in 6-to-11-year-old children**

Roma Jusienė, Rima Breidokienė, Lauryna Rakickienė

Institute of Psychology, Vilnius University, Vilnius, Lithuania

### **Abstract (max 500 words)**

Objective of the study. Internet has become a necessary attribute of everyday life, main tool for social network building, communication, education, services, entertainment activities, etc. The tremendous growth of Internet use during the past few decades has been primarily led by young people (Donald et al., 2020; McDool et al., 2020), yet already primary school-aged children are proficient Internet users, with a great portion of them using the Internet unattended by parents (EU Kids Online, 2019; Pons-Salvador et al., 2018). The increasing amount of time that people spend online raises the question of whether for some individuals, especially youngsters, the Internet use has become beyond their control (Kalmus et al., 2014). For more than two decades, studies on Internet-related addiction have been on the rise. During this period various terms have been used to describe this phenomenon in clinical and non-clinical samples: pathological Internet use, problematic Internet use, excessive Internet use, or compulsive Internet use. Brand et al. (2016) have proposed the I-PACE model (Interaction of Person-Affect-Cognition-Execution) of Internet use disorders. Among the neurobiological, predisposing factors in the I-PACE model are symptoms of Attention Deficit/Hyperactivity Disorder (ADHD), including problems with impulsivity, disinhibition, and executive functioning deficits. Nevertheless, the latter are underresearched in children when addressing risk for the problematic use of Internet (PUI). Aim of the present study is to analyze the role of executive function (EF) for the PUI in children aged 6 to 11 years.

**Methodology.** Data obtained in summer-autumn 2021 from the sample of 112 children (mean age 8.3 years, SD – 1.7; 51% were girls) were used for the analysis. PUI was measured with the Compulsive Internet Use Scale (CIUS; Meerkerk et al., 2009) completed by parents. Parents also reported on children’s everyday screen time. EF were laboratory tested using two tasks: Stroop-type task to assess inhibitory control, and Digital span from the Wechsler Intelligence Scale for Children (WISC–III) to assess working memory. The summed score of EF was also used for the further analysis.

**Results.** There was no linear correlation between children’s EF and mean CIUS score, although EF was significantly related to children’s leisure screen time, when controlling for child’s age. To test the hypothesis that EF could predict problematic Internet use, we developed the structural equation model. Results revealed that EF together with leisure screen time were significant predictors of the CIUS mean score, and also the leisure screen time together with child’s age were significant predictors of the EF.

**Conclusion.** First, these results support the importance of young school-aged children’s executive function as a risk factor for the PUI . Second, the bidirectionality of relations between EF and screen time in young age should also be seriously considered in further studies.

**542**

## **What happens when fathers and mothers disagree about father involvement? Associations with mother-child Interaction quality in Syrian refugee families in Jordan**

Maria Lee, [Kristin Hadfield](#)

Trinity College Dublin, Dublin, Ireland

### **Abstract (max 500 words)**

Introduction:

Refugee children face multiple challenges to their optimal development (e.g. Miller & Rasmussen, 2017). These challenges include poor mental health, losses of support networks, and disrupted quality of caregiving. Trauma, displacement, and resettlement can have demonstrable impacts on caregiving and on children’s health and social competence across the life course (e.g. Bryant et al., 2018; Eltanamly et al., 2021).

Globally, there are calls to make dedicated efforts to include fathers in research and parenting interventions, in order to generate robust information on father participation and impact, beyond the habitual focus on mother-child dyads. This is particularly important in crisis-affected and low-resource settings, where research rarely includes fathers’ reports of their own roles. Unfortunately father-child relationships are, more often than not, studied through the lens of mother-reported data. The handful of studies that explicitly compare father and mother reports of father involvement have noted substantive discrepancies, with mothers viewing fathers as less involved than fathers view themselves.

However, none of these studies have been conducted among refugee or Arab populations, and it is unclear how these discrepancies might relate to other areas of family functioning.

Using a sample of 150 Syrian refugee mother-father-child triads living in Jordan, we will examine the following research questions: *First*, are levels of father involvement associated with mother-child interaction quality? *Second*, are levels of spousal disagreement regarding father involvement associated with mother-child interaction quality?

#### Methodology:

This presentation will use data from the Family Intervention through Reading and Education (FIERCE) project, which collected survey and observational data from 4-8-year-old Syrian refugee children, their mothers, and their fathers living in the city of Amman or Zaatari refugee camp in 2021. In a pre-registered analysis, we will conduct a series of linear regressions to examine how mother- and father-reported father-child and father-mother involvement are associated with observed mother-child interaction quality, and how the discrepancy and mother and father reports is associated with mother-child interaction quality.

Father involvement was assessed separately in mothers and fathers using the Father Involvement Questionnaire (FIQ, Hein et al., 2020). Mother-child interaction quality was assessed from videos of mothers and children recorded doing a free play task. We used a modified version of the the Short-Form Coding of Attachment-Related Parenting (Bennetts et al., 2021) to code the videos for sensitive responding, positive mutuality, and disruptive behaviour.

#### Results:

We are finalising the pre-registration for this analysis and then will conduct the analyses. All of the data has been cleaned and coded. We hypothesise that higher levels of father involvement will be associated with higher quality mother-child interactions, that higher levels of spousal disagreement about father involvement will be associated with worse mother-child relationship quality, and finally that higher levels of spousal disagreement will be more associated with mother-child interaction quality than father involvement itself is.

#### Conclusion:

This study will help to build evidence on father involvement and child development in situations of social adversity. It will build the evidence base for the impacts of fathering in refugee families and deepen understanding of father-mother reporting discordance.

**547**

## **The Relationship between Teacher Perceived School Climate and Perceived Effectiveness of a Whole-school-approach Anti-bullying Programme**

Dziuginta Baraldsnes

Norwegian Centre for Learning Environment and Behavioural Research in Education, University of Stavanger, Stavanger, Norway

### **Abstract (max 500 words)**

School climate is an important factor for the school bullying and is defined as the quality and character of school life (Cohen et al., 2009, p. 182). Espelage and Swearer (2003) state that students attending a school in which behaviours such as bullying are acceptable by adults, are in a greater risk to become involved in such behaviours. Furthermore, researchers have ascertained that the negative school climate increases the possibilities of aggressive reactions, which can result in a vicious cycle of aggression and negative school climate (Giovazolias et al., 2010).

Various evidence-based, whole school approach anti-bullying programme have been developed and implemented. In the current study, teacher perceived effectiveness of a whole-school-approach anti-bullying programme has been investigated within the Olweus Bullying Prevention Programme [OBPP], while teacher perceived school climate has been measured by applying the School Climate Assessment Instrument [SCAI], developed by the Alliance for the Study of School Climate [ASSC] (ASSC, 2014). The main goal of the OBPP is to make school a safe and positive learning environment in which adults display warmth, positive interest and engagement; there are clear boundaries concerning unacceptable behavior; there is consistent use of non-physical, non-hostile but negative sanction when rules are broken; and adults at school (and ideally at home) act with authority and as positive role models (Kallestad, & Olweus, 2003; Olweus, 1993, 2001; Olweus & Limber, 2010). These principles have been translated into a number of specific interventions at the school, classroom, and individual levels.

The current study aimed to investigate the relationship between teacher perceived school climate and perceived effectiveness of the OBPP. It was hypothesized that higher levels of the teacher perceived overall school climate were positively associated with their perceived effectiveness of the OBPP.

The study is carried out using a quantitative survey approach, where data have been collected through a standardized internet-based questionnaire from Lithuanian ( $n = 1576$ ) sample. Ethical issues were taken into consideration as well.

A multiple regression analyses by applying the backward method was conducted to predict teacher perceived effectiveness of the OBPP with the eight sub-scales of school climate, gender, teacher qualification and teaching educational level (primary or lower/upper secondary education teacher) predictors. In the final regression model, only four of eight explanatory variables of School Climate were statistically significant: Physical Appearance (beta = .105,  $p < .001$ ), Student interactions (beta = .25,  $p < .001$ ), Discipline Environment (beta = .136,  $p < .001$ ), Attitude and Culture (beta = .086,  $p = .039$ ). Some socio-demographic variables of teachers were also statistically significant and included in the final multiple regression model, namely, Gender (beta = .053,  $p = .014$ , where 0 = male, 1 = female), Teaching Level (beta = .073,  $p < .001$ , where 0 = lower/upper secondary, 1 = primary education). Teacher qualification (a teacher, senior teacher, teacher supervisor, teacher expert) was also included into the final model, however, beta value was not statistically significant (beta = 0.39,  $p = .068$ ). Those variables explained 28.5% of the variance ( $F(7, 1568) = 91.327, p < .001$ ).

549

## How does self-efficacy influence parental behaviors? A single-case-experimental design to identify pathways of behavioral change

Susanne Schulz, Geertjan Overbeek, Patty Leijten

University of Amsterdam, Amsterdam, Netherlands

### Abstract (max 500 words)

**Objective:** Disruptive behaviors, including defiant and oppositional behavior problems, are commonly observed in early childhood, but can develop into serious health concerns when left unattended. Parents play a key role in the development and maintenance of early disruptive child behavior. Particularly parental self-efficacy is closely linked to parents' ability to use positive parenting strategies to manage disruptive child behavior. While parental self-efficacy has been established as an effective intervention component to reduce child disruptive behavior, how self-efficacy influences behavior remains largely unknown. The current study aims to experimentally increase parental self-efficacy to test whether affective, cognitive, or motivational pathways explain how enhanced self-efficacy changes parental behaviors in managing disruptive child behavior (see Figure 1). Additionally, we aim to explore whether individual trajectories of how self-efficacy influences parental behaviors differ across participants.

**Methods:** Participants consist of 80 parents of toddlers (age 2;11 – 3;11) with elevated levels of disruptive behavior who participate in a multiple baseline single-case experimental design that takes place online across 2 weeks. At multiple times per day, parents report on their thoughts of self-efficacy, feeling of stress and depression (affective pathway), attributions towards their child (cognitive pathway), perseverance (motivational pathway), and parenting practices (i.e., warmth, harshness, and inconsistency) in response to disruptive child behavior. Parents are randomly allocated to 6 to 8 days of baseline assessment. Immediately after the baseline phase, they receive an online intervention that aims to increase their feelings of self-efficacy through video feedback and mastery experience. Additionally, parent-child dyads are observed in structured play at the baseline phase, immediately after the intervention, and at the end of a two-week assessment period.

Using dynamic structural equation models, we will test whether changes in parental self-efficacy predict changes in parental warmth, harshness, and inconsistency through one or several proposed pathways (i.e., affective, cognitive, motivational). Using latent profile analysis, we will further explore whether these pathways of change differ across parents. Analyses will be conducted in the spring of 2023.

**Expected results:** All three pathways are expected to contribute to changes in parental behavior. Parents are expected to report increased levels of self-efficacy following the intervention, which will in turn lead to decreases in their feeling of stress and depression (affective), increases their positive attributions towards their child (cognitive), and increase their perseverance in challenging situations with their child (motivational). It is further possible that one of these pathways is most influential in driving change in specific parenting behaviors or that several pathways are equally involved in eliciting change. Finally, these trajectories might differ across parents.



**Conclusion:** Understanding how self-efficacy influences parental behaviors will provide important insights into the mechanisms through which self-efficacy modifies behavior, and thus also into how interventions work. The results of this study will help to identify specific targets for improving current interventions and understanding what works for whom.

554

## **Group-based versus individual parenting programs: How to best optimize parental mental health and behaviors? A meta-analysis of randomized controlled trials**

Louise Mathijs<sup>1</sup>, Sophia Backhaus<sup>2</sup>, Stijn Van Petegem<sup>1</sup>, G J Mendelez-Torres<sup>3</sup>, Frances Gardner<sup>2</sup>, Patty Leijten<sup>4</sup>

<sup>1</sup>Université Libre de Bruxelles, Brussels, Belgium. <sup>2</sup>University of Oxford, Oxford, United Kingdom.

<sup>3</sup>University of Exeter, Exeter, United Kingdom. <sup>4</sup>University of Amsterdam, Amsterdam, Netherlands

### **Abstract (max 500 words)**

**Objectives of the Study:** Parental mental health and behavior play a significant role in children's development by shaping their physical, emotional and social environment (Bennett et al., 2013; Wittkowski et al., 2016). A considerable body of research has linked early childhood disruptive behaviors, including oppositional behaviors, noncompliance, and aggression, to impaired parenting practices, emphasizing the need to implement early interventions to support parents. Parent training programs aim to motivate change in parents' behaviors, perceptions and knowledge to promote desirable changes in children's adjustment and behavior. Parenting programs are typically delivered either individually or in groups. It is unknown whether either delivery mode is more effective to enhance parenting behaviors and parent mental health. On the one hand, group programs may be more effective since they provide parents access to peer-based support. On the other hand, individual programs allow for a more personally adapted, in depth, one-on-one approach. Furthermore, which delivery mode is more effective may depend on our outcome of interest. It could be that, for example, the peer-support provided in group programs is more effective for parent mental health, while the tailored support provided in individual programs is more effective for altering parenting practices. However, both approaches may be equally effective for optimizing parenting practices. Therefore, the primary goal of this research project is to investigate which intervention delivery mode (i.e., group-based or individual intervention) is most effective in both optimizing parent's child rearing behaviors and parental mental health (i.e., depression, stress, parental self-efficacy). **Method:** The present meta-analysis will review randomized control trials of group-based interventions and individual interventions compared to control groups to investigate which delivery mode is most effective in eliciting change in parents' behaviors and mental health. Furthermore, to explore under which conditions the different delivery modes are most effective, we will examine the role of parent's socio-economic status, the length of intervention, and initial child disruptive behavior severity. We build on a preregistered systematic review [PROSPERO: CRD42019141844] of approximately 175-200 randomized trials. **Expected results:** We expect that both intervention methods will be effective in optimizing parent's mental health and behaviors. However, we

expect that the depression levels for parents following a group-based intervention will be lower than when following an individual intervention. This may be because parents enrolled in a group program might find more support and a sense of connectedness with other group-members, which may in turn decrease depressive symptoms. As of yet, we have no expectations regarding findings for parenting behavior. **Conclusion:** With this research project, we aim to address the question whether group-based and individual interventions are equally effective for enhancing parenting behaviors and parent mental health. Furthermore, our findings may also indicate under which conditions the interventions are most effective. These results may help mental health services to guide parents to programs that are most likely to benefit them.

555

## Profiles of home language use and demographic factors among diverse young Norwegian dual language learners: A latent profile approach

Siri Bratlie, Veslemøy Rydland, Ratib Lekhal, Vibeke Grøver

University of Oslo, Oslo, Norway

### Abstract (max 500 words)

Young dual language learners (DLLs) are diverse in many respects, not the least in terms of relative first (L1) and second language (L2) use at home, and in demographic factors such as home literacy environment and parental education levels. Examining DLLs as an aggregate group can therefore obscure potentially important variability. The current study examines whether the variation in relative use of first (L1) and second (L2) language at home with parents, home literacy environment, and levels of parental education reflect specific underlying subgroups (i.e., latent profiles) among young Norwegian dual language learners (DLLs).

The study is part of a large-scale Norwegian intervention study, the Oslo Early Education Study, which examines how ECEC centers in multilingual and multiethnic areas of Oslo, Norway, can support children's language development. Participants are 325 DLLs from 55 ECEC centers (52.3 % boys, Mage = 47 months, SD = 10.91, min – max = 22 – 73). Overall, the children speak more than 45 different home languages, of which the most frequent are Urdu/Punjabi (n = 65), Arabic (n = 32), and Somali (n = 23). Data on language use with parents; parental education levels; and number of children's books at home were gathered via eight items from a web-administered parental survey. Table 1 shows the distribution of scores on these items. To ease interpretation and visual representation, we converted all scales to the scale of 0-100. The analytic approach we use is latent profile analysis, which is a probability- and model-based mixture modeling technique that uses group membership probabilities estimated by maximum likelihood methods to classify individuals into latent profiles.

Preliminary analyses indicate that a model with five profiles fit the sample best (see Table 2 for fit indices, entropy values, class probabilities and class proportions for models with 1 to 8 profiles). These five profiles are rank ordered according to relative use of L1 and L2 (see Table 3 and Figure 1). The exception is the two profiles characterized by predominant L1 use at home (Profile 1, 27 % and Profile 2,

10 %), which differ from each other by levels of parental education and number of children's books at home (significantly higher in Profile 2 than Profile 1). Profile 3 (26 %) is characterized by somewhat more L1 use than Norwegian, Profile 5 is characterized by the use of both languages, whereas Profile 4 is characterized by more or mostly use of Norwegian.

In sum, there is variation in language use, home literacy environment and parental education levels among the sample of young Norwegian DLLs, which is reflected in the five latent profiles. However, there are larger and more consistent differences between profiles in language use than in the demographic factors (home literacy environment and parental education). In all profiles except in Profile 2, families typically have few children's books available in their L1. Further analyses will examine whether auxiliary variables such as language proficiency in L1 and L2, and additional demographic factors are associated with the latent profiles.

558

## **Examining differential susceptibility to psychological consequences of peer victimization during adolescence**

Marie-Pier Larose<sup>1</sup>, Christina Salmivalli<sup>2</sup>, Edward Barker<sup>3</sup>

<sup>1</sup>University of Turku, Turku, Finland. <sup>2</sup>University of Turku, Turku, Finland. <sup>3</sup>King's College London, London, United Kingdom

### **Abstract (max 500 words)**

#### **Objective of the study**

Externalizing and internalizing behavior problems are known to often co-occur, but mechanisms underlying this co-occurrence and their temporal associations with peer victimization remain unclear. Few studies have investigated the genetic etiology of peer victimization whereas several studies showed that internalizing and externalizing problems are partially influenced by genetic predispositions. However, no study has tried to model how peer victimization might be more deleterious for children with a higher predisposition for mental health problems. This study aimed to a) better understand the developmental sequelae between externalizing, internalizing problems and peer victimization by disentangling within- and between-person effects and b) test whether children with higher genetic predisposition for mental health problems are more susceptible to peer victimization experiences.

#### **Methodology**

We used data from the Avon Longitudinal Study of Parents and Children (ALSPAC) where 4,465 adolescents reported their victimization experiences and mothers reported children' and adolescents' externalizing and internalizing problems at 7, 10 and 13 years of age. We used a random-intercept cross-lagged panel model to investigate the within- and between-person associations. Models were adjusted for exposure to family adversity and child gender. We also explored whether predisposition for

internalizing and externalizing mental health problems moderated the pattern of associations investigated.

## Results

There was a clear temporal stability for externalizing, internalizing and peer victimization from the end of childhood to the beginning of adolescence. Interestingly, at the end of childhood, peer victimization was associated with externalizing problems whereas at the beginning of adolescence peer victimization only associated with internalizing problems. We found a distinct bidirectional pattern of results between girls and boys and decided to stratify our following analysis by gender. For boys, externalizing problems at 7 years old was positively associated with internalizing problems as well as peer victimization at 10 years old. Thereafter, internalizing problems at 10 years old predicted peer victimization at 13 years old as well as higher levels of externalizing problems. Moreover, high levels of peer victimization at 10 years old associated with higher levels of internalizing and externalizing problems at 13 years old. For girls, internalizing problems at 7 years was negatively associated with peer victimization whereas higher levels of externalizing problems associated with higher levels of peer victimization at 10 years old. From 10 to 13 years of age, peer victimization was associated with lower levels of externalizing problems, and higher levels of externalizing problems at 10 years associated with higher levels of internalizing problems at 13 years of age. Results on the potential differential susceptibility to peer victimization according to children's genetic predispositions will be presented at the conference.

## Conclusions

We found a distinct pattern of longitudinal association between externalizing, internalizing and peer victimization among girls and boys from the end of childhood to the beginning of adolescence. We will also tackle the differential susceptibility to peer victimization hypothesis and examine whether the impact of peer victimization is more salient for children with higher genetic predispositions.

559

## Children Aged 6 to 14 years Problematic Use of Internet: The Role of Parental Involvement and Parental Attitude on the Internet

Rima Breidokiene, Roma Jusiene, Valerija Puchalska

Vilnius university, Vilnius, Lithuania

### Abstract (max 500 words)

There is a growing global concern about the health and societal costs of problematic usage of internet (PUI) across the lifespan (Fineberg et al., 2018), raised even more under the restrictions of the COVID-19 pandemic. Similar to the pre-COVID-19 pandemic studies, recently reported PUI prevalence estimates during the pandemic significantly differ, ranging from 4% to 43.8% (Burkauskas et al., 2022). The results of the Lithuanian study of 10–11-year-olds showed that leisure screen time was longer and children's PUI scores were significantly higher in Spring 2020 if to compare to Autumn 2019 (Jusiene et al., 2022).

Adolescents and young adults remain as one of the most vulnerable societal groups (Finenberg et al., 2022), but fewer studies focused upon school-aged, especially primary school-aged children. Both biological and social factors should be considered in relation to children's PUI (Sebre et al., 2023) and parental involvement in children's internet use might be one of the most important factors, sharpening the scope and frequency of children's PUI.

The current study aimed to examine linkages between PUI of children aged 6-14 and their parents' involvement and attitudes on children's internet use. The sample of study participants consisted of 719 parents (96,9% mothers; 81,6% high-educated) who have children aged 6–14 years (mean age was 9.04 years (SD = 2,36), 55.2% boys). Parents participated in online survey in May-June 2021 and completed the Compulsive Internet Use Scale (Meerkerk et al., 2009), answered questions about their attitudes toward the internet (the attitudes toward impact of internet on children's health, relationships, and abilities), their involvement in children's web use, children's online activities (educational, entertainment, social interactions) and duration of screen use.

The results of the study showed that higher children's PUI was related to elder children's age, higher total screen time and online activities, but less favorable parental attitudes towards the impact of internet on children's health and relationships. Boys had higher scores of PUI than girls. Parental involvement in children's internet use was not related to screen time and PUI. In the 6-10 year old range, the male gender, longer screen time, greater children's involvement in online entertainment and social activities and less favorable parental attitudes toward children's health and relationships (but not toward children's abilities) predicted higher scores of PUI. The same predictors, except for online social activities, were revealed as significant predictors of PUI of children aged 11–14 years.

Parents, health, and education experts should be mindful about the total amount of screen time, as well as type and scope online activities of school-aged children. The contradictory results about the links between less favorable parental views on internet use and higher PUI are discussed as a possible effect of mutual dynamical parental-child interactions and the parental involvement in children's online schooling during COVID-19 pandemic. Parents should be actively involved in PUI prevention efforts and should be informed and educated by professionals about the most effective Internet-specific parenting practices.

**564**

## **Having mixed feelings about who you are: Bicultural adolescents' ambivalence toward being bicultural**

Sheida Novin<sup>1</sup>, Iris Schneider<sup>2</sup>

<sup>1</sup>Utrecht University, Utrecht, Netherlands. <sup>2</sup>Technical University Dresden, Dresden, Germany

### **Abstract (max 500 words)**

Objectives. Identity formation can be especially complex for bicultural adolescents who grow up with more than one culture. While prior work has provided valuable insights into the importance of ethnic

and bicultural identity during adolescence, less is known about adolescents' thoughts and feelings about being bicultural. Qualitative studies suggest that growing up with multiple cultures can have negative associations (i.e., conflict and confusion), as well as positive associations (e.g., pride and uniqueness). As such, biculturality can be a source of both positive and negative reactions. Having simultaneous positive and negative thoughts and feelings is referred to as ambivalence.

In three preregistered studies we systematically examined adolescents' ambivalence toward being bicultural. We had the following specific research questions: 1) Do bicultural adolescents feel ambivalent towards being bicultural? 2) Is feeling ambivalent toward being bicultural related to psychological well-being (i.e., behavioral problems and depressive symptoms)? 3) Is feeling ambivalent toward being bicultural predicted by contextual factors (i.e., discrimination experiences)?

**Methodology.** In all studies, participants were bicultural adolescents in the Netherlands, such that these adolescents had at least one parent who was born abroad. In Study 1 (N=55) we measured participants' ambivalence using both questionnaires and a behavioral task, all asking participants to evaluate topics relevant and irrelevant to biculturalism. The questionnaires measured subjective ambivalence (i.e., positive and negative feelings towards a topic) and objective ambivalence (i.e., feeling mixed, conflicted, and indecisive about a topic). The behavioral task used mouse-tracker software that recorded motor-output during the evaluation task.

In Study 2 (N=71), participants also completed the ambivalence questionnaires and the behavioral task, but now also completed two questionnaires measuring behavioral problems and depressive symptoms.

In Study 3 (N=85), participants were randomly assigned into one of the two conditions. In both conditions, participants read a hypothetical story. Participants in the discrimination condition were asked to imagine a situation in which a person, with a typical Dutch appearance, is favored over them. In the non-discrimination condition the situation was similar, but did not imply any discrimination. Afterwards, participants proceeded to the behavioral ambivalence task.

**Results.** Study 1 indicate that bicultural adolescents were more ambivalent towards topics relevant to biculturalism compared to topics irrelevant to biculturalism, a pattern observed on all measures. Study 2 suggest that these ambivalent feelings might contribute to internalizing problems: (subjective) ambivalence towards biculturalism was related to more depressive symptoms, but not to behavioral problems. Study 3 shows how contextual factors play a role in adolescents' ambivalent feelings: participants in the discrimination condition were more ambivalent towards biculturalism than those in the non-discrimination condition.

**Conclusion.** Adolescents' simultaneous positive and negative feelings towards one's own biculturality has not yet been systematically examined, but is important for the understanding of what it means to grow up with two cultures. Our findings shed light on the existence of these mixed feelings and suggest that these feeling can be maladaptive and caused by identity-threatening situations. Yet, future work is needed to provide more insight into the determinants and consequences of feeling ambivalent about being bicultural.

565

## Infants learn vowel minimal pairs produced in adult-directed speech under 18 months

Nicole Traynor<sup>1</sup>, Gabrielle Weidemann<sup>1,2</sup>, Christa Lam-Cassettari<sup>3,1</sup>, Paola Escudero<sup>1</sup>

<sup>1</sup>MARCS Institute for Brain, Behaviour & Development, Western Sydney University, Sydney, Australia.

<sup>2</sup>School of Psychology, Western Sydney University, Sydney, Australia. <sup>3</sup>Discipline of Psychiatry and Mental Health, University of NSW, Sydney, Australia

### Abstract (max 500 words)

**Objective:** Learning words that differ by only their vowel (e.g., don-din) can be challenging for infants. Previous word learning studies use novel words produced in infant-directed speech (IDS) to show that success depends on the task, specific word-pairs tested, and learners' age. However, IDS has been shown to obscure some contrasts (e.g., vowel length in Japanese, and vowels in certain contrasts overlap in quality and quantity when produced in IDS) but at this stage we do not know if infants can learn these words in adult-directed speech (ADS). Thus, the aim of the current study was to examine if infants can learn words that differ in a single vowel in ADS.

**Methodology:** Using the Switch task, 15- ( $M=15.24$ ,  $SD=0.42$ ,  $N=10$ ) and 17-month-old ( $M= 17.51$ ,  $SD=0.36$ ,  $N=18$ ) Australian-English monolingual infants were familiarised to 10 tokens of the word DEET paired with a moving novel object until a set criterion for habituation. During test, a Same trial, with the original word-object pairing, and two Switch trials, in which the pairing is violated by replacing the word with DIT (Switch 1), or DOOT (Switch 2), were presented.

**Results:** A linear mixed effects model was fit for each age group with looking time as the dependent variable, and test trial (Same = DEET vs. Switch = DIT vs. Switch = DOOT) as the fixed effect, and with random intercepts added for participants and test order. Significance was assessed via model comparison with an alpha of 0.05. The model found looking time differed across test trials for the 17-month-olds (see *Figure 1*),  $F[2, 34] = 4.76$ ,  $p < 0.01$ , with longer looks to the DOOT Switch ( $M = 13.23$ ,  $SD = 3.97$ ,  $p < 0.01$ ) and DIT Switch ( $M = 10.50$ ,  $SD = 4.92$ ,  $p < .05$ ) compared to the DEET Same trial ( $M = 7.51$ ,  $SD = 3.09$ ). A main effect of test trial was also observed for the 15-month-olds,  $F(2, 18) = 9.88$ ,  $p = .001$ . Results of the model revealed that the younger infants looked longer to the DIT Switch ( $M = 14.44$ ,  $SD = 3.67$ ,  $p < .001$ ) than to the DEET Same trial ( $M = 7.64$ ,  $SD = 4.05$ ) but they did not detect a switch from DEET to DOOT ( $M = 9.13$ ,  $SD = 4.15$ ,  $p = 0.37$ ).

**Conclusion:** Results suggest that at 17 months, infants can notice a switch from DEET to both DOOT and DIT when presented in ADS. These results are the first to show that infants under 21 months can learn a minimal word pair in ADS. Further, this is the first study to show infants can detect a switch from DEET to DIT at 15 months. These findings could have implications on the type of stimuli used in word learning studies going forward, and this and our position on why we think this is the case will be presented.

566

## The Emerging Techno-Microsystem and Its Longitudinal Influences on Chinese Young Children's Behavior Problems

Jialu Yu, Chengyi Xu, Zhen Wu

Department of Psychology, Tsinghua University, Beijing, China

### Abstract (max 500 words)

**Objective of the study:** Screen products are becoming increasingly accessible and indispensable in modern family life. Young children's screen use and digital-related parenting (as indicated by parental active mediation, restrictive mediation, and screen use) constitute the so-called techno-microsystem; however, the specific influences of techno-microsystem on behavior problems remain inconclusive. This three-wave longitudinal study aimed to examine: 1) how the techno-microsystem impacts children's behavior problems; 2) how children's screen use and digital-related parenting interact with each other across time.

**Methodology:** Primary caregivers of 897 preschool-aged children (472 boys; Mage = 4.56 years, SD = 1.02, range = 2.01-6.94 years) residing in mainland China completed online questionnaires at three time points from November 2020 to December 2021, spanning approximately six months between each time point. We specified two cross-lagged panel models to examine longitudinal association between children's screen use, digital-related parenting and children's behavior problems. To increase the transparency of our study, we deployed a multiverse analyses method (Steege et al., 2016) to evaluate the robustness of these predictive effects across combinations of all possible choices at each step of data processing.

**Results obtained:** Disentangling the effects of techno-microsystem, digital-related parenting, rather than young children's screen use, has been shown to be significantly linked with subsequent behavior problems. Specifically, our results revealed: (a) parental active mediation at Time 2 robustly reduced behavior problems at Time 3; (b) parental restrictive mediation successfully reduced children's screen time; and (c) parental screen use exerted reciprocal causal effects on children's screen use, forming an internal dynamic within the techno-microsystem.

**Conclusion:** We identified robust causal relations between digital-related parenting and children's behavior problems and screen use, such that parental active mediation led to a reduction in behavior problems and parental restrictive mediation led to a reduction in total screen time. There was a bidirectional relation between parents' screen use and children's screen use over time, suggesting reciprocal causal dynamics within the techno-microsystem. In addition, young children's screen use, regardless of purpose, exerts no significant effect on behavior problems. Conceptually, these findings shed new light on emerging theories of techno-microsystem, and practically can help inform screen use guidelines directed to families and educational professionals.



567

## Young people citizenship activity and personality determines

Beata Krzywosz-Rynkiewicz<sup>1</sup>, Anna Zalewska<sup>2</sup>

<sup>1</sup>University of Warmia and Mazury in Olsztyn, Olsztyn, Poland. <sup>2</sup>SWPS University, Warsaw, Poland

### Abstract (max 500 words)

Objective of the study: Young people citizenship activity is an important developmental task in building maturity, which requires a worldview and expressing it in relation to the social system. Although there is strong discussion around the citizenship education, the question how much of young people's citizenship activity is related to personality determines and how much is the result of social influence is less often addressed. In the presentation this issue will be considered and research results will be presented to answer 2 questions: What part of citizenship activity is determined by personality factors? Are personality traits more or less important in citizenship activity with development?

Methodology: Citizenship activity was measure with Citizenship Behavior Questionnaire according to 3-dimensional citizenship model (passive, semi-active and active citizenship including four subdimensions - social, personal, political activity and action for change) by Zalewska & Krzywosz-Rynkiewicz (2014). Personality determines were measured by battery of psychological instruments according to personality model by Mc Adams (2006) on two levels: (1) Basic personality traits (temperament by Regulative Theory of Temperament - Strelau, 1998, and BIG-5 by Costa & McCrae, 1992) and (2) specific personality traits (Values by Super, 1970, 1973; 1980, Mental toughness by Clough, 2002, Optimism by Czapiński, 2005, and Responsibility by Krzywosz-Rynkiewicz, 2007). Research was provided in Poland. 320 students in three age groups (late childhood, early and late adolescents) from two ecological niches (city and town) participated in research.

Results: In general results show that (1) on the level of basic personality traits, temperament is not related to citizenship activity and two BIG-5 traits (Agreeableness and Conscientiousness) are related mostly to social citizenship but political activity but readiness to protest is not related to basic personality traits (2) On the level of specific personality traits – all of them are related to citizenship activity to some extend with exception of political one and readiness to protest (3) the role of basic and specific personality traits increases with age.

Conclusion: Personality traits are significant for citizenship activity, so they cannot be ignored. However, the most significant are those formed with the development - influence of socialization and education. The importance of traits increases with age, so it is worth using the period of childhood and adolescence to develop personal resources that foster constructive citizenship activity.

569

## Peer Group Norms Influence Children's and Adolescent's Bystander Evaluations of Immigrant Exclusion

Ayşe Şule Yüksel<sup>1,2</sup>, Sally Palmer<sup>1</sup>, Eirini K. Argyri<sup>1</sup>, Joanne Smith<sup>1</sup>, Adam Rutland<sup>1</sup>

<sup>1</sup>University of Exeter, Exeter, United Kingdom. <sup>2</sup>Ministry of National Education in Türkiye, Ankara, Turkey

### Abstract (max 500 words)

Children and adolescents experience different forms of social exclusion, resulting in negative outcomes. Intergroup exclusion i.e., being excluded based on the group membership, stems from discrimination and prejudice and this bias-based form of bullying can be more harmful to children than other forms such as being excluded based on personal characteristics (e.g., being shy). As a consequence of ongoing migration, schools are becoming increasingly diverse and school-aged young immigrants are more likely to encounter bias-based bullying and discrimination in schools than their majority-status counterparts. Group norms on who to include or exclude and who to help or not help shared by ingroup peers are important in such intergroup contexts. This experimental study explored how the interplay between injunctive norms (what peers approve or disapprove of) and descriptive norms (what peers actually do) as bystanders influence children's and adolescents' evaluations of the social exclusion of immigrants and non-immigrants.

British children (aged 8-11, n = 226) and adolescents (aged 13-15, n = 237) were presented with a hypothetical scenario in which they were a part of a peer group of British friends who formed an after-school cooking club. Then they read that their group has a rule that they should help people if they are being left out (injunctive norm). Next, participants were told about a British or an immigrant newcomer who wants to join the club but was excluded from the club by a peer from their British group of friends. We manipulated the descriptive norm, so participants either read about their peer group helping the excluded newcomer or doing nothing to help. Participants then completed measures that assessed the acceptability of social exclusion and their group's bystander reaction (helping the victim or doing nothing to help) on a 1 (definitely not okay) to 6 (definitely okay) scale. Following the measures, participants provided their reasoning and justifications through answering "why?" questions.

The results revealed that adolescents were more likely to evaluate exclusion as acceptable compared to children. However, adolescents were less likely to evaluate exclusion as acceptable when the victim was an immigrant compared to when the victim was British (see Figure 1). Moreover, when participants were asked to evaluate their group's bystander reaction (helped the victim so they are not left out or did nothing to help), only adolescents evaluated the group doing nothing to help the victim more negatively when the victim was an immigrant compared to when the victim was British (see Figure 2). The reasoning findings also revealed developmental changes in their social and moral reasoning. Implications for the development of educational strategies to reduce the exclusion of immigrants, and to promote inclusive bystander reactions that challenge prejudice-based exclusion in globalised societies, will be discussed.

570

## THE EFFECTS OF PARENTING STYLES AND PARENTAL STRESS ON MARITAL SATISFACTION

Irem Metin-Orta, Ceren Naz Senaydin-Bulduklar

Atilim University, Ankara, Turkey

### Abstract (max 500 words)

Parenting styles refer to the parenting approaches, beliefs, and behaviors that shape the emotional tone of the relationship that parents establish with their children (Davies & Coe, 2018). Researchers have proposed four parenting typologies namely authoritative, authoritarian, permissive, and neglecting parenting styles depending on two dimensions of warmth/responsiveness and demandingness/control (Baumrind, 1967, Darling & Steinberg, 1993). The present study aims to investigate the effects of parenting styles on parents' marital relationship quality. In particular, it focuses on the effects of four parental styles (authoritative, authoritarian, overprotective and permissive parenting styles) on marital satisfaction levels experienced by the parents. In general, authoritative parents set firm limits and rules and encourage their children's autonomy, authoritarian parents do not allow their children to express themselves and restrain their autonomy, and permissive parents raise their children with an overly accepting approach. and overprotective parents are highly involved in their children's lives. This study also examines the moderating effect of parental stress on the relationships between parenting styles and marital satisfaction. A convenience sample of 160 adults (131 women with a mean age of 37) having at least one child responded to an online survey. The questionnaire included items that measure parental attitudes, parental stress, marital satisfaction, and demographical information. In order to test the moderating effect of parental stress, separate regression analyzes were conducted using Hayes's (2018) Process Macro. The results showed that among four parenting styles, only authoritarian and permissive parenting styles negatively predict marital satisfaction. Furthermore, parental stress has a negative effect on marital satisfaction levels experienced by the parents. With respect to the moderating effect, it was found that parenting stress moderates the relationship between permissive parenting and marital satisfaction. That is, permissive parenting is negatively associated with marital satisfaction at high levels of parental stress. The current study overall contributes to a better understanding of the link between parenting and marital satisfaction. It also provides important implications to researchers and practitioners in identifying the necessary steps to enhance the satisfaction levels of the parents.

571

## Parental burnout and child development in Syrian refugee families in Jordan

Anisha Wadhwa, Kristin Hadfield

Trinity College Dublin, Dublin, Ireland

## Abstract (max 500 words)

### Introduction:

Akin to burnout at work, parental burnout occurs when parenting stress overwhelms parents' abilities to cope with their parenting responsibilities (Mikolajczak & Roskam, 2020). Parental burnout can lead parents to neglect or become violent toward their children and may negatively impact children's development in a number of ways, including behavioural problems, poorer academic achievement, and worse wellbeing (Griffith, 2022; Mikolajczak et al., 2019). In this project, we will examine parental burnout in Syrian refugee families in Jordan.

### Research questions:

1. How are parenting-related stressors and parenting-related resources associated with parental burnout?
2. How is parental burnout associated with the parents' wellbeing and family functioning?
3. How is parental burnout associated with child social emotional learning?

### Methods:

We will use survey and direct assessment data collected from 102 father-mother-child triads who took part in the Family Intervention for Empowerment through Reading and Education (FIERCE) study. This project sampled Syrian refugee families living in Jordan. We will use data collected at two of the timepoints, about a year apart.

All analyses will be pre-registered; we are currently finalising the pre-registration. Parental burnout was assessed in both mothers and fathers using the Parental Burnout Assessment (Roksam et al., 2018), adapted for use with Arabic-speaking mothers and fathers. To answer the first research question, we will use a linear regression to examine the extent to which five parenting-related stressors (mother age, father age, relative poverty, number of children in household, and maternal human insecurity) and four parenting-related resources (social cohesion, paternal involvement, secure attachment, and spousal relationship quality) are associated with maternal and paternal burnout levels. To answer the second research question, we will correlate parental burnout levels with maternal and paternal wellbeing, and with maternal reports of family functioning. Finally, to answer the third research question, we will correlate parental burnout levels with directly assessed child social emotional learning.

### Conclusion:

Parental burnout is a topic that is only recently gaining attention (Mikolajczak et al. 2019), yet seems to be an important influence on parents' mental health and wellbeing, family functioning, and child development. These analyses will provide needed information on the predictors and correlates of parental burnout in an understudied population.

572

## Parents' Self-control Matters in the relationship between Parental Monitoring Adolescent Self-control

Gülendam Akgül<sup>1</sup>, Derya Atalan Ergin<sup>2</sup>

<sup>1</sup>Çankırı Karatekin University, Çankırı, Turkey. <sup>2</sup>Cappadocia University, Nevşehir, Turkey

### Abstract (max 500 words)

#### Objective of the study

Self-control, one's ability to adjust dominant responses to accept by social values and moral norms and to support the pursuit of long-term goals, has great significance for adolescents for its role in positive youth development. Parental characteristics are important determinants of adolescent self-control. Many studies reported an association between positive parenting strategies (e.g., parental monitoring) and good self-control development among adolescents. There is evidence that heritability has a role in self-control.

Therefore, we examined the self-control among adolescents predicted by parental self control, parental monitoring and child emotional problems. We included parental monitoring as it has a positive correlation with self-control. We included adolescent parental self-control since there is strong evidence for heritability of self-control. Finally, adolescent emotional problems is controlled as it has a negative correlation with self-control.

#### Methodology

A cross-sectional survey was conducted with adolescents and their parents. The sample consisted of 531 adolescents (Mage=12.41, SD=1.13) and their parents (Mage=37.50, SD=6.23). Parent sample consisted of mostly mothers (N=442, %83.24) and adolescent sample consisted of mostly girls (N=297, 56.14%). Data was collected with Parental Monitoring Scale, Brief Self-Control Scale and emotional problems subscale of Strengths and Difficulties Questionnaire.

We applied a hierarchical multiple regression analysis to examine the association of parental monitoring, parental self-control and adolescent self-control after controlling for emotional problems of adolescent. Then, we conducted a mediation analysis to examine the mediating role of parental self-control in the relationship between parental monitoring and adolescent self-control after controlling for emotional problems. The mediation analysis was performed based on lavaan software implemented via JASP.

#### Results

Multiple regression analysis results showed that parental monitoring ( $\beta=.18$ ,  $p<.001$ ) and parental self-control ( $\beta=.42$ ,  $p<.001$ ) were significant predictors of adolescent self-control ( $R^2=.28$ ,  $F(3,527)=69.94$ ,  $p<.001$ ) after controlling for emotional problems ( $\beta=-.14$ ,  $p<.001$ ,  $R^2=.18$ ,  $F(1,529)=18.34$ ,  $p<.001$ ).

The mediation model analysis demonstrated partial mediation between parental monitoring and adolescent self-control since the direct effect was positively significant ( $B = 0.18$ ,  $SE = 0.04$ ,  $p < .001$ , 95%  $CI = [0.11 - 0.26]$ ), including positive indirect effects of parental self-control ( $B = 0.11$ ,  $SE = 0.02$ ,  $p < .001$ , 95%  $CI = [0.07 - 0.16]$ ). The total effect of parental monitoring on adolescent self-control was statistically significant ( $B = 0.29$ ,  $SE = 0.04$ ,  $p < .001$ , 95%  $CI = [0.23 - 0.37]$ ).

### Conclusion

The current findings revealed the importance of parental self-control in the relationship between parental monitoring and adolescent self-control. Positive parental strategies are related to better self-control outcomes among adolescents. However, parents' own self-control strategies mediate the effect of monitoring on child outcomes. Given the mediation analysis results, in order to support self-control among adolescents, parents should learn self-control first.

573

## What roles do teachers' culturally responsive teaching self-efficacy and cultural diversity climate play for the school and psychological adjustment of children of different immigrant generations?

Francesca Ialuna<sup>1</sup>, Sauro Civitillo<sup>2</sup>, Maja Schachner<sup>3</sup>, Nele McElvany<sup>4</sup>, Philipp Jugert<sup>1</sup>

<sup>1</sup>University of Duisburg-Essen, Essen, Germany. <sup>2</sup>Utrecht University, Utrecht, Netherlands. <sup>3</sup>Martin-Luther-Universität Halle-Wittenberg, Halle, Germany. <sup>4</sup>TU Dortmund University, Dortmund, Germany

### Abstract (max 500 words)

In many European countries such as Germany, schools and classrooms are becoming increasingly culturally and ethnically diverse. It is crucial that all children have the chance to adjust well at school (e.g., performing well), and that teachers feel prepared to deal with cultural diversity in the classroom.

Culturally responsive teaching (CRT) aims at valuing cultural diversity, for example including different cultural perspectives, and promoting a classroom climate in which all students learn effectively (Gay, 2002). So far, there is limited empirical evidence on the effects of CRT on children's school achievement. Taking teachers' CRT self-efficacy as a proxy for the implementation of CRT practices (Siwatu, 2007), the first aim of this study was to examine to what extent teachers' CRT self-efficacy is associated with children's school (i.e., school achievement, school belongingness) and psychological adjustment (i.e., life satisfaction).

As one of the objectives of CRT is to promote a positive cultural diversity climate between culturally diverse students, our second aim is to assess the mediating role of cultural diversity climate (i.e., promoting equality and inclusion and cultural pluralism at school) in the association between teachers' CRT self-efficacy and children's adjustment. Research showed that cultural diversity climate predicts ethnic minority students' school and psychological adjustment (Schachner et al., 2016). So far, studies

examining this relation among elementary school children of the first immigrant generation are scarce. Hence, we will additionally explore possible differences across children's immigrant generations. Hypotheses and analysis plan were preregistered.

We collected data from multiple sources, namely fourth grade children ( $N = 234$ ,  $M_{age} = 10.45$ ,  $SD = .55$ ) and their classroom teachers ( $N = 41$ ) in Germany. Thirty-seven percent were first-generation, 43.4 % were second-generation immigrant and refugee and 18.9% were non-immigrant children. Teachers' CRT self-efficacy was assessed with a self-report online survey. We measured cultural diversity climate, school belongingness and life satisfaction with paper-and-pencil questionnaires for children. School achievement was assessed with a vocabulary test measuring reading comprehension and an arithmetical test for fourth graders measuring mathematical competence.

Multilevel analyses showed that teachers' CRT self-efficacy was significantly positively associated with children's mathematical competence, but not with the other outcomes. A climate of equality and inclusion was significantly and positively associated only with children's mathematical competence, while cultural pluralism was positively associated with school belongingness and life satisfaction, but negatively with reading comprehension. Further analyses will show to what extent cultural diversity climate mediates the association between CRT self-efficacy and the outcomes. Moreover, we will perform moderation analyses to explore potential differences between children of different immigrant generations.

This study provides first evidence on the role played by CRT and cultural diversity climate on the school and psychological adjustment among children of different immigrant generations. Results indicate how to target school interventions in order to increase the school and psychological adjustment of children of different immigrant generations.

575

## **Determinants of parenting: Is experiencing father absence as a child linked to future parenting?**

Mariëlle Osinga, Tina Kretschmer

University of Groningen, Groningen, Netherlands

### **Abstract (max 500 words)**

**Objective.** Our understanding of predictors of parenting remains limited, particularly with regard to the influence of parents' developmental history on their parental attitudes and behaviors. How do the parenting and family climate one experiences as a child predict their future parenting? This study explores the link between experiencing father absence as a child and future parenting of their own child(ren) and the potential mediating or moderating role of the interparental relationship.

**Methodology.** Using prospective multigenerational cohort data from the longitudinal TRAILS (Tracking Adolescents' Individual Lives Survey) sample and its intergenerational spin-off The Next Generation (TRAILS NEXT), we will examine whether growing up without the biological father in the home following

parental divorce or separation is associated with parents' emotional availability and support to their own child(ren) among both fathers and mothers. We will conduct regression analyses in which we include father absence as a child as predictor at age 11 and 16 and emotional availability and support as a parent as outcome when their child is 2.5 years old, controlled for family of origin SES and parents' age and gender. Additionally, we will test whether negative marital interactions three months postpartum mediate or moderate this potential link. **Results.** We expect to find a negative association between experiencing father absence as a child and parents' emotional availability and support to their own child(ren), because it might be less easy for these parents to provide physical comfort for their own child(ren). In addition, we hypothesize that the frequency of negative marital interactions might explain why father absence as a child is linked to parents' emotional availability and support to their own child(ren) and, as such, act as a mediator. However, parents' relationship might also act as a moderator and, for instance, strengthen or weaken the association between father absence as a child and parents' emotional availability and support to their own child(ren). **Conclusion.** The results of this study are expected to further expand and refine our understanding of the interrelationships between factors predictive of parenting, as well as the contribution of these factors to parenting behavior; a necessary step in building knowledge of family functioning if we are able to be truly effective in helping parents with the challenge of caring for their children.

576

## Do the Predictors of Adolescents Well-Being differ Online and Face-to-face Education?

Derya Atalan Ergin<sup>1</sup>, Gülendam Akgül<sup>2</sup>

<sup>1</sup>Cappadocia University, Nevşehir, Turkey. <sup>2</sup>Çankırı Karatekin University, Çankırı, Turkey

### Abstract (max 500 words)

Objective of the study

The COVID-19 pandemic is one of the most crucial life events impacting adolescents' mental health and their needs. School closures and limited social relations with their peers had a negative impact on adolescent mental health. On the other hand, social, environmental, and individual factors can bolster adolescent well-being. Although there have been some studies on adolescent well-being during the pandemic, less attention has been paid to longitudinal predictors of well-being. We aimed to examine both cross-sectional and longitudinal predictors of adolescent well-being during and after the pandemic.

Methodology

We designed a longitudinal study spanning over one year in which students experienced online and face-to-face education. In the first wave, the sample was 236 adolescents (N<sub>girl</sub>= 140, 59.3%; N<sub>boy</sub>= 96, 40.7%) and their parents (N<sub>mother</sub>=100, 80.0%; N<sub>father</sub>=25, 20.0%). In the second wave, 550 adolescents participated the study (N<sub>girl</sub>=308, 56.1%; N<sub>boy</sub>=241, 43.9%). For the longitudinal analysis, we matched first and second wave the data. Longitudinal mediation analysis was conducted with 125



adolescents (N<sub>girl</sub>=75, 60%; N<sub>boy</sub>=50, 40%) and their parents (N<sub>mother</sub>= 100, 80.0%; N<sub>father</sub>= 25, 20.0%). Adolescents filled down “Brief Self-control Scale”, “Social Support from Classmate Scale”, “Motivation in Education Scale”; also, parents filled down “Satisfaction with Life Scale” and “Brief Self-control Scale”.

Two hierarchical regression analysis were performed to determine the predictors of adolescent well-being at T1 and T2. In the first stage adolescent gender and age were added the model as covariates. Adolescent’s instinct motivation, social support from classmate and self-control were added in the second stage and parent life satisfaction and parent self-control were added in the last step. Additionally, the mediating effect of adolescent’s self-control was assessed longitudinally on the association between adolescent well-being and social support from classmate using SPSS macro-PROCESS.

## Results

The first hierarchical regression analysis results showed that social support from classmate ( $\beta = .38$ ,  $p < .001$ ), and self-control ( $\beta = .40$ ,  $p < .001$ ) were positively predicted adolescents’ well-being during the pandemic. The second hierarchical regression analysis indicated that adolescents’ intrinsic motivation ( $\beta = .26$ ,  $p < .001$ ), social support from classmate ( $\beta = .30$ ,  $p < .001$ ) and self-control ( $\beta = .29$ ,  $p < .001$ ) positively predicted to adolescents’ well-being after the pandemic. Parent self-control and parent life satisfaction were not significant predictors of adolescent well-being at T1 and T2. Finally, mediation analysis results showed that adolescents’ self-control had an indirect effect on their well-being through classmate social support ( $B = .10$ ,  $SE = .03$ ,  $95\%CI = [.03-.18]$ ). In other words, social support from classmate had a mediator role between self-control and well-being.

## Conclusion

The current findings highlight the importance of peer relationships and self-control during and after the pandemic. In addition, parental well-being did not predict adolescent well-being during or after the pandemic. Social support from classmates had a partial mediating role in the relationship between self-control and adolescent well-being. Accordingly, adolescents with high self-control and high social support from classmates have positive psychological well-being independent of negative life events.

**578**

## **Promoting Civic Engagement in Adolescence: The Role of Environmental Sensitivity and Civic Discussions with Parents**

Giusy Danila Valenti<sup>1</sup>, Nicolò Maria Iannello<sup>2</sup>, Cristiano Inguglia<sup>1</sup>, Alida Lo Coco<sup>1</sup>, Sonia Ingoglia<sup>1</sup>

<sup>1</sup>University of Palermo, Department of Psychology, Educational Science and Human Movement, Palermo, Italy. <sup>2</sup>University of Palermo, Department of Law, Palermo, Italy

**Abstract (max 500 words)**

**Objective of the Study:** Civic engagement (CE) refers to individuals' involvement in activities aimed at improving and helping communities and society (Boyd et al., 2011). Generally, CE entails people's personal beliefs and feelings about their commitment in the community (*attitudes*) and actions they actually perform to make a difference in that community (*behaviors*; Doolittle & Faul, 2013). As adolescence is a pivotal time for the development of CE, it is fundamental to examine factors that might promote it. Thus, this study explored the role of some individual and contextual variables in favoring youths' civic attitudes and behaviors. Particularly, it investigated whether environmental sensitivity (ES; Pluess, 2015) - the ability to perceive, register, process and respond to external stimuli - and civic discussions with parents (CD) were directly associated with adolescents' civic attitudes and behaviors. Briefly, it was surmised that youths being more sensitive to their surroundings and more frequently involved in civic discussions with parents were likely more interested in issues affecting their own community, also reporting more positive beliefs about their commitment in that community, and a higher involvement in civic activities. Also, this work investigated whether ES moderated the relation between CD and CE. That is, we explored whether youths being more sensitive to their environment were more open to messages from parents regarding their communities and, thus, more prone to exhibit greater civic attitudes and behaviors.

**Methodology:** A sample of 448 adolescents (30% males), aged from 14 to 18 years ( $M = 16.51$ ,  $SD = 1.35$ ), was recruited in several high schools in Southern Italy. Participants were asked to fill out an online self-reported questionnaire assessing CE (attitudes and behaviors), civic discussions with parents, and ES (expressed in terms of aesthetic sensitivity, AS, ease of excitation, EoE, and low sensitivity threshold, LST). A series of SEM was run to test the hypotheses.

**Results:** Our findings indicated that CD were positively related to civic attitudes and behaviors, AS was positively associated with civic attitudes, whereas EoE was negatively related to civic behaviors. Contrary to our expectations, ES dimensions did not moderate the relation between CD and CE.

**Conclusion:** Overall, this study showed the role of ES and CD as individual and contextual factors in promoting CE, respectively. Several considerations might be taken into account to explain why ES did not influence the association between CD and CE.

579

## **Teasing. Where object-related joint activities, engagement and communication meet.**

Arkadiusz Biątek

Institute of Psychology, Jagiellonian University, Krakow, Poland

### **Abstract (max 500 words)**

The study examines the phenomenon of teasing in early childhood. Traditionally, teasing is defined as a deliberate provocation accompanied by playful markers that together comment on something relevant to the target of the tease (Keltner, et al, 2001). Research on infant teasing emphasizes its inherently

relational nature. It highlights that to tease, infants must predict the actions and expectations of others (Reddy & Mireault, 2015). Teasing can serve a variety of functions, e.g. it is a form of joyful closeness and intimacy (e.g. peekaboo). In adults, as expressed in proverbs (e.g. in Polish: "*kto się czubi ten się lubi*"; '*those who tease each other like each other*'), teasing is seen as a means of deepening social bonds and intimacy.

In an ongoing longitudinal study focusing primarily on the development of pointing, we observed participants under semi-naturalistic conditions. Thirteen infant-caregiver dyads visited the laboratory every month for six months. They were asked to play as they normally did. The participants' behaviour was recorded by three PTZ cameras. In my presentation, I will limit myself to the data that were collected in the one dyad in which episodes of teasing were observed. The molecular coding scheme, which includes behaviours such as the direction of the infant's gaze and the infant's and mother's behaviour, was applied using the INTERACT software. Additionally, video motion tracking software (i.e. MediaPipe) was used to track the hand and arm movements of the participants while interacting.

As part of the ongoing analysis, we have identified episodes of skilled teasing in one dyad. During the third visit (when R. was 10 months old), R. began to exchange objects with her mother in the form of give-and-take joint activities. After a few exchanges, R. began to slowly pass the ball to her mother, and when the object was very close to mother's hand, she would scoop it up. This sequence of handing and taking was repeated three times, after which R. was amused and finally gave the object to her mother (a similar sequence was repeated three times). It is interesting to note that a few minutes earlier, in the other part of the study, the mother had brought R. close to the poster hanging on the wall and had dismissed it in amusement.

I will present the results of a micro-analytical description of these sequences, as well as movement dynamics analyses based on time-series data obtained from MediaPipe. I will discuss them with reference to the dyad's behaviour observed during the following four visits.

The teasing episodes observed appear to be a unique and missing example in the literature of such behavior so early in development. It will be discussed with reference to a cognitively rich explanation (i.e. as a staged communicative act [Clark, 1996] and metacommunication: "it is play" [Bateson, 1972]) as well as cognitive lean interpretation (Bekoff, 1972; Nakano & Kanaya, 1993). Different psychological processes possibly involved in teasing, as well as its role in developing sociability, social competence and understanding communicative intentions, will be discussed.

**580**

## **The effect of “Stop sexual harassment” on prosocial bystander behaviour in Norwegian secondary schools**

Hilde Slaatten<sup>1</sup>, Ragnhild Bjørknes<sup>2</sup>, V. Paul Poteat<sup>3</sup>, Bente Storm Haugland<sup>4</sup>, Kyrre Breivik<sup>1</sup>

<sup>1</sup>Regional Centre for Child and Youth Mental Health and Child Welfare, NORCE Norwegian Research Centre, Bergen, Norway. <sup>2</sup>Norwegian Centre for Child Behavioural Development, Oslo, Norway.

<sup>3</sup>Counseling, Developmental and Educational Psychology, Boston College, Boston, USA. <sup>4</sup>Department of Clinical Psychology, University of Bergen,, Bergen, Norway

### **Abstract (max 500 words)**

**OBJECTIVE:** Sexual and gendered harassment is normalized in many peer groups. Even though pupils in Norway are legally protected against sexual harassment and harassment based on gender, gender expression and sexual orientation, little is done to systematically target this behaviour in Norwegian schools. The school-based intervention “Stop sexual harassment” was developed to prevent and reduce sexual and gendered harassment among pupils in secondary schools (age 13-15 years). The effectiveness of the intervention is evaluated in a cluster randomized controlled trial administered from June 2021 to June 2023. “Stop sexual harassment” is based on Latane and Darley’s five-step model that leads to intervention in an emergency. An important component of “Stop sexual harassment” is to increase pupils’ willingness and skills to signal disapproval when witnessing a co-pupil being exposed to gendered and sexual harassment, and when being exposed to the harassment themselves. This presentation will explore the extent to which participating in “Stop sexual harassment” increases pupils’ prosocial bystander behavior in these instances, as well as the pupils’ ability to stand up for themselves when exposed to the harassment.

**METHODOLOGY:** Data from a cluster randomized controlled study with 1590 pupils in 36 secondary schools in Norway will be utilized. Pupils’ reactions to sexual harassment victimization (26 items) and harassment victimization due to gender non-conformity or sexual orientation (16 items), will be compared between intervention schools and control schools at pre- (T1) and post- (T2) intervention. Analyses will be conducted using multilevel regression analyses to control for the clustering of data.

**EXPECTED RESULTS:** It is expected that pupils who attend schools participating in “Stop sexual harassment” will more frequently signal disapproval when a co-pupil or they themselves are exposed to sexual harassment or harassment based on sexual orientation or gender expression compared to students in control schools.

**CONCLUSION:** Pupils may benefit from signaling disapproval when a co-pupil or they themselves are exposed to harassment. By engaging in prosocial bystander behaviour, the common experience of pluralistic ignorance with bystanders not being bothered by sexual and gendered harassment may be broken. This may challenge the normalization of sexual and gendered harassment among adolescents.

**583**

### **Examining the Relationship Between Emotional Dependency and Mental Health among Young Adults: Moderating Role of Loneliness**

Burcu İldeniz Tan, Duygu Taşfiliz, Buse Yavuz, Dilek Şirvanlı Özen

Altınbaş University, İstanbul, Turkey

**Abstract (max 500 words)**

Close relationships with other people are at the center of young adulthood. Meeting the need for intimacy and having healthy close relationships are particularly critical. The quality of romantic relationships with significant others during this period has important effects on the mental health of young people. The concept of partner dependence, which expresses an emotional, physical, and mental intense investment in the romantic partner, draws attention in terms of revealing the different dynamics of romantic relationships. Studies have shown that relationship dynamics, in which people feel emotionally dependent on their partners, are associated with various individual and relational problems like anger, partner violence, guilt, and low relationship satisfaction. However, although addiction to a romantic partner is a very unique and important subject in addiction studies, its relationship with other factors is a relatively less researched concept. The aim of this study is to examine the moderating effect of loneliness on the relationship between emotional dependency and its mental health consequences. In this study, loneliness refers to the social relationships and resources of the person other than the romantic relationship, and the mental health consequences are evaluated through participants' levels of depression, anxiety, and stress levels. A cross-sectional research design is applied and the participants between the ages of 18-40 fill out the online scales including the Emotional Dependency Scale (EDS), UCLA Loneliness Scale (ULS-8), and Depression Anxiety Stress Scale-21 (DASS-21). Data collection is still in progress and data is expected to be available by May 2023. As a result, participants with high emotional dependency are expected to show more negative psychological health outcomes depending on their loneliness levels. Results are expected to contribute to our understanding of emotional dependency and its consequences, as well as possible interventions to boost the mental health of young adults by helping to improve their close relationships.

585

**Attachment to mother and internalizing/externalizing problems: The mediating role of avoidant coping**Rukiye KIZILTEPE<sup>1</sup>, Gamze ER-VARGÜN<sup>2</sup><sup>1</sup>Pamukkale University, Denizli, Turkey. <sup>2</sup>Anadolu University, Eskişehir, Turkey**Abstract (max 500 words)**

Objective of the study: Developmental psychopathology perspective emphasizes that the early interaction with the caregiver has a significant impact on adaptation and functioning across the lifespan. Since internalizing and externalizing problems are prevalent in adolescence, numerous studies have repeatedly focused on the relationship between parental attachment and internalizing and externalizing problems. However, few studies have indicated the underlying mechanism of this relationship. In this study, we aimed to investigate the mediator role of avoidant coping strategies in the link between attachment to mother and internalizing and externalizing problems.

Methodology: Participants were 240 adolescents (49.6% girls) from secondary schools in four distinct socioeconomic neighborhoods. The mean age of the participants is 12.60 years with a standard

deviation of 1.07 years. The participants completed The Strengths and Difficulties Questionnaire, Avoidant Coping Subscale of the Kidcope, and the subscale of mother attachment of Inventory of Parent and Peer Attachment – Brief Form.

Results: All analyses were conducted SPSS version 21 and LISREL 8.80. Results of a path model indicated that attachment to mother was negatively associated with internalizing ( $\beta = -0.28, p < .001$ ) and externalizing problems ( $\beta = -0.32, p < .001$ ). In addition, attachment to mother was negatively linked to avoidant coping ( $\beta = -0.14, p < .01$ ), which in turn was associated with internalizing ( $\beta = 0.30, p < .001$ ) and externalizing problems ( $\beta = 0.20, p < .001$ ) after controlling the effect of the covariates (family type and socioeconomic levels of neighborhoods). Our model indicated good model fit ( $\chi^2 [8, n = 240] = 10.35, p = .24$ ; RMSEA = .035 [90% – CI = .001–.089]; CFI = 0.98; IFI = 0.98; GFI = 0.99). The explained variance of internalizing and externalizing problems were 21% and 16%, respectively.

Conclusion: The current study showed the importance of examining direct and indirect associations between attachment to mother and internalizing and externalizing problems. Future prevention studies should consider attachment to mother and avoidant coping to prevent internalizing and externalizing problems in adolescence.

**588**

## **The impact of gender identity threat on adolescents' academic attitudes**

Bonny Hartley

University of Greenwich, London, United Kingdom

### **Abstract (max 500 words)**

#### *Objective of the study*

Disparities between girls' and boys' school achievement persist and are wide ranging, including differences in behaviour, performance, and representation across disciplines. Previous research suggests that these differences are aggravated by stereotypes, through processes such as stereotype threat and gender role conformity (e.g., Hartley & Sutton, 2013). The present research investigates the role of another social threat – gender identity threat (Rudman, Dohn, & Fairchild, 2007).

Research suggests that threats to gender identity (i.e., those that call into question an individual's perceived masculinity or femininity) can elicit compensatory acts in which people respond in a more gender-typical manner as they try to restore their gender status. Such threats have been shown to increase stereotypical job preferences and presentation of agentic vs communal traits, and to increase sexism and aggression in men. The present study experimentally investigates whether threats to gender identity affect adolescents' school-related attitudes, beliefs, and behaviours in ways that may serve to reinforce gender differences.

#### *Methodology*

Data collection is currently taking place in UK schools with students aged 13-14 years (target  $n > 120$ ; min

30 per cell). The study employs a 2(gender identity: control vs threat) x 2(participant gender: girl vs boy) between groups design, where participants are randomly assigned to a control or experimental condition, in which their masculinity or femininity is threatened. Specifically, participants in the threat condition complete a short task designed to create uncertainty about how prototypical they are of their gender (a procedure that has previously been used to induce gender identity threat, Sinclair & Carlsson, 2013). Participants then complete several questionnaire-based measures, which include attitude towards school; academic self-handicapping strategies; disruptive behaviour; perseverance; academic and social achievement goals; gender stereotypes about effort and achievement; and attributions for success and failure.

#### *Results expected*

Analyses will test effects of gender identity threat on adolescents' school-related attitudes, beliefs, and self-report behaviours. It is expected that adolescents who experience a threat to their gender identity will respond in ways that are more stereotypical or normative of their gender (consistent with compensatory efforts to restore their gender status). For example, gender identity threat is expected to increase boys' tendencies to self-handicap and devalue school, and to attribute successes to ability and failures to lack of effort. Effects are expected to be reversed for girls (although predictions are slightly more tentative because previous research indicates effects are often smaller for femininity than masculinity threats). Analyses will also explore further relationships between the variables measured.

#### *Conclusion*

The findings should provide initial evidence as to whether differences in adolescents' academic attitudes, beliefs, and behaviours can be understood in terms of gender identity threats. This may be one mechanism by which gendered norms and stereotypes can influence students at school and perpetuate differences. The research will have implications for exploring strategies to reduce potential impacts of gender identity threats (e.g., via self-affirmation of values) and challenging gender norms and stereotypes.

**591**

### **The role of Infant Directed Speech on mother and infant's emotional regulation. A physiological perspective.**

Maria Grazia Logrieco, Maria Spinelli, Valeria D'Aloia, Francesca Lionetti, Alessandra Sperati, Ilenia Passaquindici, Giulio D'Urso, Mirco Fasolo

G. d'Annunzio University of Chieti-Pescara, Chieti, Italy

#### **Abstract (max 500 words)**

##### Objective of the study

Emotion regulation in infancy is mostly dyadic and in that parents play a key role in facilitating and fostering infant regulation, which then develops into self-regulation. This means that the quality of parental interactive behaviors with the infant is crucial for understanding the infant's abilities to

regulate emotions. Early interaction between the parents and the infant are mediated by infant-directed speech (IDS). IDS is considered an important vehicle of affective communication and is crucial for the development of infant emotion regulation processes. In particular, during interaction with preverbal infants, it is not so much the linguistic content of IDS but rather the prosody of the caregiver's voice that is of interest. Thus, with the prosodic modulation of the voice parents share positive emotions with the infant and attune to the infant's affective state and interactional expectations. An experimental context in which to observe infants' emotion regulation is the still face-paradigm (SFP; Tronick, 1978). After a period of face-to-face interaction, the caregiver is instructed to stop any communication and to maintain a still face while keeping eye contact with the infant. The lack of a caregiver response is stressful for the infant and the procedure allows to observe infant's ability to regulate such distress. From a physiological point of view emotional regulation can be assessed with respiratory sinus arrhythmia (RSA) a parasympathetic biomarker. The aims of this study are to investigate whether IDS prosody may reflect caregiver's RSA during the play phase and whether IDS prosody may have an effect on the child emotional regulation measured with the RSA.

### Methodology

60 mother-infant dyads performed the SFP procedure at infant's 3 months of age (mother's mean age= 35 yrs, SD =5 yrs), during which dyad's physiological activity and maternal speech were recorded. IDS prosody (Fundamental frequency (F0) mean, F0 range and intonational phrase duration) and dyad's RSA were calculated every 20 sec, during the play phase of SFP in order to see dynamic changes of physiological regulation in infants and mothers.

### Results

Results show an association between maternal IDS prosody and RSA. Specifically, high F0 mean, and wide F0 variability range is associated with high maternal and infant's RSA. Furthermore, data indicate an effect of prototypical IDS and maternal RSA on infant's RSA. In particular, high F0 mean and wide F0 range predict high infant's RSA over time during the play phase of SFP and variations of infant's RSA across episodes that indicate better emotion regulation.

### Conclusion

To conclude, IDS prosody reflects maternal emotional and physiological activity and has an effect on the infant's emotional regulation measured with the RSA. This data confirms that IDS prosody has an essential role in the process of emotional regulation, not only from a behavioral perspective but even from a physiological one. As the data collection is in progress, by the time of the conference, data will be available on a larger sample size.



593

### **Changes in adolescents' COVID-19-related stress, parent-adolescent relationships and adolescent mental health during the COVID-19 pandemic: The effect of personality traits**

Monika Donker<sup>1</sup>, Stefanos Mastrotheodoros<sup>1,2</sup>, Susan Branje<sup>1</sup>

<sup>1</sup>Utrecht University, Utrecht, Netherlands. <sup>2</sup>University of Crete, Rethymno, Greece

#### **Abstract (max 500 words)**

Background: The coronavirus disease 2019 (COVID-19) pandemic and the extensive measures to prevent a further spread of the virus have had a major impact on the daily life of all citizens, including families with adolescent children. As in many other countries, children in the Netherlands could not attend school for several periods, had limited (face-to-face) contact with peers, and their structured leisure activities were often cancelled. Several previous studies showed the short-term effects of the pandemic during the first lockdown as well as heterogeneity in these effects. The current study builds on these results by investigating changes over a longer period, from before the pandemic to the start of the second year of the pandemic. Objective: The objective of this preregistered study was to examine the longitudinal associations among changes in COVID-19-related stress, changes in parent-adolescent relationships, and changes in mental health from before the pandemic (Fall 2019) to the end of the second lockdown (Spring 2021). Moreover, we studied whether personality traits predict the changes in stress, relationship quality and mental health throughout the pandemic. Methodology: We used Latent Change Score models with four waves of data from about 240 Dutch adolescents (Mage = 11.4 years at wave 1) from the multi-informant study "InTransition". Results: On average, only few changes were observed throughout the study period. Parent-adolescent negative interactions (conflict intensity) decreased between Wave 1 (W1) and Wave 2 (W2), and COVID-19 related stress tended to decrease between W3 and W4. Significant associations emerged between the changes in the constructs. Increases in internalizing symptoms between W1-W2 and between W3-W4 were positively associated with concurrent increases in parent-adolescent conflict. Increases in COVID-19-related stress between W2-W3 were associated with concurrent increases in internalizing symptoms, and with concurrent increases in conflict. Several personality effects were found, indicating that not all adolescents experienced these changes in the same way. Conclusion: This study is one of the few studies examining changes in adolescent relationships and well-being from before through the second year of the pandemic, as well as the effects of personality therein. Even though no significant changes were found on average, significant correlated (concurrent) changes indicate that this period has been challenging for some youth. Personal characteristics might partly explain who is more vulnerable during this period.

600

### **Online Parent Training for the Initial Management of ADHD Referrals (OPTIMA): Testing the usability of the Structured E-Parenting Support (STEPS) app.**

Kasia Kostyrka-Allchorne<sup>1</sup>, Claire Ballard<sup>1</sup>, Nancy Lean<sup>1</sup>, Edmund Sonuga-Barke<sup>1,2</sup>

<sup>1</sup>King's College London, London, United Kingdom. <sup>2</sup>Aarhus University, Aarhus, Denmark

## **Abstract (max 500 words)**

### 1) Background and objective of the study

STEPS is a parenting support intervention delivered via a mobile phone app. STEPS has been designed to support parents of primary school-aged children with high levels of hyperactivity/impulsivity, inattention, and conduct problems, who are awaiting assessment for a potential attention-deficit/hyperactivity diagnosis in child health services. Its clinical- and cost-effectiveness is currently being evaluated in a randomised controlled trial, as part of the OPTIMA multi-centre research programme in the United Kingdom <https://optimastudy.co.uk>. The present preparatory study tested the usability of STEPS to optimise its value for parents.

### 2) Methodology

Participants: Twelve parents of children aged 5-11 were recruited from the general population.

Measures: Participants completed an adapted System Usability Scale (Brooke, 1996), which assesses the usability of a digital tool (e.g., ease of use, confidence of use, perceived amount of technical support that would be required, etc.). They also responded to open-ended questions that probed impressions about the app, including its look, feel and navigation, and elicited more detailed views about the experience of using the app. These responses were coded with Enlight quality constructs template (Baumel et al., 2017).

The app: STEPS has a linear structure to allow users to build up their parenting skills, with a clear visual distinction between the completed modules and those that are yet to be finished (Figure 1). STEPS is an unguided intervention, and there is no personal clinical support for parents using it. The content is delivered in short, accessible pieces; each video or audio clip is no more than 3 minutes long. When parents register with the app, they choose a 'Buddy' – a parent character played by an actor, who will accompany them on their STEPS journey. Parents can also select favourite content for later quick access and record audio or text reflections.

Procedure: Each participant took part in two remote video sessions scheduled about a week apart. In the intervening time, participants were asked to use the app often and were also asked to complete the SUS online. In the first session, participants downloaded the app, complete a few navigation tasks (e.g., select and change a Buddy, watch a video, record a reflection, save an item to favourites, etc.) and answered questions about their first impressions of STEPS. In the second session, participants talked about their general mobile phone use and then provided more detailed views on STEPS.

### 3) Results

Parents rated the app's usability as very high; the overall score on the SUS was 94.8 out of 100 (SD = 4.8). Responses to open-ended questions showed that the participants' experience of using STEPS was positive. Parents described the app as easy to navigate and use, with an attractive combination of

colours and visual design. They described the content as useful, pitched at the right level, and presented sensitively. Participants also suggested how the app could be improved.

#### 4) Conclusions

Parents felt STEPS has the potential to effectively deliver parenting support whilst families are on the waitlist.

**601**

### **Attitudes towards sexual liberties among Muslim and non-Muslim students: A social network study of attitudinal socialization and selection processes**

Chloe Bracegirdle, Olivia Spiegler

University of Oxford, Oxford, United Kingdom

#### **Abstract (max 500 words)**

##### Objective

Adolescence is a key developmental period for attitudes towards sexual liberties (e.g., homosexuality, abortion, cohabitation). During this period, friendships shape adolescents' attitudes towards sexual liberties through the process of socialization, which leads friends' attitudes to become more similar over time. In Western European societies, Muslim adolescents typically hold less liberal attitudes towards sexual liberties than non-Muslim adolescents. Thus, when friendships form between Muslim and non-Muslim adolescents, do their differing attitudes become more similar? Or might differing attitudes prevent the formation of friendships between Muslim and non-Muslim adolescents? The present research sought to address these research questions.

##### Methodology

We investigated our research questions in a longitudinal study of attitudes and friendship networks in 187 German schools ( $N = 3420$  students). We used data from a large-scale longitudinal project, the Children of Immigrants Longitudinal Survey in Four European Countries (CILS4EU). Students were aged 14-16 years, 32% Muslim 68% non-Muslim, and 47% girls 53% boys. At three timepoints (2010, 2011, 2012), students reported their attitudes towards sexual liberties and nominated up to five peers in their school class as friends. This sociometric data enabled us to test how friendship networks and adolescents' attitudes co-develop over time. We analysed the data using social network analysis and longitudinal multilevel modelling.

##### Results

We found that friendships between Muslim and non-Muslim students were rare: 60% of non-Muslim students had no Muslim friends and 35% of Muslim students had no non-Muslim friends. Large

differences were found in attitudes towards sexual liberties between Muslim and non-Muslim students (Cohen's  $d > 1.04$ ), with Muslim students reporting comparatively less liberal attitudes.

Cross-sectional analyses indicated that students share similar attitudes to their friends, regardless of religious group. However, longitudinal multilevel models provided no evidence that Muslim and non-Muslim friends' attitudes became more similar over time. Rather, the attitudinal similarity between Muslim and non-Muslim friends likely results from friendship selection processes (i.e., students choosing to befriend peers with more similar attitudes to themselves). We are currently conducting further analyses to quantify the extent to which the degree of attitudinal similarity impacts the formation of friendships between Muslim and non-Muslim adolescents. We expect that largely differing attitudes prevent the formation of friendships between Muslim and non-Muslim adolescents, and thus contribute to religious segregation in friendship networks.

Two additional results are of note. First, we found evidence of "ingroup" socialization: Muslim friends' attitudes became more similar over time, and non-Muslim friends' attitudes became more similar over time. Second, attitudes became less liberal among a small number of non-Muslim students who had a particularly high number of Muslim friends.

#### Conclusion

Together, our findings indicate that friendships across religious boundaries do not influence attitudes. Therefore, attitudinal differences between Muslim and non-Muslim adolescents are unlikely to diminish through exposure to friends. Instead, attitudinal differences contribute to the high level of religious segregation in school friendship networks.

**603**

### **Religious development among immigrant-origin Muslim, immigrant-origin Christian and native Christian youth - A person-oriented approach**

Olivia Spiegler<sup>1</sup>, Chloe Bracegirdle<sup>2</sup>

<sup>1</sup>University of Oxford, Oxford, United Kingdom. <sup>2</sup>Univeristy of Oxford, Oxford, United Kingdom

#### **Abstract (max 500 words)**

##### Objective

Religious development is an important dimension of human development and is linked to youths' social and psychological adjustment. Adolescence and early adulthood are thought to be characterized by declines in religiosity, but empirical research is largely based on Christian samples in North America.

We examined whether the widely observed declines are a universal or culturally specific trend. To achieve this, we studied changes in religiosity from age 14 to 22 among immigrant-origin Muslims, immigrant-origin Christians and native Christians in Germany - a highly secularized Western country. We

further used a person-oriented analytical approach (i.e., Growth Mixture Modeling, GMM) to examine if there are subgroups of adolescents following different developmental trajectories. Finally, we validated those subgroups by investigating whether class membership was meaningfully related to demographic characteristics, parent religiosity, and long-term changes in mental well-being (e.g., anxiety), risk behaviour (e.g., smoking), cultural values (e.g., gender role attitudes) and acculturation (e.g., national identification).

### Methodology

Data were drawn from the 3-wave Children of Immigrants Longitudinal Survey in Four European Countries (CILS4EU) and its 4-wave German follow-up (CILS4EU-DE). The sample comprised 1197 immigrant-origin Muslim, 797 immigrant-origin Christian and 2086 native Christian adolescents (49.5% boys, 49.8% girls). Religiosity (importance, prayer, service attendance) was assessed at Waves 1-3 and 5-7. We conducted separate analyses for each religious group. To model change, we specified piecewise growth models with an intercept and slope for adolescence and an intercept and slope for early adulthood.

### Results

The results of the GMM analyses showed that there are subgroups of adolescents with distinct developmental trajectories in each of the religious groups (Figure 1). We found three subgroups among immigrant-origin Muslims characterized by high (58%), low (31%), or increasing (11%) religiosity; two subgroups among immigrant-origin Christians characterized by low (68%) or high (32%) religiosity; and three subgroups among native Christians characterized by low (74%), decreasing (17%) or high (9%) religiosity.

Across the religious groups, being in a high religiosity class was associated with higher well-being, lower risk behaviour and more traditional values. Additionally, for the immigrant groups, being in a high religiosity class was associated with less acculturation. Together these findings support the validity of the classes.

### Conclusion

We conclude that 1) there is heterogeneity in religious development, 2) declines in religiosity during adolescence and early adulthood are not the norm, 3) there are similar subgroups across religious groups but their sizes differ substantially, 4) religiosity develops differently during adolescence and early adulthood with the most dramatic changes occurring during adolescence, and 5) religiosity is a psychological resource for Christians and Muslims even in secular contexts.

**605**

**Zooming in on everyday ethnic-racial discrimination: A review of experiencing sampling methodology studies in adolescence**

Sauro Civitillo<sup>1</sup>, Philipp Jugert<sup>2</sup>

<sup>1</sup>Utrecht University, Utrecht, Netherlands. <sup>2</sup>University of Duisburg-Essen, Essen, Germany

### **Abstract (max 500 words)**

Past research among adolescents in Europe, Australia, and the US has shown that experiences of exclusion and rejection based on ethnic-racial group membership pose a serious risk for psychological adjustment, as well as for school performance (Benner et al., 2018; Civitillo et al., 2023). However, the bulk of previous evidence on the detrimental consequences of ethnic-racial discrimination (ERD) is highly dominated by a between-person perspective, showing that youth who report higher levels of ERD report lower levels of mental health or other school-related outcomes. Studies that have used experience sampling methodology (ESM) demonstrated that discrimination experiences vary from one day to the next, uncovering within-person fluctuations in the same ethnic-racial group. In this review, 1) we take stock of studies that have applied an ESM to examine the consequences of daily (ERD) on youth' psychological adjustment and academic outcomes, 2) summarise moderators and mediators of these associations, and 3) highlight the benefits and limitations of employing ESM to examine ERD in comparison to traditional between-person methodologies.

A total of 19 studies published between 2010 and September 2022 were identified and reviewed. Our synthesis showed that ERD is detrimental for psychological adjustment and academic outcomes on a daily level. In other words, on days where adolescents experienced ERD, they also reported higher levels of maladjustment. Furthermore, a number of studies reported lagged associations between previous-day ERD and next-day psychological adjustment, providing evidence for the assumed temporal order between ERD and adjustment.

These studies document the negative effects of experiencing ERD on a daily basis, but also that variations exist depending on the moderators accounted for in the analyses. Accordingly, many studies in this review examined protective factors such as social support, parental ethnic-racial socialization (ERS), sleep quality, and ethnic-racial identity (ERI), indicating that negative consequences of ERD may be attenuated under certain conditions. This holds the promise that educators and parents can help adolescents to cope with and resist against discriminatory experiences. Yet, our review also highlighted mixed findings for parental ERS and some dimensions of ERI (e.g., exploration).

Our review points to limitations in existing ESM studies. For instance, only two ESM studies focused on the relationships between daily ERD and academic outcomes. Considering that discrimination often occurs in the school context, future studies could focus on how daily ERD affects school functioning (e.g., school engagement, sense of school belonging). Only two studies investigated mediational mechanisms, suggesting that the 'how' and 'why' daily ERD is associated with maladjustment warrants further investigation. Although the use of ESM has great potential for the understanding of everyday ERD among adolescents, this line of research requires more evidence on contextual characteristics, mediating mechanisms, and with a wider variety of ethnic-racial groups.

622

## Pre and during COVID-19 pandemic trends of suicidality hospitalizations among youths in Piedmont, Northwestern Italy

Michela Bersia<sup>1,2</sup>, Emanuele Koumantakis<sup>1,2</sup>, Paola Dalmasso<sup>1</sup>, Lorena Charrier<sup>1</sup>, Paola Berchiolla<sup>3</sup>, Rosanna Irene Comoretto<sup>1</sup>

<sup>1</sup>Department of Public Health and Pediatrics, University of Torino, Torino, Italy. <sup>2</sup>Post Graduate School of Medical Statistics, University of Torino, Torino, Italy. <sup>3</sup>Department of Clinical and Biological Sciences, University of Torino, Orbassano, Italy

### Abstract (max 500 words)

**Objective of the study:** Over the last decade, there is still uncertainty on pre-COVID-19 pandemic trends of suicidality among youths, hampering a deeper comprehension of the potential COVID-19 pandemic impact on the phenomenon. We conducted a cross-sectional study using 2017-2021 surveillance data collected in the Piedmont region, Italy. Firstly to explore temporal trends in suicidality among hospitalized adolescents; secondly, to assess potential changes in the patterns between pre- and during the COVID-19 pandemic.

**Methodology:** Data referred to the first hospitalization discharge record with a suicidality-related ICD9-CM code (suicidal ideation, suicidal risk, suspected suicide) among adolescents aged 13-19 were collected in Piedmont (Northwestern Italy) between 1 January 2017 and 31 March 2021. Incidence rates per year quarter (IR) were calculated based on the hospital's catchment population. IR ratios (IRR) were calculated by comparing each pandemic IR per year quarter with that referred to the previous year. A Poisson segmented regression model adjusted by seasonality and stratified by gender was estimated to evaluate an overall trend over time and potential breakpoints.

**Results obtained:** We included 334 adolescents (median age: 15 years, IQR: 14-16; 80% girls). During the study period, a mean of 11.8/100,000 girls (95%CI: 6.7-19.3) and 2.7/100,000 boys (95%CI: 0.8-7.1) were discharged from hospitalization for suicidality per year quarter. An overall statistically significant increasing trend of suicidality in inpatient discharge IR per year quarter was seen among girls from 2017 to 2021 (IRR 1.04; 95% CI: 1.02-1.07), but the escalating trend lost significance in the segmented model (IRR 1.03; 95%CI: 1.00-1.05) before the breakpoint, in October-December 2020. No significant trend was seen among boys, neither at the overall nor segmented regression. The results were confirmed by the pre-during COVID-19 IR ratios per year quarter: a significant increasing trend was seen among girls in January-March 2021 (IRR 2.42; 95%CI: 1.23-4.73, ref. January-March 2020), while no changes were observed during the 2020 year quarters (ref. 2019 year quarters). The same pattern, although non-statistically significant, was registered among boys.

**Conclusion:** Our findings described a non-statistically significant increasing trend of suicidality in inpatient discharges among girls in the pre-pandemic period, despite substantial stability among boys. After the pandemic outbreak, the initial stability of the pre-COVID-19 pandemic phenomenon was shown in 2020. Later, in the first 2021 year quarter, a significant increasing trend of suicidality was highlighted, in line with the available literature. The present work contributes to the knowledge of suicidality among adolescents as a time-dependent phenomenon during the COVID-19 pandemic. The

life challenges brought by the pandemic could have contributed to an early overall mental health worsening and, later, to an increase in suicidality among people with mental illness.

623

## Suicidality among youths as a time-dependent phenomenon during COVID-19 pandemic: a meta-analysis in the psychiatric setting

Michela Bersia<sup>1,2</sup>, Emanuele Koumantakis<sup>1,2</sup>, Paola Berchiolla<sup>3</sup>, Lorena Charrier<sup>1</sup>, Paola Dalmaso<sup>1</sup>, Rosanna Irene Comoretto<sup>1</sup>

<sup>1</sup>Department of Public Health and Pediatrics, University of Torino, Torino, Italy. <sup>2</sup>Post Graduate School of Medical Statistics, University of Torino, Torino, Italy. <sup>3</sup>Department of Clinical and Biological Sciences, University of Torino, Orbassano, Italy

### Abstract (max 500 words)

**Introduction:** A recent meta-analysis highlighted that the COVID-19 pandemic could have impacted suicidality among youths. Anyway, it remains unclear whether different phases of the suicidality patterns could be traced during the pandemic. The present meta-analysis collected studies reporting 2019, 2020, and 2021 prevalences of suicidal outcomes among under 19 years old admitted to psychiatric services to assess prevalence trajectories comparing the during- and pre-pandemic phases.

**Methodology:** Five databases (PubMed, Embase, Scopus, CINAHL, and Web of Science) were systematically searched for studies published in English from January 1st, 2020 until July 27th, 2022, reporting both 2019, 2020, and 2021 prevalence for suicidal ideation (SI) and/or suicidal behaviors (SB) among youths aged <19 during admitted to psychiatric services during the COVID-19 pandemic. Single-study prevalence data were pooled using random-effects meta-analysis. Prevalence ratio (PR) comparing during- and pre- pandemic periods (2020 vs. 2019; 2021 vs. 2020; 2021 vs. 2019) has been computed and pooled. The present abstract shows the preliminary results; a literature update is planned for Spring 2023.

**Results:** Five European observational studies were selected: 4 about SI, and four about SB. During the pandemic, the pooled prevalence of SI among youths admitted to psychiatric services was 60% (95% CI 40-77%), while the pooled prevalence of SB was 24% (95% CI 14-38%). Compared to 2019, initial stability of SB prevalence in 2020 (PR 0.98; 95% CI: 0.66-1.46) was followed by a non-significant increase in 2021 (PR 1.14; 95% CI: 1.00-1.31). On the other hand, SI showed a more progressive trend toward an increase in 2020 and 2021 compared to 2019 (2020 PR 1.04, 95% CI:0.84-1.30; 2021 PR 1.10, 95% CI: 0.95-1.27). Overall, a statistically significant SI increase was seen in 2021 (PR 1.19; 95% CI: 1.09-1.30), while a trend toward an escalation was registered for SB (PR 1.09; 95% CI: 0.81-1.48).

**Conclusion:** During the COVID-19 pandemic, an overall worsening of mental conditions among psychiatrically ill youths was highlighted. While SI could have been a quickly responsive symptom to the pandemic challenges, accounting for an early general deterioration of mental symptomatology among



psychiatric youths since 2020, SB issues could have become apparent later. Overall, the present results confirmed both an urging and hopefully situation, addressing the need and the potentially high impact of preventive measures to contain the suicidal escalation among youths, starting from the most mentally vulnerable.

625

## The development of infant self-regulatory capacity across the first three months of life is compromised by negative coparenting

Tiago Miguel Pinto<sup>1,2</sup>, Raquel Costa<sup>1,3,4</sup>, Diogo Lamela<sup>1</sup>, Inês Jongenelen<sup>1</sup>, Bárbara Figueiredo<sup>2</sup>

<sup>1</sup>Lusófona University/HEI-Lab: Digital Human-environment Interaction Labs, Porto, Portugal. <sup>2</sup>School of Psychology, University of Minho, Braga, Portugal. <sup>3</sup>EPIUnit - Instituto de Saúde Pública, Universidade do Porto, Rua das Taipas, n° 135, 4050-600, Porto, Portugal. <sup>4</sup>Laboratório para a Investigação Integrativa e Translacional em Saúde Populacional (ITR), Universidade do Porto, Rua das Taipas, n° 135, 4050-600, Porto, Portugal

### Abstract (max 500 words)

**Objective of the study:** Developing self-regulatory capacity is a major developmental task in infancy. Infant self-regulatory capacity is a resource that promotes further development, while self-regulatory difficulties predict a variety of adjustment problems. Developmental psychopathology perspective acknowledges the importance of understanding the mechanisms and the causal processes in the postnatal environment that impact infant development. Coparenting is a major element of the postnatal environment influencing infant development. As a development-enhancing or a risk-promoting environment, coparenting can impact the early development of infant self-regulatory capacity. This study aimed to analyze the impact of positive and negative coparenting dimensions on the development of infant self-regulatory capacity from two weeks to three months of life.

**Methodology:** A sample of 103 primiparous couples (N = 206 parents) were recruited at the 1st trimester of pregnancy. All couples were married (50.9%) or cohabiting (49.1%). Most were Portuguese (91.4% of mothers and 94.6% of fathers), employed (89.6% of mothers and 89.2% of fathers), and were from medium or high socio-economic levels (86.7% of mothers and 91.1% of fathers). Half of mothers and fathers were aged between 30 and 39 years old (52.1%), and had more than 12 years of education (59.5% of mothers and 48.4% of fathers). All infants were first-born, 53.7% female and 46.3% male. Most infants were born at term ( $\geq 37$  gestational weeks; 91.5%) and did not have health problems during the first three months of age (86.5%). Mothers were the primary caregiver in most cases (94.6%). Mothers and fathers reported on socio-demographic characteristics during pregnancy, and on positive and negative coparenting dimensions as well as on infant self-regulation at two weeks and at three months postpartum. Growth curve models were performed to analyze the impact of positive and negative coparenting dimensions on the development of infant self-regulatory capacity from two weeks to three months of life.

**Results obtained:** Results indicated significant time effects on the development of infant self-regulatory capacity. Infant self-regulatory capacity increased from two weeks to three months of life. Significant effects of the negative coparenting dimension were found on infant self-regulatory capacity from two weeks to three months of life,  $b = 0.02$ ,  $p = .031$ , while no effects of the positive coparenting dimension were found. Higher levels of mothers' and fathers' reports of negative coparenting predicted a lower increase in infant self-regulatory capacity from two weeks to three months of life,  $b = -0.16$ ,  $p = .002$ .

**Conclusion:** The results support that negative coparenting is a risk-promoting environment that can compromise the development of infant self-regulatory capacity across the first three months of life. Infants in the context of families with high levels of negative coparenting may be at high risk of self-regulatory problems. Reducing negative coparenting interactions during the early postpartum period could help to prevent infant negative developmental outcomes.

626

## Infant socioemotional development: The negative impact of maternal childbirth-related post-traumatic stress disorder symptoms

Raquel Costa<sup>1,2,3</sup>, Inês Jongenelen<sup>1</sup>, Diogo Lamela<sup>1</sup>, Rita Pasion<sup>1</sup>, Ana Morais<sup>1</sup>, Tiago Miguel Pinto<sup>1</sup>

<sup>1</sup>Lusófona University/HEI-Lab: Digital Human-environment Interaction Labs, Porto, Portugal. <sup>2</sup>EPIUnit - Instituto de Saúde Pública, Universidade do Porto, Rua das Taipas, n° 135, 4050-600 Porto, Portugal, Porto, Portugal. <sup>3</sup>Laboratório para a Investigação Integrativa e Translacional em Saúde Populacional (ITR), Universidade do Porto, Rua das Taipas, n° 135, 4050-600 Porto, Portugal, Porto, Portugal

### Abstract (max 500 words)

**Objective of the study:** Mother's childbirth-related posttraumatic stress disorder (PTSD) symptoms can have a negative impact on mother and infant's behaviors during dyadic interactions, and on the infant's socioemotional development. Addressing this hypothesis, this study aimed to analyze the (1) impact of mother's childbirth-related PTSD symptoms on infant's socioemotional development; and (2) moderator role of comorbid symptoms of anxiety and depression on the impact of mother's childbirth-related PTSD symptoms on infant's socioemotional development.

**Methodology:** The study is approved by the ethical commission of the institutions involved, and the recruitment phase is now in place. Researchers contact eligible mothers at the hospital and explain the objectives and procedures of the study. Mothers are eligible if they are 18 years of age or older. At least 250 mothers will be contacted presentially at the hospital to participate in this longitudinal study with three assessment waves: (1) 1-3 days postpartum, (2) 8 weeks postpartum, and (3) 22 weeks postpartum. Between 1 and 3 days postpartum, mothers will report on-site on their sociodemographic and obstetric characteristics. At 8 weeks postpartum, mothers will complete online self-reported measures of birth trauma, previous trauma, childbirth-related PTSD, anxiety, and depressive symptoms. At 22 weeks postpartum, mothers will complete online self-reported measures of childbirth-related PTSD, anxiety, and depressive symptoms, and of infant's socioemotional development. Childbirth-related PTSD symptoms will be measured using the City Birth Trauma Scale The Edinburgh Postnatal

Depression Scale (EPDS) will be used to assess depressive symptoms and the State-Trait Anxiety Inventory (STAI-S/T) will be used to assess anxiety symptoms. Infant's socioemotional development will be assessed using the Ages & Stages Questionnaire: Social-Emotional. Unadjusted and adjusted (to relevant variables) multilevel linear regression models will be performed to analyze data.

**Expected results:** We expect that mother's childbirth-related PTSD symptoms may have a negative impact on infants' socioemotional development. Infants from mothers with more childbirth-related PTSD symptoms are likely to present lower socioemotional development at two months of age. Mother's comorbidities enhance the negative impact of mother's childbirth-related PTSD symptoms on the infant's socioemotional development. Infants from mothers with more childbirth-related PTSD symptoms and more depressive and/or anxiety symptoms will present lower socioemotional development at two months, than infants from mothers with more childbirth-related PTSD symptoms but with less depressive and/or anxiety symptoms.

**Conclusion:** Findings provide evidence on the adverse impact of mother's perinatal mental health problems on infant's socioemotional development. Infants from mothers with more childbirth-related PTSD symptoms and comorbid anxiety and depressive symptoms could be particularly at risk of socioemotional developmental problems. Data will inform psychological interventions targeting mother-infant interaction and co-regulation and infant development, which aligns with United Nations Sustainable Development Goals (SDG) 3.4 and 3.5.

628

## Identification and Examination of Digital Obesity in Young People

F. Cemre Yavuz Şala, Ecem Çiçek, Kübra Berber, Sema Nur Toker, Neslihan Güney Karaman

Ankara University, Ankara, Turkey

### Abstract (max 500 words)

Objective:

Individuals' digital consumption habits have changed as a result of the rapid advances in information and communication technology and the pandemic. Although digitalization facilitates the fulfillment of many needs including educational, social, practical, and entertainment; it exposes individuals to a variety of risks depending on the intensity, area and purpose of use. Digital obesity, a current concept, can be defined as individuals having easy access to digital content and becoming addicted to it by consuming it in large quantities. It is associated with the desire to consume a large amount of content in a short period of time, with technological tools becoming human limbs and leaving one feeling incomplete without them. However, there is conflict about who is "digitally obese" and what the boundaries should be. Students who have just started university are one of the groups that use technology extensively and are vulnerable to a variety of risks due to the developmental stage they are in. In this context the aim of this study is to conceptualize digital obesity and reveal the consequences of digital obesity on young people.

### Methodology:

This is a correlational study, consisting of two parts: First, by using FoMo, binge-watching and screen use types variables, a norm for digital obesity will be developed. Secondly, using this norm, (digital obese and non-obese) participants will be compared on sleep quality, depression, negative self-perception, somatization, hostility.

Data collection process is still ongoing, however study group is aimed to be consist of approximately 500 participants. Data collection tools are demographic information form, screen use information form, FoMo scale, binge-watching engagement and symptoms questionnaire, sleep quality scale, and brief symptom inventory. A norm development study will be conducted based on the cutoff score in measuring the concept of digital obesity. In line with the second objective of the study, MANOVA analysis will be performed to compare the "digital obese" and "non-digital obese" groups, in terms of low sleep quality, depression, anxiety, negative self-perception, somatization and hostility levels.

### Expected Results:

In this study it is expected that digital obesity have significant effect on outcomes such as sleep quality, depression, anxiety, negative self-perception, somatization and hostility. Individuals in the digital obese group are expected to have lower sleep quality and higher levels of depression, anxiety, negative self-perception, somatization, and hostility than those in the other group.

### Conclusion:

In conclusion, digital obesity is expected to have significant negative effects on young people's mental health and sleep quality. However, this study has limitations as well. Future studies may take a more ecological approach and measure screen use prospectively.

630

## **Infant socioemotional development in the context of perinatal intimate partner violence: the role of parental reflective functioning**

Ines Jongenelen<sup>1</sup>, Diogo Lamela<sup>1</sup>, Tiago Miguel Pinto<sup>1</sup>, Raquel Costa<sup>1,2,3</sup>, Rita Pasion<sup>1</sup>, Célia Ferreira<sup>1</sup>

<sup>1</sup>Lusófona University/HEI-Lab: Digital Human-environment Interaction Labs, Porto, Portugal. <sup>2</sup>EPIUnit - Instituto de Saúde Pública, Universidade do Porto, Porto, Portugal. <sup>3</sup>Laboratório para a Investigação Integrativa e Translacional em Saúde Populacional (ITR), Universidade do Porto, Porto, Portugal

### **Abstract (max 500 words)**

**Objective of the study:** One in four children under five years are exposed to intimate partner violence (IPV) worldwide, which has a detrimental impact on children's development. Mothers' parenting behavior is a key indirect mechanism through which IPV impacts infant development. Unexplored

maternal neuro and cognitive processes may act as unfolding mechanisms linking IPV exposure and parenting behavior, such as parental reflective functioning (PRF). The aim of this study is to analyze whether mothers' PRF mediates the link between perinatal IPV and infant socioemotional development.

**Methodology:** The study is approved by the ethical commission of the institutions involved, and the recruitment phase is now in place. Three-hundred and forty pregnant women will participate in a 2-wave longitudinal study from the 3rd trimester of pregnancy (28-32 gestational weeks) to 2 months postpartum (6-12 postpartum weeks): At the 3rd trimester and 2 months postpartum, women will report on sociodemographic and obstetric characteristics and infant biometric data. In both assessment waves, mothers will complete self-reported measures to assess IPV, PRF, and infant socioemotional development. Intimate Partner Violence will be assessed using the The Violence Against Women Instrument, parental reflective functioning will be assessed using the Parental Reflective Functioning Questionnaire and infant socioemotional development will be assessed using the Ages & Stages Questionnaires: Social-Emotional. The aims of the study will be achieved by using mediation models.

**Results obtained or expected:** We expect that perinatal IPV will be associated with lower levels of PRF at the 3rd trimester of pregnancy and with lower socioemotional development in the infant at 2 months of age. Likewise, lower levels of PRF at the 3rd trimester of pregnancy will be associated with lower socioemotional development in the infant at 2 months of age. We also expect that PRF at the 3rd trimester of pregnancy mediates the link between perinatal IPV and lower socioemotional development in the infant at 2 months of age.

**Conclusion:** Findings can provide evidence on PRF during pregnancy as an important cognitive parenting dimension that can explain the impact of perinatal IPV on infant socioemotional development. Results will inform the development of evidence-based multidisciplinary and multilevel early intervention programs and clinical practice with vulnerable infants due to direct and indirect exposure to IPV. Findings will inform policymakers in the development, evaluation, and implementation of effective policies in preventing the short and long-term impact of IPV exposure on infant developmental pathways.

641

### **A Preliminary Investigation of the Effect of Early English Learning on Japanese Preschoolers' Executive Functions: Evaluating the Validity of Verbal Switching Task in relation to the Non-Verbal Task**

Aya Kutsuki<sup>1</sup>, Hideyuki Taura<sup>2</sup>

<sup>1</sup>Kobe Shoin Women's University, Kobe, Japan. <sup>2</sup>Ritsumeikan University, Kyoto, Japan

#### **Abstract (max 500 words)**

Objective

The study investigated the potential impact of early English learning on Executive Functions (EFs) in Japanese preschoolers, compared to their monolingual counterparts. The validity of the verbal switching task was also assessed in relation to the non-verbal Simon task. The examination of early English learning among Japanese preschoolers is still understudied and has limited research.

### Methodology

The sample consisted of 66 preschoolers aged between four and five, divided into two language groups. The first group consisted of 38 English-learning preschoolers, 21 three-year-olds ( $M=44.45$  months,  $SD=2.59$ ) and 17 four-year-olds ( $M=52.82$  months,  $SD=3.49$ ), all from Japanese-speaking homes and attending a Japanese-English bilingual preschool. The second group consisted of 28 Japanese monolingual preschoolers, 13 three-year-olds ( $M=44.12$  months,  $SD=2.167$ ) and 15 four-year-olds ( $M=52.82$  months,  $SD=3.48$ ).

### Experimental Tasks

The Simon task was used to measure inhibitory control and conflict resolution, with two trials of six stimuli each. The verbal switching task was created to measure verbal switching abilities. Children were shown two drawings of different boys on a PC screen and asked to say "Ma" to the boy with brown hair and "Mi" to the boy with blond hair before naming an object (e.g. apple, scissors) that appeared together. The brown hair trial consisted of six drawings of the same boy with brown hair, while the mixed trial consisted of 12 stimuli of brown and blond hair boys appearing interchangeably, requiring the child to switch sounds when verbalizing.

### Results

The reaction times, correct responses, and Simon effects were compared between the two language groups using t-tests. At age four, bilingual preschoolers had significantly faster reaction times in the Simon task compared to monolinguals. No significant differences were found at age five. For the verbal switching task, bilinguals had significantly more correct responses in the mixed trial than monolinguals at both ages, with no significant differences found in the brown hair (non-switching) trial. Partial correlation analyses, controlling for age, showed significant correlations between the correct responses in the mixed trial but not the brown hair trial of the verbal switching task and the reaction times of the Simon task, with a positive correlation at age four and a negative correlation at age five.

### Conclusion

The study found that bilingual children performed better on incongruent trials, which require inhibitory control, and on congruent trials, which are non-inhibitory but require attention. This suggests that early English learning may have a positive impact on both verbal and non-verbal attentional control, which is a broader concept than Executive Function (EF). The verbal switching task was also confirmed as an effective measure of bilingual children's attentional control. Additionally, the study highlights the potential relationship between verbal switching behavior and non-verbal attentional control that exists in bilinguals. The age at which these differences become apparent may vary, depending on the type of task used, as different tasks may measure different aspects of attentional control.

The developmental significance of these differences, as well as the reverse correlations observed at age four, will be discussed in further detail.

**643**

## **Mother-Child Discrepancies in Reports of Child Physical Abuse and their Associations with Child's Emotional and Behavioral Adjustment**

Diogo Lamela, [Tiago Miguel Pinto](#), Raquel Costa, Rita Pasion, Inês Jongenelen

HEI-Lab, Lusófona University, Porto, Portugal

### **Abstract (max 500 words)**

Objective of the study:

Mother-child discrepancies frequently occur in reports of child physical abuse. Such discrepancies raise important challenges for interpreting and integrating data from multiple informants. The main objective of the current study was to identify patterns of mother-child discrepancies in reporting child physical abuse using profile latent analysis. We then tested differences between the identified profiles on mothers' mental health problems and children's emotional and behavioural difficulties.

Methodology:

Participants were 159 Portuguese mother-child dyads with police-documented exposure to intimate partner violence. Participants were recruited in Child Protective Services (CPS) and Domestic Violence Shelters. Trained female research team members administered the assessment protocols to mothers and children separately. Data were collected in the CPS and shelter facilities. The mothers' mean age was 36.26 years ( $SD = 7.52$ ; range = 21-58 years). The children's mean age was 7.23 years ( $SD = 1.94$ ), with 54% of the sample consisting of boys ( $n = 87$ ).

Results:

We identified two convergent profiles (mother-child agreement on both high and low levels of child physical abuse) and one divergent profile (child reported more physical abuse). Mothers of the divergent profile reported more mental health problems than mothers of the convergent profiles. Children of the divergent profile and one of the convergent profiles (mother-child agreement on high levels of child physical abuse) showed the highest levels of emotional and behavioural difficulties.

Conclusion:

These results illustrate how examining informant discrepancies in the assessment of abusive parenting practices increases our understanding of children's psychological adjustment. The methodological implications for Developmental Psychology will also be discussed.

644

## Uncovering heterogeneity in math achievement trajectories in middle school during the Covid-19 pandemic

Rimantas Vosylis<sup>1,2</sup>, Berita Simonaitienė<sup>1</sup>, Eglė Melnikė<sup>1</sup>, Daiva Sevalneva<sup>1</sup>, Rasa Erentaitė<sup>1</sup>

<sup>1</sup>Kaunas University of Technology, Kaunas, Lithuania. <sup>2</sup>Mykolas Romeris University, Vilnius, Lithuania

### Abstract (max 500 words)

#### Objectives

Pandemic-related sudden changes in the educational systems have raised high concerns about the potential negative implications for students' academic outcomes. Recent meta-analysis provides evidence that, on average, students' academic outcomes (learning gains, test scores, grades) have declined during the pandemic, however, there was a substantial variation of the effect based on the national context, students' background, school subject (Betthausen et al., 2023). Some studies have suggested that the pandemic was related to stronger differentiation or polarization of students' academic outcomes: while some students have demonstrated abrupt drops in academic outcomes, others have shown steep increases in their academic functioning (e.g., Erentaitė et al., 2022; Salmela-Aro, et al., 2021; Tomasik, 2020). To date, the understanding of the heterogeneity in the pandemic effects on students' academic outcomes is limited. Accordingly, the aim of our study is to uncover the potential heterogeneity in academic outcomes among Lithuanian middle school students by analyzing their yearly math grade point average (GPA) trajectories between 2020 and 2022. In addition, we test whether pre-pandemic achievement levels, students' gender, socioeconomic status and special learning needs predict students' GPA trajectories during the pandemic.

#### Methodology

The data for this study were obtained from the government institution that collects, stores, and handles data from schools in Lithuania. The dataset examined in this study consisted of 17,685 students (48.9% girls) nested in 460 schools. The students were in the 8th grade in 2022, and their math GPA data covered grades 6th, 7th and 8th. We also used their national assessment math test scores obtained in 4th and 8th grade. Data on student sex, socioeconomic status (SES), and special learning needs was also used in the analyses. We applied Growth Mixture Modeling (GMM) to identify groups of students with similar patterns of change in math GPA between 2020 and 2022.

#### Results

Overall, results suggested the presence of seven latent trajectory classes: high achievers (19%), achievers with a slight decline (25%), moderate achievers with a slight decline (9%), moderate achievers with a strong decline (5,6%), rapid climbers (1%), slowly recovering (9%), and underachievers (30,6%). The validity of the classification was tested by comparing 4th- and 8th-grade national assessment math test scores across the uncovered GPA trajectories - the pattern of differences paralleled the results of math GPA scores. Lastly, the results of multinomial logistic regression revealed that pre-pandemic



achievement levels, students' gender, SES and special learning needs meaningfully predicted students' grade trajectories during the pandemic.

## Conclusion

While the majority of middle school students showed a normative slight decline in their math achievement over the pandemic period, a few distinct subgroups have demonstrated either a steep decline or slow to rapid recovery of their math results. Females, those with higher pre-pandemic math achievement levels and those with lower special needs had higher chances of being on a trajectory of increasing grades, while the role of student SES was double-barrelled during the pandemic period.

**645**

## **Proneness to experience shame, guilt, and self-disgust, as a function of adolescents' and emerging adults' socio-cognitive developmental profiles**

Elisavet Chrysochoou<sup>1</sup>, Vagia Roidou<sup>1</sup>, Aikaterini Panagiota Stavroulaki<sup>1</sup>, Ana Belen Vivas<sup>2</sup>

<sup>1</sup>Aristotle University of Thessaloniki, School of Psychology, Thessaloniki, Greece. <sup>2</sup>CITY College, University of York Europe Campus, Psychology Department, Thessaloniki, Greece

### **Abstract (max 500 words)**

Despite a great research interest in self-conscious emotions lately, and the increasing knowledge about their developmental significance (Tracy et al., 2007), we know less about the mechanisms underlying change and the factors shaping these complex emotional experiences beyond childhood. Yet, adolescence and emerging adulthood are sensitive periods for the development of both self-consciousness and adaptive cognitive-affective reactions to the social world. Additionally, social anxiety, linked to tendencies to interpret social situations in negative or threatening manners (Miers et al., 2008) and suggested to moderate the effects of self-discrepancy on negative self-conscious affect (Liss et al., 2013), appears to increase in adolescence (Westenberg et al., 2007). Whereas evidence suggests increased experiences of negative self-conscious affect (Else-Quest et al., 2012) and social anxiety (Nelemans et al., 2019) among females. The present study focuses on adolescents' and emerging adults' proneness to experience negative self-conscious emotions, in relation to their gender and socio-cognitive developmental profiles (as shaped by cognitive-affective reactions when one's self-concept is considered threatened, social anxiety, and tendencies to employ more or less adaptive emotion regulation strategies, besides age and parental SES).

Participants were 236 adolescents (13 to 17-year-olds; 135 females) and 256 emerging adults (18 to 25-year-olds; 150 females). They were administered (a) the TOSCA-A (Tangney et al., 1991), to measure proneness to shame and guilt, as well as externalization of cause/blame, and detachment (unconcern), (b) the Self-Disgust Scale (Overton et al., 2008), tapping disgust towards one's self and behaviour, (c) the SAS-A (La Greca & Lopez, 1998), measuring fear of negative evaluation, as well as social avoidance and distress in new situations and more generally, and (d) the ERQ (Gross & John, 2003), providing measures of cognitive reappraisal and expressive suppression to regulate emotions.

Cluster analyses indicated two socio-cognitive developmental profiles: a more adaptive (N = 291; 186 females; mean: 17.7 years) and a less adaptive profile (N = 201; 99 females; mean: 19.1 years), characterized respectively by lower and higher levels of externalization, detachment, expressive suppression, and the social anxiety components measured (there were no differences in SES and cognitive reappraisal). Findings seem to indicate a link between less adaptive cognitive-affective responses to the social environment and age, centered on transition to emerging adulthood. A MANOVA that followed did not demonstrate a significant interaction of the socio-cognitive profile and gender variables. Yet, females were characterized by greater levels of shame, guilt, and self-disgust overall, whereas participants with the less adaptive socio-cognitive profile, showed higher levels of shame and self-disgust, but lower levels of guilt. The latter is considered the most adaptive self-conscious emotion of the three studied, being focused on behaviour rather than the global self, and contributing to social engagement and adjustment (Tangney et al., 2007).

Further studying cognitive-affective reaction and regulation patterns in adolescence and emerging adulthood, in relation to age and gender, and as predictors of emotional experiences related to self-consciousness, could enhance our understanding of the developing self, beyond childhood and in response to the adaptive challenges of each period.

**649**

### **Effects of stability and changes in family socioeconomic status on diurnal and hair cortisol: findings from a longitudinal twin study**

Yamiley Christina Cantave<sup>1</sup>, Mara Brendgen<sup>2</sup>, Isabelle Ouellet-Morin<sup>3</sup>

<sup>1</sup>University of Groningen, Groningen, Netherlands. <sup>2</sup>University of Quebec at Montreal, Montreal, Canada. <sup>3</sup>University of Montreal, Montreal, Canada

#### **Abstract (max 500 words)**

Background: Although exposure to socioeconomic hardship is hypothesized to induce dysregulation in hypothalamic-pituitary-adrenal (HPA) axis activity and cortisol secretion, evidence remains inconsistent. Yet, few studies have investigated this association according to a developmental approach sensitive to the social context likely to mitigate this association. Objectives: 1) To examine the role of stability and changes in family hardship as indicated by low socioeconomic status (SES) in predicting multiple indicators of cortisol secretion. Method: Participants are from the Québec Newborn Twin Study, a population-based sample of twin pairs recruited at birth. Family SES was collected in early childhood (ages 0–5) and mid-adolescence (age 14). Diurnal cortisol (n=569) was measured at age 14 at awakening, 30 min later, in the afternoon and evening over four non-consecutive days. Hair cortisol concentration (HCC, n=704) was measured at age 19. Results: Youth experiencing lower SES levels throughout childhood and adolescence had a flatter diurnal slope and higher HCC in comparison to those who experienced upward socioeconomic mobility from childhood to mid-adolescence and those with persistently higher SES levels. Moreover, youth who experienced downward socioeconomic

mobility showed higher HCC, except for those who were raised in higher-SES households during early childhood. Conclusions: This study supports the hypothesis that early socioeconomic adversity may sensitize HPA axis activity to later socioeconomic disadvantage, which may bear consequences for socioemotional and behavioural functioning.

655

### **Infants' negative emotionality: The role of maternal distress and of early life affective touch experiences**

Joana Antunes<sup>1</sup>, Raquel Costa<sup>2,3,4</sup>, Cláudia Sousa<sup>4</sup>, Isabel Soares<sup>1</sup>, Adriana Sampaio<sup>1</sup>, Ana Mesquita<sup>5,1</sup>

<sup>1</sup>School of Psychology, University of Minho, Braga, Portugal. <sup>2</sup>EPIUnit - Instituto de Saúde Pública, Universidade do Porto, Porto, Portugal. <sup>3</sup>Laboratório para a Investigação Integrativa e Translacional em Saúde Populacional (ITR), Universidade do Porto, Porto, Portugal. <sup>4</sup>Lusófona University/HEI-Lab: Digital Human-environment Interaction Labs, Porto, Portugal. <sup>5</sup>ProChild CoLAB, Guimarães, Portugal

#### **Abstract (max 500 words)**

Objective of the study: Touch plays a key role for the foundation of infants' social bonding and emotional communication. During the COVID-19 pandemic mother-newborn separation, no (in)direct breastfeeding, and no skin-to-skin contact after birth were implemented in some healthcare facilities. In addition to this tactile deprivation, the COVID-19 pandemic context may have contributed to higher levels of perinatal distress. This study aims to analyse: 1) the association between COVID-19-related perinatal distress and infant negative emotionality; and the 2) the mediating role of COVID-19 impact on early life affective touch experiences on the association between COVID-19-related perinatal distress and infant negative emotionality.

Methodology: Women within the first year of postpartum with infants older than 3 months of age reported, using online surveys, on socio-demographic information, distress level about changes in birth and postnatal experiences due to COVID-19 pandemic ("In general, what is the level of distress you have experienced about changes to your birth and postnatal experiences due to COVID-19?"); and impact of COVID-19 pandemic on mother-newborn affective touch experiences during hospitalization ("To what extent do you think COVID-19 had a positive or negative impact on your experiences of touch with your baby (e.g. stroking, kissing) during hospitalization?"). Infant negative emotionality (i.e. distress, sadness, and fear) was assessed based on the Infant Behavior Questionnaire–Revised Very Short Form. Analyses were performed using IBM SPSS Statistics software. Descriptive statistics were conducted to describe participants' social and demographic characteristics. Mediation analysis was conducted using models 4 from PROCESS macro, version 4.2, which allows to calculate heteroscedasticity consistent standard errors and also to use bootstrapping to calculate model coefficients and confidence intervals. The model was adjusted for mother's age, education and professional status.

Results: The sample comprised 353 Portuguese mothers and their infants, whose childbirth occurred during the COVID-19 pandemic. Mothers were aged between 23 and 46 years old (M = 33.55; SD = 4.40). For 201 (56.9%) of them, this was the first pregnancy. Most of these women are employed (n= 315,

89.2%) and finished a higher education degree ( $n = 289$ , 81.9%). Infants were aged between 3 and 12 months old ( $M = 6.59$ ;  $SD = 2.55$ ), of which 178 (50.4%) were males. The infant's score for negative emotionality varied between 1.38 and 6.57 ( $M = 4.00$ ;  $SD = 1.11$ ). The percentage of women reporting some to high level of COVID-19-related perinatal distress was 48% and 24% reported that the COVID-19 pandemic had a negative impact on their experiences of affective touch with their newborn during hospitalization. COVID-19-related perinatal distress was a significant predictor of negative emotionality ( $B = 0.13$ ,  $SE = .03$ , 95% CI: 0.07 – 0.19). Additionally, COVID-19 impact on early life affective touch experiences mediated the association between perinatal distress and infant negative emotionality (indirect effect = 0.04,  $SE = .01$ , 95% CI: 0.01 – 0.06).

Conclusion: Favorable environments within maternal and newborn healthcare services are critical to promote positive experiences in the first hours of life with potential short term impact on infant developmental outcomes.

658

### **Locked up, lonely and hateful online? Loneliness and need to belong during COVID-19 pandemic in relation to contact frequency, well-being and hate speech among youth and emerging adults**

Jan S. Pfetsch, Katrin Lietz, Anja Schultze-Krumbholz

Technische Universität Berlin, Berlin, Germany

#### **Abstract (max 500 words)**

Reducing in-person contacts (“social distancing”) was one way to contain the spread of the corona virus especially at the beginning of the COVID-19 pandemic. Schools and universities in Germany were closed (partially) for students from March 2020 to at least June 2021, which may have led to reduced direct and online contacts, increased loneliness and reduced well-being. Indeed, an international systematic review found higher prevalence rates of loneliness in pandemic times and significant relations between higher loneliness and lower well-being (Farrell et al., 2022). German helpline services observed that loneliness was the most important counseling topic among 15- to 19-year-olds, but especially among 20- to 29-year-olds (Armbruster & Klotzbücher, 2020). Our study analyzes the relation of loneliness and well-being of school and university students after more than one year of social distancing measures (April 2021).

We conducted an online survey with  $n = 190$  school students and  $n = 646$  university students. As results did not differ considerably between both subsamples, we analyzed a final sample of  $N = 836$  school and university students ( $M = 22.00$ ,  $SD = 5.5$  years, 66% male) and controlled for age and gender. The online survey included the frequency of direct and online contacts, contact satisfaction, loneliness (UCLA-R Loneliness Scale, subscales “feelings of isolation”, “lack of proximity”), need to belong (Leary Need to Belong Scale), well-being (Short Warwick-Edinburgh Mental Well-Being Scale), and hate speech (new instrument based on an empirical classification of hate speech). We conducted latent regressions, mediation and moderation analyses with Mplus 8.2.

In a latent regression with well-being and hate speech as outcomes, well-being was significantly predicted by the frequency of online contacts (but not direct contacts or contact satisfaction). Additionally, both loneliness subscales significantly negatively predicted well-being (but the need to belong did not). Hate speech was predicted significantly positively by the frequency of online contacts and contact satisfaction (but not direct contacts), loneliness lack of proximity (but not isolation) and negatively by the need to belong. A mediation analysis showed indirect paths for well-being (but not for hate speech): feelings of loneliness mediated the effect of contact frequency and satisfaction on well-being. In a moderation analysis well-being was negatively predicted by loneliness isolation and lack of proximity and hate speech moderated the relationship of loneliness isolation on well-being: the less loneliness isolation and the less hate speech, the higher was well-being.

In conclusion, loneliness and reduced online contacts in times of social distancing had a relevant effect on well-being of adolescents and emerging adults. Feeling lonely seems to be a mechanism between less online contacts and lower levels of well-being. Hate speech, as a behavioral outcome, was also directly predicted by loneliness and contact frequency and moderated the link between loneliness isolation and well-being: participants who experienced more loneliness and engaged in more hate speech showed diminished well-being. Thus, loneliness is negatively related to well-being, especially when considered in the context of behavioral problems. Consequently, supporting vulnerable persons, especially in times of social distancing, seems recommendable.

659

## **Beyond ‘Migrant Background’: How to Select Relevant, Social Justice Oriented, and Feasible Social Categories in Research**

Jana Vietze<sup>1</sup>, Miriam Schwarzenthal<sup>2</sup>, Ursula Moffitt<sup>3</sup>, Sauro Civitillo<sup>4</sup>

<sup>1</sup>Erasmus University Rotterdam, Rotterdam, Netherlands. <sup>2</sup>University of Wuppertal, Wuppertal, Germany. <sup>3</sup>Wheaton College Massachusetts, Norton, USA. <sup>4</sup>Utrecht University, Utrecht, Netherlands

### **Abstract (max 500 words)**

In psychological research conducted in the continental European context, samples are typically divided into individuals “of migrant and non-migrant background” or into “natives” and “migrants” to distinguish between those whose parents were born in the country of residence and those with at least one parent born abroad, regardless of personal migration experience. These ascribed labels are often used inconsistently and may reinforce Othering and racialized exclusion from the national group (Erick & Schwartzman, 2015; Moffitt & Juang, 2019; Will, 2019). Importantly, they may also mask the heterogeneity of people “of migrant background,” a term which spans up to three generations of immigrants and their descendants with a vast range of ethnic, religious, and cultural affiliations and differential experiences, including with regard to ethnic and religious discrimination (EU MIDIS II, 2017) and cultural self-identification (Nesterko & Glaesmer, 2019).

The present study aims to empirically explore the impact of dividing the same sample according to the widely used “migrant vs. non-migrant background” as compared to more narrowly defined groups

(including by generation, religion, citizenship status, language spoken at home, and self-reported cultural identity). In doing so, we (1) explore both the theoretical and empirical overlap across subsamples, (2) test possible *mean differences* between subsamples on variables frequently used in educational and psychological research with youth “of migrant background” (i.e., perceived individual and societal discrimination, national identity), and (3) investigate *differences in relations* between these variables and academic adjustment across subsamples.

We draw on questionnaire data from 1335 adolescents attending 66 classrooms in Berlin, Germany (48% female,  $M_{\text{age}} = 14.69$  years,  $SD_{\text{age}} = 0.74$ ). Besides completing scales assessing perceived individual and societal discrimination as well as the strength of their national identity, the students reported their own and their parents’ and grandparents’ birth countries, as well as their religion, citizenship, language spoken at home, and their self-selected cultural identity label (e.g., „Turkish”, „Turkish-German” ...). Of all students, 52% were of “migrant background” (i.e., with at least one parent born abroad), 37% of “non-migrant background”, and 11% did not receive permission from their parents to answer birthplace-related questions.

First, cross-tabulation analyses reveal large heterogeneity within the group of students of migrant background, regarding migrant generation, citizenship, languages spoken at home, and cultural self-identification. Next, regression analyses, as well as multigroup SEM analyses in Mplus show that *group mean differences* in perceived discrimination and national identity are typically bigger when the sample is divided according to more narrowly defined groups (i.e., family heritage, religion, or citizenship) as opposed to “migrant vs. non-migrant background.” Similar results are obtained for *group differences in relations*, such as between perceived discrimination/national identity and academic adjustment.

Our results highlight the diversity within the group of students ascribed an “migrant background”. They also show that by dividing samples into individuals “of migrant and non-migrant background”, meaningful group differences may remain unexplored. These results can contribute to raising awareness for the impact of sampling decisions for research and study populations. We conclude with a step-by-step recommendation for sampling decisions in future research.

660

## **Socioeconomic inequalities, problematic social media use, and adolescent mental health: Crossnational evidence from 40 countries**

Seyma Celik, Pablo Gracia

Trinity College Dublin, Dublin, Ireland

### **Abstract (max 500 words)**

A large body of literature has examined the role of problematic digital use on adolescents’ mental health and well-being (Davis, 2001; van Rooj et al., 2010). Generally, problematic digital use is considered as excessive and frequent usage of digital devices as well as using digital devices in a way that may impair mental health (Livingstone et al., 2011; Wong et al. 2020). Although problematic digital use is found to

be linked to mental health outcomes, i.e., life satisfaction and psychological complaints differently (Puukko et al. 2020; Salmela-Aro et al. 2017; Sanders et al. 2019), the literature lacks a comprehensive investigation of the socioeconomic inequalities within and between countries in problematic digital use and mental health outcomes of adolescents. This study contributes to filling this major gap by answering two key research questions: (1) Does adolescents' SES level moderate the association between adolescents' problematic digital use and mental health?, (2): Does the association between adolescents' problematic digital use and mental health vary between countries and do country-level indicators (partly) explain this variation?

The dataset was obtained from Health Behavior of School-aged Children (HBSC; Inchley et al., 2020) survey study conducted in 2017-2018. We excluded countries that have missing data on country-level variables and individuals that have missing data on any key variables. The final dataset contained 162,263 adolescents from 40 countries and regions. ( $M_{age}$ : 13.50, 50.72% female). Family Affluence (Torsheim et al., 2016) is used for individual level SES. Problematic social media use (PSMU) (van den Eijnden et al., 2016) and frequent social media use (FSMU) were employed to examine problematic digital use by proxy. National income (GDP per capita; World Bank, 2022a), income inequality (Gini; World Bank, 2022b), and broadband subscription prevalence (broadband subscription per 100 people; World Bank, 2022c) were used as country-level indicators. Data analyses were conducted with STATA 17 software using multilevel regression modelling, individuals were clustered within countries. Individual and country level variables were added to an empty model using a stepwise approach. The same steps were repeated for psychological complaints outcome and life satisfaction outcome separately.

Table 1 shows the results for the psychological complaints and life satisfaction analyses. Adolescents who reported more FSMU use reported fewer psychological complaints and more life satisfaction. On the contrary, adolescents who reported more PSMU had more frequent psychological complaints and lower life satisfaction. The associations between PSMU and the outcome variables were significantly weaker in High-SES adolescents compared to low-SES adolescents. In countries with higher national income and lower broadband subscription prevalence, the association between PSMU and psychological problems was weaker. In countries with higher income inequality, the association between FSMU and life satisfaction was stronger.

Overall, these results highlight that problematic digital use components are associated with the two mental health outcomes differently within and between countries, and there are some socioeconomic disparities in adolescents' digital use and their mental health. We will further conduct further analyses to examine the cross-country variations of the strength of the associations between digital use variables and mental health variables.

**663**

### **Benefits to children spending time in nature: links between nature connectedness, wellbeing, and mental health.**

Dawn Watling<sup>1</sup>, Lorraine Lecourtois<sup>2</sup>, Levent Adam<sup>1</sup>, Aysha Bellamy<sup>1</sup>

<sup>1</sup>Royal Holloway, University of London, Egham, United Kingdom. <sup>2</sup>Wakehurst, Royal Botanical Gardens Kew, Ardingly, United Kingdom

### **Abstract (max 500 words)**

**Objectives:** Research has demonstrated that there is a benefit to engaging with nature in terms of wellbeing and mental health. Further, children who spend more time engaging (e.g., science learning) with nature develop a greater connection to nature. In this work, and in partnership with Wakehurst, Royal Botanical Gardens (RBG) Kew, we aim to understand if changes in children's connection to nature may predict changes in wellbeing and mental health, and if this is impacted differently depending on the biodiverse landscape visited during a visit to Wakehurst.

**Methods:** Data from 599 seven- to 12-year-old from 10 schools in South East, England was collected at two time points, approximately 2 weeks apart. Schools were approached who had not visited, as part of a school trip in the previous four years. Children completed questionnaires at both timepoints, including the connection to nature index, the Kidscreen 27, and the Revised child anxiety and depression scale (RCADS-11). The first set of questionnaires was completed in the children's school and the second set was completed at Wakehurst, RBG Kew follow a nature walk in one of three biodiverse landscapes (wetlands, meadowlands, woodlands), which took place between May and September 2022.

**Results:** Findings highlighted that, in line with previous work that connection to nature was lower and less likely to change for the older children, and that following the walk those who initially had lower connection to nature reported stronger connection to nature. Further, we saw that those who experienced the meadowland reported strong connection to nature following the walk than those who visited the wetlands or the woodlands. Importantly, we found that children reported more positive wellbeing following the walk, after accounting for anxiety and depressive symptoms when they reported a stronger connection to nature. Connection to nature did not predict changes in depressive mood following the walk after accounting for feelings of anxiety and wellbeing, but was associated with greater feelings of anxiety; this finding requires further investigation.

**Conclusions:** Our findings indicate that spending time in nature has benefits in enhancing children's feelings of connectedness to nature, and that there may be differing impacts depending on where one spends time in nature. The research supports findings with adults and with work that explores hands on engagement with nature for wellbeing; in particular, where there are greater wellbeing benefits when there is a stronger connection to nature. Findings for anxiety were surprising and requires further investigation to understand if it was the novelty of the environment or possibly a link to ecological anxiety that children were experiencing when they were more strongly connected to nature.

**664**

## **DECODING THE HELICOPTER PARENTING CONSTRUCT AND ITS LINKS TO ADULT ATTACHMENT**

Marta Zeglen<sup>1</sup>, Katarzyna Lubiewska<sup>2</sup>



<sup>1</sup>University of Warsaw, Warsaw, Poland. <sup>2</sup>University of Warsaw,, Warsaw, Poland

### **Abstract (max 500 words)**

Literature has described helicopter parenting in terms of parental engagement and through the use of the parenting behaviors of warmth or control (coercion). Helicopter parents are involved in their child's life to a developmentally inappropriate extent, thus triggering negative developmental outcomes for children. However, gaps in these studies still seem present. First, the relations between helicopter parenting and parenting warmth or control have garnered inconsistent findings. Second, the links between adults' memories of helicopter parenting and attachment insecurity in adult romantic relationships have not been thoroughly investigated.

Therefore, the present study targeted young adults' experiences of helicopter parenting and its relations to parenting behaviors and attachment insecurity in adult intimate relationships. First, we investigated the perception of being helicoptered in childhood in relation to memories of parental warmth, parental coercion, or their combination. Second, these parenting dimensions were tested as predictors of attachment insecurity (avoidance and anxiety) in intimate adult relationships.

We hypothesized that: there will be positive relations between helicopter parenting and parental warmth (hypothesis 1) and parental control (hypothesis 2); the interaction of warmth and control will be associated with helicopter parenting (hypothesis 3); and the experience of being helicoptered by parents in childhood will be positively related to attachment anxiety (hypothesis 4). The predictive effects of parental warmth, coercion, and helicopter parenting on attachment were preliminarily explored.

Participants include 320 young adults ranging from 18 to 35 years old from Poland (n = 147), Belarus (n=114), and Norway (n=59). These participants were asked to fill out a set of standardized parenting and attachment scales.

Results partially supported the proposed hypotheses revealing positive correlations between experiences of parental coercion and helicopter parenting (supporting hypotheses 1 and 2). Regression analyses showed that parental warmth and parental coercion explains helicopter parenting with relatively stronger effects of parental coercion, although the interaction of warmth and coercion on helicopter parenting was not statistically significant (not supporting hypothesis 3). Hypothesis 4 was not supported, rather, analyses revealed negative associations with parental warmth and attachment avoidance and attachment anxiety.

This study revealed links of helicopter parenting to parental warmth and coercion, and attachment insecurity. However, young adults' experiences of parenting and its links to attachment insecurity outcomes in adult intimate relationships could be more strongly captured through parental warmth and coercion, rather than helicopter parenting. These results emphasize the need for future research on the helicopter parenting, especially in adequately measuring the construct and its potential generational transmissions into adult intimate relationships.

665

## **The Moderating Role of Childhood Trauma in the Effects of Experimentally Induced Social Exclusion on Social Pain, Basic Psychological Needs, Well-Being, and Ill-Being**

Asma Rashid<sup>1,2</sup>, Sebastiano Costa<sup>3</sup>, Jolene van der Kaap-Deeder<sup>2</sup>

<sup>1</sup>University of Campania, Luigi Vanvitelli, Caserta, Italy. <sup>2</sup>Norwegian University of Science and Technology, Trondheim, Norway. <sup>3</sup>University of Campania Luigi Vanvitelli, Caserta, Italy

### **Abstract (max 500 words)**

Childhood trauma has been linked to increased ill-being and even psychopathology later in life. Moreover, previous research has shown the detrimental impact of social exclusion on psychological well-being and need satisfaction. Less is known, however, about the possible moderating role of childhood trauma in the effects of social exclusion. Therefore, this study aimed to investigate childhood traumatic experiences as a possible moderator in the association between social exclusion and social pain, basic psychological needs, well-being, and ill-being. This study employed an experimental design with two conditions (i.e., social exclusion and social inclusion), with the hypotheses and analyses being preregistered on the Open Science Framework. Participants (N = 162) aged between 18 and 30 years (Mage = 23.69; SDage = 2.803; Male = 24.7%; Female = 74.1%) participated online thereby filling out a questionnaire on childhood trauma, taking part in Cyberball, and then reporting on their state of social pain, basic psychological needs, well-being, and ill-being. Cyberball is an online ball-tossing game where participants are led to believe that they are playing with two other individuals and are then either excluded (i.e., receiving the ball only three times) or included (i.e., receiving the ball one-third of the time). Results from an independent samples t-test first showed that participants in the exclusion condition indeed experienced more social exclusion than those in the inclusion condition (i.e., manipulation check). Moreover, participants in the social exclusion condition reported a higher level of social pain than those in the inclusion condition, but no condition effects were found for the needs, well-being, or ill-being. Bivariate correlation analyses revealed significant positive associations from childhood trauma to social pain, ill-being, and need frustration, and negative relations with well-being and need satisfaction. Moderation analyses revealed that childhood trauma significantly moderated the associations from social exclusion to well-being and need satisfaction, with individuals with a lower level (compared to higher level) of childhood trauma suffering more from being excluded in terms of lower well-being and need satisfaction. Overall, this study advances our understanding of the effects of social exclusion and the role of childhood trauma herein.

668

## **The Effectiveness of School-Based Skills-Training Programs Reducing Performance or Social Anxiety: Two Randomized Controlled Trials.**

Amanda W. G. van Loon<sup>1</sup>, Hanneke E. Creemers<sup>2</sup>, Simone Vogelaar<sup>3</sup>, Anne C. Miers<sup>3</sup>, Nadira Saab<sup>3</sup>, P. Michiel Westenberg<sup>3</sup>, Jessica J. Asscher<sup>1</sup>

<sup>1</sup>Utrecht University, Utrecht, Netherlands. <sup>2</sup>University of Amsterdam, Amsterdam, Netherlands. <sup>3</sup>Leiden University, Leiden, Netherlands

### **Abstract (max 500 words)**

Background: Given that high levels of stress during adolescence are associated with negative consequences, it is important that adolescents with psychological needs are supported at an early stage, for instance with interventions at school. However, knowledge about the potential of school-based programs targeting adolescents with psychological needs, aimed at reducing school or social stress, is lacking. Objective: The current study aimed to investigate the effectiveness of two targeted school-based skills-training programs, addressing either skills to deal with performance anxiety or social skills. Methods: Two randomized controlled trials were performed with participants who self-selected to one of the programs. The sample comprised of  $N = 361$  adolescents ( $M_{age} = 13.99$  years,  $SD = 0.83$ ) from various educational levels and ethnic identity backgrounds. The performance anxiety program included  $N = 196$  participants ( $N = 95$  in the experimental group), while the social skills program included  $N = 165$  participants ( $N = 86$  in the experimental group). MANCOVA's were performed. Results: The performance anxiety program had a small effect on reducing adolescents' test anxiety. Furthermore, for adolescents who attended more than half of the sessions, the program had small effects on reducing test anxiety and fear of failure. The program did not improve adolescents' coping skills or mental health. The social skills program was not effective in improving social skills, social anxiety, and mental health. Conclusions: A relatively short, targeted program addressing skills to deal with performance anxiety can have the potential to reduce adolescents' performance anxiety.

669

### **The differential role of injunctive normative beliefs in explaining the association between appetitive aggression and offline and cyberbullying**

Daniel Graf<sup>1</sup>, Takuya Yanagida<sup>2</sup>, Christina Salmivalli<sup>1</sup>

<sup>1</sup>INVEST Flagship Research Center, University of Turku, Turku, Finland. <sup>2</sup>Faculty of Psychology, University of Vienna, Vienna, Austria

### **Abstract (max 500 words)**

Current research shows the importance of bullying-related injunctive normative beliefs (i.e., beliefs about whether a behavior is accepted) in reducing bullying. However, findings clarifying the role of injunctive normative beliefs by taking other characteristics of bullying incidents into account remain scarce. One factor that could specify a bullying incident is the underlying drive (e.g., appetitive aggression) of the perpetrators. In addition, considering communication modes (e.g., offline vs. online) could contribute to understanding under which circumstances injunctive normative beliefs unfold their effect. The present study therefore examines the mediating role of injunctive normative beliefs on the

association between two types of appetitive aggression – impulsive-appetitive aggression (i.e., thrill-seeking, fun) and controlled-appetitive aggression (i.e., reward-seeking, social dominance) – and offline- and cyberbullying in order to provide information for the development of tailor-made prevention and intervention strategies.

A total of 1064 students (M<sub>age</sub> = 14.07, SD = 2.15; ♀ = 58%) from 16 Austrian schools answered questionnaires on offline and online injunctive normative beliefs, offline and online impulsive- and controlled-appetitive aggression as well as offline and cyberbullying. Four mediation analyses with either offline or online impulsive- or controlled-appetitive aggression as a predictor, offline or online injunctive normative beliefs as mediator, offline- or cyberbullying as dependent variable and gender and age as covariates were conducted. Full information maximum likelihood (FIML) was used to deal with missing data. The hierarchical data structure (i.e., students nested within classes) was taken into account by adjusting the standard errors using a sandwich estimator. Statistical significance was tested using bias-corrected bootstrapping confidence intervals based on 5000 bootstrap draws.

Our results revealed a positive indirect effect of offline impulsive-appetitive aggression on offline bullying via offline injunctive normative beliefs (Est. = 0.012, 95% CI [0.004, 0.024]) as well as a positive indirect effect of online impulsive-appetitive aggression on cyberbullying via online injunctive normative beliefs (Est. = 0.008, 95% CI [0.002, 0.018]). With respect to controlled-appetitive aggression, we found a positive indirect effect of offline controlled-appetitive aggression on offline bullying via offline injunctive normative beliefs (Est. = 0.015, CI [0.004, 0.032]) but not of online controlled-appetitive aggression on cyberbullying via online injunctive normative beliefs (Est. = 0.007, CI [0.000, 0.018]).

Our results demonstrate that injunctive normative beliefs play a role in explaining impulsive-appetitive bullying behavior for both offline and online communication. This suggests that offline and cyberbullying could be reduced by establishing anti-bullying injunctive normative beliefs, especially in relation to impulsive-appetitive bullying. The lack of differences between communication modes might suggest that injunctive normative beliefs for impulsive-appetitive (cyber)bullying operate predominantly implicitly and that communication mode-related differences (e.g., anonymity online), that might influence conscious cognitive processes, might be subordinate. Regarding controlled-appetitive aggression, we found that injunctive normative beliefs explained the association with bullying exclusively for offline communication. This suggests that additional cognitive processes (e.g., moral disengagement) might attenuate the protective effect of injunctive normative beliefs in online communication. Future studies should investigate such cognitive processes (e.g., cognitive biases) to develop evidence-based strategies to help unleash the protective effect of injunctive normative beliefs in controlled-appetitive cyberbullying.

**671**

## **Does the Olweus Bullying Prevention Program still work in Norway?**

Kyrre Breivik, Marit Larsen

Regional Centre for Child and Youth Mental Health and Child Welfare, NORCE Norwegian Research Centre, Bergen, Norway

**Abstract (max 500 words)**

**Objective of the study:** The Olweus Bullying Prevention Program is the oldest and most extensively evaluated bullying program in the world. It has shown positive effects both in Norway, where it was originally developed in the 1980's, and in other countries such as USA and Germany. There is however a continuous need for evaluating its effectiveness in new generations of children and schools. The last evaluation of OBPP in Norway was done in the early 2000's and it is important to assess to what extent it has retained its effect. The aim of the present study is to evaluate the effectiveness of BPP in Norwegian schools that implemented the program from 2010 to 2019, and to investigate the impact of OBPP on different forms of bullying (verbal, indirect, physical and cyber).

**Method:** The study includes data from all the elementary (grade 4-7) and secondary schools (grade 8-10) that implemented the Olweus anti-bullying program between 2010 and 2019 in Norway (n=53). The data consists of student self-report of bullying victimization and perpetration (from the Olweus Bullying Questionnaire). Multilevel logistic regression and piecewise growth curve analyses will be conducted to explore the change in bullying from pre-implementation to up to five years after starting the implementation of the program.

**Results:** Preliminary analyses indicate that the implementation of OBPP was associated with a clear reduction of bullying both in the short term (one year after program start) and in the longer term (up to five years after program start). Similar to the results from previous studies, OBPP seems to take longer time to have effect in secondary schools than in primary schools. The results of yet to be analyzed data on the impact of OBPP on different forms of bullying will also be presented. In line with previous research it is expected that OBPP will reduce all forms of bullying.

**Conclusion:** The reduction of bullying in Norwegian schools that implemented OBPP from 2010 to 2019 seems to be similar to what has typically been found in previous Norwegian studies, indicating that despite societal changes OBPP still has a strong effect in reducing bullying victimization and perpetration.

672

**Online parenting programs for children's mental health: A network meta-analysis**

Ana Catarina Canário<sup>1</sup>, Burcu Kömürcü Akik<sup>2</sup>, Koraljka Modić Stanke<sup>3</sup>, Oana David<sup>4</sup>, Rukiye Kızıltepe<sup>5</sup>, Karen Rienks<sup>6</sup>, Rita Pinto<sup>1</sup>, Marco Martins<sup>1</sup>, Therdpong Thongseiratch<sup>7</sup>

<sup>1</sup>University of Porto, Porto, Portugal. <sup>2</sup>Ankara University, Ankara, Turkey. <sup>3</sup>University of Zagreb, Zagreb, Croatia. <sup>4</sup>Babes-Bolyai University Cluj-Napoca, Cluj-Napoca, Romania. <sup>5</sup>Pamukkale University, Denizli, Turkey. <sup>6</sup>University of Amsterdam, Amsterdam, Netherlands. <sup>7</sup>Prince of Songkla University, Songkla, Thailand

**Abstract (max 500 words)**

The use of information and communication technology to deliver parenting and mental health support services to families is not new but has significantly increased during the Covid-19 pandemic. Different studies have addressed the effects of technology-assisted family support, with the most frequently studied forms being online programs to improve parenting practices and reduce child mental health problems.

The accumulated evidence shows that such programs can successfully improve parent understanding of child development, parental feelings of self-efficacy, adaptive parenting behavior, and improve parent and child mental health. In addition, several individual studies and meta-analyses tried to identify program characteristics that enhance the effectiveness of online parenting programs. Some suggested that adding professional contact to online programs increases their effects and that sending parents reminders to work on the online program is associated with stronger effects. However, well-powered evaluations comparing different types of online parenting programs are still limited in the literature.

The purpose of the current study is to develop a systematic review and network meta-analysis to answer the research questions: How do online parenting programs impact children's mental health and how do program effects differ according to program-specific components? The current review builds on a previous systematic review of online parenting interventions and is one of the deliverables of the Working Group 3 on "Quality standards and evidence based programmes" of the COST Action EurofamNet: The European Family Support Network.

The review was registered in PROSPERO (CRD42022354393). The literature searches were run in May 2022 to identify studies with experimental designs focusing on parenting programs delivered online, comparing the effects to those from wait list, no intervention, minimal intervention, or alternative online intervention control groups. A total of 6722 records were retrieved from the PSYCINFO, Medline, Web of Science, and Cochrane Library datasets, 2598 of which were duplicates. 4124 titles and abstracts were screened and, of those, 210 records had the full text screened. 31 papers were deemed eligible for inclusion in the review. The review follows the PRISMA statement. The risk of bias in the selected studies was assessed.

Data on the programs' specific characteristics, its specific components, and outcomes on children's mental health (specifically disruptive behavior problems and emotional problems), parenting behavior and parental mental health at any assessment post-intervention were extracted from the studies included in the review. Data analysis will estimate the overall online program effects and present two network meta-analyses, one per primary outcome, children's disruptive behavior, and emotional problems. The current review will contribute to further understand the direct and indirect effects of online parenting programs' components on children's behavioral problems.

**678**

## **A new tool for assessing school environment: School Climate Questionnaire**

Alexandra Bochaver<sup>1</sup>, [Kirill Khlomov](#)<sup>2</sup>, Aleksei Korneev<sup>3</sup>

<sup>1</sup>Centre for Modern Childhood Studies, Institute of Education, National Research University Higher School of Economics, Moscow, Russian Federation. <sup>2</sup>Institute for Social Sciences, Russian Presidential Academy of National Economy and Public Administration, Moscow, Russian Federation. <sup>3</sup>Faculty of Psychology, Lomonosov Moscow State University, Moscow, Russian Federation

### **Abstract (max 500 words)**

**Objective of the study.** In school children learn many values, as well as social rules and communicative skills. Different school environments form different attitudes and expectations among the students. This study aims at the validation of the new 22-item School Climate Questionnaire (SCQ) developed for assessing school climate from the perspective of the school students.

**Methodology.** A sample included 4,776 respondents from 9 to 18 years old. They filled the online-survey that includes SCQ, the Revised Olweus Bully/Victim Questionnaire, the Warwick–Edinburgh Mental Well-Being Scale (WEMWBS), and the Academic Motivation Scale. Hypothesis 1: the new tool SCQ has structural validity (three factors). Hypothesis 2: the new tool SCQ has convergent validity, which is supported by the by the significant correlations with victimization, aggression, mental wellbeing, and academic motivation.

**Results obtained.** Confirmatory factor analysis (CFA) demonstrated, that the new tool has three factors, and their reliability is satisfactory. Three scales are titled Deviant Behavior, Subjective Unsafety, and School Well-Being. The results revealed significant correlations between the three scales of SCQ and scales of Victimization, Aggression, Mental Well-Being, and different types of Academic Motivation. Both hypotheses are supported.

**Conclusion.** The School Climate Questionnaire is a reliable and valid instrument that may be used by researchers and practitioners in the different educational environments.

**679**

### **It is not like her: Maternal positivity does not buffer effects of her psychological control on child attachment**

Katarzyna Lubiewska<sup>1,2</sup>, Nebi Sümer<sup>3</sup>, Karolina Głogowska<sup>2</sup>, Marta Żegleń<sup>1</sup>

<sup>1</sup>University of Warsaw, Warsaw, Poland. <sup>2</sup>Kazimierz Wielki University, Bydgoszcz, Poland. <sup>3</sup>Sabancı University, Istanbul, Turkey

### **Abstract (max 500 words)**

Developmental effects of psychological control have been debated for a long time as universal or specific across cultures. Evidences to support both conclusions are noncoherent. Also frameworks for formulating cross-cultural hypotheses are contradictory (e.g., culture-fit hypothesis vs cultural

normativity theory). Studies testing culture in interaction with other factors that might moderate relation between psychological control and child developmental outcomes are needed.

The present study aimed to analyze associations between maternal psychological control and child attachment security with culture and mother-child relational climate as separate and combined moderators of this relation. We hypothesized that: (1) negative relations between maternal psychological control and child attachment security will be present across cultural groups with weaker strength of this association in the Polish group than in Turkish and Dutch groups (Hypothesis 1); and (2) maternal positivity will buffer the negative effects of psychological control on child attachment security stronger in the Polish than Dutch and Turkish groups (Hypothesis 2). Emic measure assessing maternal positivity-to-negativity ratio was used to assess mother-child relational climate. The child's attachment security (where the child uses the mother as a safe haven and secure base) and child's perception of maternal psychological control were assessed using standard measures. Equal numbers of mothers and their children between 8 and 12 years of age from Poland, Turkey, and the Netherlands participated in the main study (756 dyads).

Results revealed that: (1) maternal psychological control was associated negatively, whereas positivity-to-negativity ratio positively with child attachment security; (2) country moderated relation between positivity-to-negativity ratio and safe haven; (3) even though positivity-to-negativity ratio moderated relation between maternal psychological control and both child's attachment security, the moderating effect of positivity-to-negativity ratio was significant only in the Polish sample; (4) maternal positivity did not buffer but worsened effects of maternal use of psychological control on child attachment security in the Polish sample. Culture specificities in parenting-attachment link are discussed addressing effects of country-culture on associations between maternal psychological control and child attachment security highlighting the need to go beyond cultural factors in testing effects of culture in parenting studies.

**684**

## **The beginning of the independent mobility in childhood as a special mirror of the parent-child relationships**

Alexandra Bochaver, Victoria Yerofeeva, Oxana Mikhaylova, Ekaterina Tsyganova

Centre for Modern Childhood Studies, Institute of Education, National Research University Higher School of Economics, Moscow, Russian Federation

### **Abstract (max 500 words)**

Objective of the study. The aim of the research was to study the subjective experience of the beginning of independent movements in childhood and to establish the connection of this experience with the further acquisition and understanding of autonomy (Power et al., 2013; Grolnick, Pomerantz, 2009; Grolnick et al., 2002; Soenens, Vansteenkiste, 2010).

Methodology. The theoretical framework of the study was, firstly, the concept of parental mobility licenses (Hillman et al., 1990), secondly, distinction of autonomy as volitional functioning or



independence (Soenens et al., 2017; Ryan and Lynch, 1989; Soenens et al., 2007), and thirdly, parental communicative styles based on control or autonomy support (Grolnick, Pomerantz, 2009; Grolnick et al., 2002; Soenens, Vansteenkiste, 2010). 30 semi-structured interviews with informants about their experience and understanding of autonomy were conducted. Thematic analysis to find the links and similar patterns was used.

Results obtained. The analysis of adolescent and youth interviews showed that in the descriptions of the acquisition of autonomy through independent mobility, there are those features of parental behavior and the way of understanding independence that are later present in subsequent stories about autonomy. Parents' use of strategies to support autonomy or to control and comprehension of independence as behavior based on will and values or as an adult's independence in situations when a child begins to move around the city by himself, later present in other situations that informants describe in connection with the development of their own autonomy.

Conclusion. The experience of mastering independent movements may reflect more extensive layers of child-parent relations, where growing up and acquiring different forms of independence by a child is the result of the interaction of a complex set of factors in which the interaction of the child and parents plays an important role.

The study was carried out with the support of the Russian Science Foundation (RNF), project No. 22-18-00416.

692

## Factors differentiating infants with high negative affectivity with and without sleep-onset association problems

Elina Vierikko<sup>1</sup>, Juulia Paavonen<sup>2,3</sup>, Outi Saarenpää-Heikkilä<sup>4</sup>, Pirjo Pölkki<sup>5</sup>, Tiina Paunio<sup>2,6</sup>, Anneli Kylliäinen<sup>1</sup>

<sup>1</sup>Faculty of Social Sciences /Psychology, University of Tampere, Tampere, Finland. <sup>2</sup>National Institute for Health and Welfare, Helsinki, Finland. <sup>3</sup>Child Psychiatry, University of Helsinki and Helsinki University Hospital, Helsinki, Finland. <sup>4</sup>Department of Paediatrics, Tampere University Hospital, Tampere, Finland. <sup>5</sup>Faculty of Social Sciences and Business Studies, University of Eastern Finland, Kuopio, Finland. <sup>6</sup>Psychiatry, University of Helsinki and Helsinki University Hospital, Helsinki, Finland

### Abstract (max 500 words)

#### Introduction

Sleep and settling problems are common among infants with difficult temperament, defined especially by high negative affectivity. Little is known of parents' bedtime behaviour related to better sleep quality of these infants. Usually, minimal parental involvement during the bedtime has shown to support infants sleep consolidation.

### **Objective of the study**

The study aimed to examine differences in sleep quality and quantity, and parents' bedtime behaviour in infants with high negative affectivity versus other infants. Especially, the factors differentiating the infants with high negative affectivity with and without sleep-onset association problems (i.e., > 2 awakenings during night and inability to self-soothe) were of interest.

### **Methodology**

The sample [ $n = 1217$  healthy children; 52,5 % boys; aged 8 months ( $M = 8.14$  months,  $SD = 0.38$ )] was a part of the population-based longitudinal Child Sleep birth cohort study. Sleep and bedtime behaviour were measured with the Infant Sleep Questionnaire (ISQ; Morrell, 1999), the Brief Screening Questionnaire for Infant Sleep Problem (BISQ; Sadeh, 2004), and the Parental Interactive Bedtime Behaviour Scale (PIBBS; Morrell & Cortina-Borja, 2002), and infant temperament with the Infant Behavior Questionnaire-Revised-Short Form (Gartstein & Rothbart, 2003). Infants rated 1 SD or above the sample mean were categorized as having a high negative affectivity ( $n = 179$  (14,7 %); 45% boys).

### **Results**

Infants with high negative affectivity had more severe sleep problems (i.e., lower total amount of sleep, more awakenings) in general compared to other infants. They had greater variation in sleeping arrangements and bedtime routines, and their parents were more active in settling. More than half of them (56.4%) had sleep-onset association problems compared to one third of the other infants (33.6%). Infants with high negative affectivity and sleep-onset association problems ( $n = 101$ ) had shorter night and total sleep duration and more other sleep problems compared to those without sleep-onset association problems ( $n = 78$ ). Results showed that the sleep-onset association problems in infants with high negative affectivity were related to parent's settling strategies; infants with high negative affectivity had almost 4-fold likely to have sleep-onset association problems if settled and sleeping in parents' bed. In addition, parents of infants with sleep-onset association problems used more often passive physical comforting (i.e., stand or lie near the child without touching or picking up the infant).

### **Conclusion**

Our findings indicated that infants' negative affectivity may lead to increased sleep problems when the bedtime routines had great variation and when sleeping arrangements, and parental involvement in settling do not support self-soothing. Thus, informing parents about effective settling strategies, supporting them to create consistent bedtime routines and strengthen infants own soothing skills are especially important for parents of the infants with negative affectivity.

695

**Eye movements reveal how word recognition changes when reading fluency improves**

Jarkko Hautala

Niilo Mäki Institution, Jyväskylä, Finland

### **Abstract (max 500 words)**

Knowledge on how word-recognition processes change when reading fluency (RF) improves may inform which aspects of reading are most malleable at a certain age and reading level. According to the dual-stage view of word recognition (Hautala, 2021) orthographic coding precedes and facilitates phonological decoding, the former process manifesting in word frequency effect (WF) in first fixation durations (FFD), and the latter process as WF and word length (WL) interaction effect in average refixations durations (ARD). The first research question was how do readers' first-pass eye movement change as reading fluency improves? It was hypothesized that FFD, number of first-pass fixations (NrFix) and ARD all reduce over time as a function of RF development, but WF and WL effects remain proportionally equal (Huestegge, 2009). The second research question was how the observed changes jointly contribute to reading fluency development? It was hypothesized that reduction in fixation duration explains reduction in NrFix and development in reading fluency (Huestegge, 2009).

The participants were 81 (44 girls, 37 boys, mean age 10.1 years [SD = 0.6]) 3rd and 4th grade Finnish students with highly variable reading fluency. Informed by correlational analyses, we selected individual mean of total fixation time as an index of reading fluency and gain in it as an index of reading fluency development. The eye tracking experiments consisted of reading parts of two stories at time point 1, which stories then continued at experiment conducted at time point 2. In sum the students read 1743 words and the four story parts were highly comparable in terms of psycholinguistic variables such as mean WF and WL. Eye movements were analyzed with (generalized) linear mixed models with independent variables being time, RF, RF development, WF and WL and their all possible interactions. Interdependency of the changes in the eye movement measures and their joint contribution on RF development was studied with hierarchical regression analysis

Concerning the first research question, FFD, NrFix and ARD all reduced over time. Similar to what has been shown in an intervention study, only fixation duration measures, not NrFix, reduced as a function of reading fluency development. The WF and WL effects remained proportionally equal to overall mean. Concerning the second research question, after controlling for the initial level of RF explaining 11% of its development, FFD and ARD reduced hand-in-hand and explained most (39%) of the reading fluency development. Surprisingly, this reduction inhibited reduction in the NrFix. However, only when the reduction in fixation durations were first controlled for, reduction in NrFix explained additional 25% of variance in RF development.

Within the dual-stage framework, the joint reduction in FFD and ARD may reflect increased efficiency in extracting, maintaining and decoding letter string representations in working memory. Results are also suggestive that when this development progresses substantially, it may eventually enable the reader to read words with less fixations.

References:

Hautala 2021. <https://doi.org/10.1007/s11145-021-10201-1>

Huestegge 2009. <https://doi.org/10.1016/j.visres.2009.09.012>

701

### **Stress, couple dynamics and parenting behaviors: a dyadic approach**

Petruta-Paraschiva Rusu, Diana-Sînziana Duca, Ionela Bogdan, Andreea Ursu

University of Suceava, Suceava, Romania

#### **Abstract (max 500 words)**

Stress has negative consequences not only at the individual level, but also at the couple and family level, affecting couple relationship quality (Randall & Bodenmann, 2017; Rusu, 2016; Rusu et al., 2020) and parenting behaviours (Taraban & Shaw, 2018). Stressors originating outside the family (external stressors such as work stress, economic stress) have been found to determine more parenting stress, dysfunctional parent child interaction and child anxiety (Platt, Williams, & Ginsburg, 2016). According to the Process of Parenting Model (Belsky, 1984; Taraban & Shaw, 2018), parental stress affects parenting behaviours directly and indirectly by reducing parents' well-being and marital quality. The present study aimed to examine how one's partner's stress relates to changes in one's own and his/her partner perceived relationship quality and parenting behaviours; gender differences in the magnitude of the association between partners' stress and parenting outcomes; and the moderating role of dyadic coping in the associations between stress and changes in relationship quality and parenting behaviours (Fig. 1). Data were collected from 302 married couples (N= 604). Preliminary analyses indicate negative associations of parental stress with couple relationship satisfaction, dyadic coping and parental warmth. In addition, parental stress was positively related to parent-child negative communication. Furthermore, dyadic coping moderated the association between stress and parents' couple relationship satisfaction and the association between stress and parent-child negative communication. The final results will include dyadic data analyses by using Actor-Partner Interdependence Model in order to analyse both the actor effects (e.g. the effects of parental stress of each partner on their own relationship satisfaction, parental warmth and parent-child negative communication) and partner effects (the effects of parental stress of one partner on their partner relationship satisfaction, parental warmth and parent-child negative communication). Understanding how stress affects family relationships and the most important strengths that could buffer this association may lead to the development of intervention programs for couples.

706

### **The Impact of Covid-19 on Pupils' Attitudes to Self and School in a Challenging Context**

Rosie Gordon<sup>1</sup>, Buket Kara<sup>1</sup>, Suna Eryigit-Madzwamuse<sup>2</sup>

<sup>1</sup>University of Brighton, Brighton, United Kingdom. <sup>2</sup>University of British Columbia, Vancouver, Canada

#### **Abstract (max 500 words)**

In this paper, we aim to understand the impact of Covid-19 on children and young people's attitude to school. In this paper, we will present the results of the Pupil Attitudes to Self and School (PASS) survey analysis, completed across state-funded primary, secondary and special schools, in Blackpool, U.K., where children and young people face significant developmental challenges.

Blackpool is one of the 20% most deprived areas in England, with significantly high rates of children in need (child unlikely to maintain satisfactory health/development or have significantly impaired development), children who are 'Looked After' (children in care of the local authority) and with Special Educational Needs (Department for Education, 2022, Public Health England, 2022). Facing this constellation of developmental disadvantage (Hart et al., 2003), children and young people in Blackpool struggle to produce positive academic outcomes. As evidenced by the school readiness figures (key measure of early years development) which was just 68% in 2018-2019, 14% lower than England's average (JSNA Blackpool, 2022). Schools provide fertile ground for reducing inequalities and disparities between pupils. Research has demonstrated across various contexts and interventions, that positive pupil attitudes to school and learning, are associated with better academic outcomes (Byers et al, 2018; Chowdhury et al, 2020; Mazana et al, 2018; Ruiz-Jimenez et al, 2022).

This study utilises a quantitative methodology to explore PASS totals and its nine subscales: Feelings About School, Perceived Learning Capability, Learners Self Regard, Preparedness for Learning, Attitudes to Teachers, General Work Ethic, Confidence in Learning, Attitudes to Attendance and Response to Curriculum. Data was collected from N=10,598 pupils across all N=44 schools in Blackpool from Class Year 3 to 11. Outcomes from pupil data will indicate within-group changes across 2019-2020 and 2020-2021 academic year, spanning from the Autumn term of 2019 (September to December 2019), to the Summer term of the 2020 academic year (May to July 2021). Therefore, data presented will evidence changes to pupil's attitudes of the school, immediately following the onset of Covid-19. We then provide between-groups results across demographic characteristics (e.g., gender, Free School Meal status, English as an Additional Language, School Level and SEND status), to determine risk factors associated with poorer PASS scores. Preliminary analysis, comparing the Autumn 2018 term to the Summer 2020 across one secondary school, indicates a statistically significant decrease in PASS scores, subscales, and demographic variables (Table 1-3). Attitudes to Attendance, Feelings about School and Preparedness for Learning subscales had the largest decreases across survey years, highlighting the real danger of disengagement from school, for pupils at an important developmental and academic stage of life.

Although this cohort study is limited by its lack of control group, it presents a unique opportunity for school stakeholders to provide an effective response to the disruption of Covid-19 and prevent future disengagement. Particularly for those who are the most disadvantaged and vulnerable. Moreover, we must identify factors associated with increasingly negative attitudes for future targeted prevention strategies. Future directions of research, and implications for practice will be discussed.

**713**

### **School-related adversities and development of self-esteem from adolescence to mid-adulthood. A 36-year follow-up**

Olli Kiviruusu<sup>1,2</sup>, Noora Berg<sup>1,3,4</sup>, Taina Huurre<sup>1</sup>, Mauri Marttunen<sup>1,2</sup>

<sup>1</sup>Department of Public Health and Welfare, Finnish Institute for Health and Welfare, Helsinki, Finland.

<sup>2</sup>Psychiatry, University of Helsinki and Helsinki University Hospital, Helsinki, Finland. <sup>3</sup>Helsinki Institute of Life Science, University of Helsinki, Helsinki, Finland. <sup>4</sup>Department of Public Health and Caring Sciences, Lifestyle and rehabilitation in long-term illness, Uppsala University, Uppsala, Sweden

### **Abstract (max 500 words)**

**Background:** School-related adversities (e.g., bullying, learning difficulties) have been associated with lower self-esteem. However, long-term effects of these factors on self-esteem development have been studied less. The aim of the study was to examine developmental trajectories of self-esteem from adolescence to mid-adulthood and the way school-related adversities are associated with these trajectories.

**Methods:** Data was drawn from the Finnish Stress, Development and Mental Health (TAM) cohort study project with 36 years of follow-up. At baseline in 1983 participants were ninth graders (age 16, N=2194, 96.7% of the target) and they answered a questionnaire during school hours. The participants were followed up at ages 22 (N=1656), 32 (N=1471), 42 (N=1334) and 52 (N=1160) using postal questionnaires. Self-esteem was assessed at each time point with a 7-item measure resembling Rosenberg's self-esteem scale. School bullying (yes/no) and learning difficulties (yes/no) were inquired retrospectively at age 42, while poor relationships with classmates and poor school performance (grade point average, lowest quartile) were reported at age 16. Analyses were done using latent growth curve models (LGM).

**Results:** Self-esteem developed positively from adolescence to adulthood, leveled off around age 32, and turned to a slightly decreasing trajectory after age 42. Women had significantly lower self-esteem than men throughout the study period. Both retrospective (being a bully victim, having learning difficulties) and prospective (poor relationships with classmates, poor school performance) measures of school-related adversities were all associated with self-esteem trajectory going constantly at a lower level between ages 16 to 52 ( $p < 0.01$ ). Being a bully victim was also associated with slower self-esteem development ( $p < 0.01$ ). No gender differences were observed in these associations.

**Conclusions:** The positive development of self-esteem from adolescence to adulthood seems to stop and even turn to a decreasing path in mid-adulthood. School-related adversities, whether using prospective or retrospective measures, were associated with a lower self-esteem trajectory, and associations prevailed up to mid-adulthood years. Thus, interventions tackling school bullying and learning difficulties are likely to support not only adolescent self-esteem, but also prevent long-lasting disparities in self-esteem development during the life course.

**714**

**Intra- and interindividual processes of wellbeing and social interactions within the school setting: Insights from an Experience Sampling Measures (ESM) project**

Patrik Söderberg, Anette Bengs, Martina Mölsä, Isik Ulubas-Varpula, Daniel Ventus

Åbo Akademi University, Wasa, Finland

### **Abstract (max 500 words)**

This paper presents findings from project REBOOT, a ÅAU research project that applies digitalized experience sampling methodology (ESM) to the study of student and teacher wellbeing within educational contexts. The paper also provides a behind-the-scenes view of the legal, ethical and methodological considerations involved in using ESM in the field of social interactions in general, and the user experiences of study participants.

While traditional cross-sectional self-reports of social interactions have been criticized for relying on autobiographical memories of past events (Pellegrini, 2001; Rollins et al., 2018; Gumpel et al., 2014), the experience sampling method (ESM) is a growing paradigm in studies on physical and mental wellbeing with the potential to address some of these concerns (Berkel et al., 2019; Mölsä et al., 2022).

During fall 2022, daily assessments of wellbeing, workload, and social interactions, were collected over a period of 10 days in a sample of 300 students and 60 teachers at five middle and secondary schools in Finland. One week prior to the ESM period, participants completed a background survey including personality assessments.

The intensive longitudinal data collected will be analyzed by means of dynamic structural equation modelling (DSEM) which combines time-series and multilevel analysis with a SEM framework. The analysis will assess to what extent student and teacher wellbeing mirror during the same school-weeks mirror each other, and to what extent these experiences are influenced by the social milieu of the school settings.

Study findings are discussed in terms of intra- and interindividual processes of wellbeing and social interactions, and suggestions are made for future ESM-based research in developmental sciences.

**715**

### **From Home to School: The Impact of Marital Discord on Children's Academic Self-Efficacy**

Fulya Kırimer-Aydınlı<sup>1</sup>, Gülbin Şengül-İnal<sup>2</sup>, Nebi Sümer<sup>3</sup>

<sup>1</sup>Anadolu University, Eskişehir, Turkey. <sup>2</sup>University of Oslo, Oslo, Norway. <sup>3</sup>Sabancı University, İstanbul, Turkey

### **Abstract (max 500 words)**

The objective of the study: Marital discord may significantly impact children's development and wellbeing, exacerbating social and educational problems and placing an additional emotional burden on

parent-child bonding. Children who experience ongoing conflict between parents may struggle with higher stress, anxiety, and behavioral problems, negatively influencing their academic performance. These children may face several emotional struggles in developing feelings of security, trust, and emotional regulation in a healthy manner. Additionally, drawing on 'spillover' theories, parents who experience destructive marital conflict in their interparental relationship impart negativity to their children through utilizing adverse parenting practices such as harsh and controlling parenting. Children who witness their parents being destructive during a conflict may view themselves as less capable of academic success, leading to lower levels of academic self-efficacy. In the present study, we aim to investigate to what extent (1) marital discord, parent-child attachment security, parental psychological control influence academic self-efficacy in math and Turkish in middle childhood and (2) the emotional quality of the parent-child relationship (i.e., attachment security and psychological control) mediates the association between marital discord and academic self-efficacy.

**Methodology:** Using a large sample of Turkish parent-child dyads (N = 1283) from a national study (Sümer et al., 2009), we estimated a mediational path model which includes effects of attachment security and psychological control on the relationship between perceived interparental conflict and academic self-efficacy by applying structural equation modeling in Mplus 8.3 (Muthén & Muthén, 2006) (see Fig. 1). The children whose age range is between 9 and 11, filled out the scales to measure perceptions of interparental conflict, attachment to parents, parental psychological control and their perception of academic performance in math and Turkish. We tested the model while controlling for potential intervening demographic factors (e.g., child gender, age, duration of marriage, maternal and paternal education) —often mentioned in the literature as factors associated with academic achievement.

**Results:** The model fits the data well . Perceived marital conflict predicted attachment security and academic self-efficacy negatively and psychological control positively. The mediation analysis showed that attachment security significantly mediated the link between perceived marital conflict and academic self-efficacy ( $\beta_{\text{indirect}} = -.206$ ,  $p = .000$ , 95% CI [-.312, -.093]). Unlike our expectation, the mediating effect channeling through parental psychological control was not significant ( $\beta_{\text{indirect}} = .037$ ,  $p = .351$ , 95% CI [-.033, .121]).

**Conclusion:** The results suggest that exposure to conflict between parents can harm developing feelings of insecurity in children, which can negatively impact the belief in their ability to meet academic goals. These findings highlight the importance of the emotional atmosphere in the family context on children's self-evaluations about their academic performance in school. Unfulfilled emotional needs and traumatic experiences in the family environment may result in significant consequences for children's academic functioning. The results suggest that it is crucial for parents to strive for healthy conflict resolution in interparental interactions in order to provide a stable and supportive environment for their children, and a healthy foundation for their academic success.

**716**

## **The outcomes of school climate for students with an immigrant or refugee background – A systematic review**



Anja Schultze-Krumbholz<sup>1</sup>, Ruth Berkowitz<sup>2</sup>, Sarah Bürger<sup>3</sup>, Josip Burušić<sup>4</sup>, Marija Buterin Mičić<sup>5</sup>, Teuta Danuza<sup>6</sup>, Marta Fülöp<sup>7</sup>, Reda Gedutienė<sup>8</sup>, Angela Mazzone<sup>9</sup>

<sup>1</sup>Department of Educational Psychology, Technical University of Berlin, Berlin, Germany. <sup>2</sup>School of Social Work, University of Haifa, Haifa, Israel. <sup>3</sup>Department of Educational Psychology, University of Vienna, Vienna, Austria. <sup>4</sup>Institute of Social Sciences, Zagreb, Croatia. <sup>5</sup>University of Zadar, Zadar, Croatia. <sup>6</sup>Faculty of Education, University of Prishtina, Prishtina, Kosovo, Serbia. <sup>7</sup>Institute of Cognitive Neuroscience and Psychology, Hungarian Academy of Sciences, Budapest, Hungary. <sup>8</sup>Department of Psychology, Klaipėda University, Klaipėda, Lithuania. <sup>9</sup>DCU Anti-Bullying Centre, Dublin City University, Dublin, Ireland

### **Abstract (max 500 words)**

In 2021, more than 8% of children living in the EU were non-nationals of the country they were living in. This number has been consistently increasing over the past years (eurostat Statistics Explained, 2022) and will most likely keep growing, making the integration of children and youth with immigrant or refugee backgrounds a major task for European societies. Especially schools play a crucial role in this process. However, the well-being and inclusion of students is not only based on formal education, but is also related to dimensions of school climate (Thapa et al., 2013). School climate is not easily defined. In general, according to the National School Climate Council, it refers to “norms, values and expectations that support people feeling socially, emotionally and physically safe” (2007, p. 5). In a research synthesis, Berkowitz et al. (2017) identified student-teacher-relationships, school safety and a sense of belonging to or connectedness with school as central dimensions. However, little is known about the challenges that specifically students with immigrant or refugee backgrounds face in school. Therefore, our research question were: How do the different dimensions of school climate affect students with immigrant or refugee backgrounds? What are challenges students with immigrant or refugee backgrounds face related to school climate?

We conducted a systematic literature review based on the PRISMA checklist and using the Covidence computer program. Before the search, a coding scheme was developed. Online searches were then conducted in the following databases: Web of Science, PubMed, PsycInfo and ERIC (combined), and Scopus. Search terms were [teacher-student relationship\*] AND migrant OR migration OR Refugee OR asylum seek\*. The term in brackets referred to the respective school climate dimension and was subsequently substituted with [student-teacher relationship\*], [school climate], [class climate], [school engagement], [school connectedness], [school belonging], and [school safety], resulting in eight searches in five databases each. We focused on studies published between January 2011 and June 2021. Inclusion criteria were: a) peer-reviewed publication, b) school-aged children and adolescents up to Grade 12/13, c) school climate (dimensions) measured specifically, d) school climate dimension(s) as independent variable, e) student outcomes as dependent variable. Studies were excluded when they did not meet the inclusion criteria or referred to a) internal migration, b) solely theoretical considerations, c) societal or community level, or d) national identity. Altogether, 1,614 publications were identified. After removing duplicates, 1,296 publications were screened by title and abstract by two researchers, resulting in 156 publications for data extraction by pairs of raters. Raters were trained regarding the coding scheme and the scheme was modified after inspecting interrater reliabilities. After a second round of rater training and interrater reliabilities, it was decided to have two persons extract data on the categories pertaining to the studies’ results regarding student outcomes.

Results of the present review will be available in summer 2023 and will be presented in the proposed talk. The results of this review can inform the development of school climate measures and guidelines sensitive to the specific challenges and opportunities for multicultural schools.

**718**

## **Do executive functions predict the use and effectiveness of emotion regulation strategies in adolescence?**

Yoann Fombouche<sup>1</sup>, Joanna Lucenet<sup>2</sup>, Lyda Lannegrand<sup>1</sup>

<sup>1</sup>University of Bordeaux, Bordeaux, France. <sup>2</sup>University of Bordeaux, France, France

### **Abstract (max 500 words)**

Adolescence is characterized by quantitative and qualitative changes both in cognitive and emotional regulatory processes (Schweizer al. 2020). Among higher cognitive processes, executive functions (i.e., inhibition, working memory, shifting) that guide goal-directed thoughts and behaviors are regularly mentioned contributing to emotion regulation during adolescence (e.g., Thompson, 2011). However, the nature of the relation between executive functions and emotion regulation remains hotly debated. First, some authors consider that they refer to the same processes, while others argue that they are related but distinct processes (e.g., a particular emotion regulation strategy is linked to an executive function). Second, studies have presented mixed findings about the relationships between emotion regulation and executive functions in adolescence. Such discrepancy may be attributed to the self-reported vs. performance-based measures, which do not fully assess the same construct by focusing either on adolescents' perceptions of their functioning or their performance.

Our study aimed to 1) assess the relationships between the effectiveness of emotion regulation strategies and executive functions in adolescents, 2) determine whether adolescents' perceived use of emotion regulation strategies could be related to the efficiency of executive functions and 3) compare adolescents' perceptions of both emotion regulation and executive functions with their performances in tasks that evaluated the same processes.

The sample consisted in 60 middle schoolers (Mage = 13.5, SD SDage = 0.92, range = 12-15 years, 48.3% boys) who completed questionnaires and experimental tasks of emotion regulation and executive functions (inhibition, shifting and updating). The Contextualised Emotion Regulation Survey (CERSA) was used to measure five emotion regulation strategies (i.e., cognitive reappraisal, distraction, expressive suppression, rumination, and support seeking) in three situations eliciting specific negative emotions (i.e., sadness, fear, and anger). Adolescents also performed an emotion regulation task consisting in reducing the intensity of negative emotions while viewing pictures through the use of different strategies (distraction, expressive suppression or reappraisal). Turning to executive functions measures, the self-report version of the Behavioral Rating Inventory of Executive Functions (BRIEF2-SR) was used to assess adolescents' perceptions of their executive functioning difficulties. Three tasks were presented to adolescents to evaluate their inhibition (go/no-go task), shifting (cued task switching) and working memory (N-Back) performance.

Linear mixed models evidenced that executive abilities predicted adolescents' success in reducing the intensity of negative emotions when they used reappraisal and distraction strategies. Adolescents' performance in executive tasks also predicted the self-report use of most strategies in negative situations. Among executive functions, inhibition was the strongest predictor of emotion regulation, both in self-report and experimental measures. Finally, partial correlations highlighted moderate relationships between self-report and experimental tasks, both for emotion regulation and executive functions.

In sum, our study showed specific associations between executive functions and emotion regulation in adolescents, suggesting that they are distinguishable processes. Interestingly, executive functions predicted both use and effectiveness of emotion regulation strategies. Theoretical and practical implications will be discussed during the presentation.

**721**

## **A qualitative inquiry of singlehood experiences in established adulthood: Between stigma, solitude, freedom and growth**

Marie-Aude Boislard, Laplante Sabrina, Mélanie Millette

Université du Québec à Montréal, Montréal, Canada

### **Abstract (max 500 words)**

**Background:** The increasing number of singles in adulthood is the greatest demographic change since the "Baby Boom" in many Western countries. As such, sexologists, researchers, clinicians and policymakers would benefit from increased knowledge on established adult singles' (EAS) realities, challenges and needs.

**Objective:** The aims of this study were to (1) examine how stigmas and myths about single established adults affect their experiences as singles; (2) investigate gender differences in established adults' experiences as singles.

**Methodology:** Three focus groups were conducted online between July and November 2021, with a total of 19 established adults (47% men; Mage = 39.42, SD = 4.71; mostly heterosexuals). A hybrid inductive qualitative analysis was conducted. It involved team-coding and thematic analyses, using a theoretical framework based on social clock and stigma theories.

**Results:** Emotional ambivalence was salient in participants' experiences of singlehood, as they discussed oscillating between feelings of freedom and growth on the one side, and pressure, incompetency, solitude, and anxiety (e.g., of "*being alone until death*") on the other side ("*It is to be free, to do what we want, we don't have to answer to anyone*" (Zazou, W, 36 y.o.); "*So what am I doing wrong? [...] anxiety to think maybe this is my life*" (Joker999, M, 44 y.o.). Participants reported having been confronted to negative perceptions of adult singlehood (e.g., perceived failure in seduction and in maintaining a romantic relationship over time) - especially woman -, and to gendered stigma (e.g., "fuckboy", "careerist woman or man-eater"), as show in this quote: "*I would say that a single man, he's going to be*

*seen as someone who doesn't want to settle down or [...] who hasn't accepted that he's an adult [...] An adult guy who's not mature. Whereas a single girl is going to be someone who hasn't been nice enough to keep a guy" (Eric, M., 45 y.o.). Various anticipated or actual griefs (e.g., maternity, property access) also emerged from the focus groups: "Well, from the moment I accepted that I would not have a child and then I would not have a family, it was like removing a ton of bricks" (Sporty, W, 44 y.o.).*

Conclusion: Social clock, developmental and stigma theories are especially informative for understanding the realities of EAS who evolve outside the couple institution. Even though singlehood in established adulthood is often perceived as a developmental derogation to adulthood expectations of romantic lasting involvement, finding love was described as "a plus" in EAS' lives, not a necessity. The theoretical and clinical implications of these findings will be discussed.

**724**

## **Would You Behave as the Ones You Like Most? The Influence of Prosocial Behavior in Adolescents' Likeability Networks**

Daniela Chávez<sup>1</sup>, Diego Palacios<sup>2</sup>, Lydia Laninga-Wijnen<sup>1</sup>, Christina Salmivalli<sup>1</sup>, Claire Garandau<sup>1</sup>, Christian Berger<sup>3</sup>, Paula Luengo<sup>3</sup>

<sup>1</sup>University of Turku, Turku, Finland. <sup>2</sup>Universidad Mayor, Santiago, Chile. <sup>3</sup>Pontificia Universidad Católica de Chile, Santiago, Chile

### **Abstract (max 500 words)**

Research shows that adolescents tend to adjust their behavior to the behavior of their high-status peers for risky, aggressive, and maladaptive behaviors (Rambaran et al., 2013); yet little is known about the influence of high-status adolescents on their peers for adaptive behaviors such as prosociality. In addition, most evidence of behavioral influences among youth has been derived from friendship ties, meaning that youth are more likely to adopt the behavior of those they nominate as friends. However, the tendency to adjust one's behavior to match peers' behavior may not be restricted to existing friendships. Adolescents may also adjust their behavior to match the behavior of the ones they would like to hang out with, as a way to gain acceptance from them. This study first addresses the question of whether adolescents' prosocial behavior is influenced by the prosocial behavior of the ones they would like to hang out with.

It is also possible that highly liked adolescents, who are generally cooperative and prosocial and less likely than others to be aggressive (Newcomb et al., 1993) are more influential than less liked adolescents, via social reinforcement. Seeing prosocial peers being rewarded in the peer group by being well-liked (Chávez et al., 2022) may encourage adolescents to engage in the same behavior, in the hope of reaping the same rewards. Therefore, adolescents may be even more influenced – for prosocial behavior – by the peers they would like to hang out with if those peers are well-liked by the peer group in general.

This study aimed to shed light on the potential power of influence for prosocial behavior of those adolescents' peers who would like to hang out with. In other words, the current study aims to assess the contagion power of highly liked students to spread prosocial behavior. We will examine the following questions: 1) Are adolescents who receive more nominations as someone peers would like to hang out with more prosocial? 2) Do adolescents become similar in prosocial behavior to the peers they like? (Dyadic liking nominations) and 3) Do adolescents become even more similar in prosocial behavior to the peers they like if these peers are particularly well-liked by others? (Reputational liking ties from all peers). Using a stochastic actor-oriented model (SAOM; Snijders et al., 2010) with 3-wave longitudinal data implemented in the Simulation Investigation for Empirical Network Analysis software package (RSiena; Ripley et al., 2021), the model specification will include both selection and influence effects to examine the extent to which the presence of a liking tie is related to similarity in prosocial behavior. We thus expect that the results of this study overcome major shortcomings of previous research regarding a) peer influence of prosocial behaviors through socialization processes, b) evidence for the particular influential role of high-status classmates (most liked in the class) from a social network perspective and contribute c) to provide explanations for a potential mechanism in the development of prosocial behavior during adolescence.

**729**

## **Acculturation Related Hassles and Coping Strategies of Language Brokers in Australia: A Mixed-method Study**

Renu Narchal

Western Sydney University, Penrith, Australia

### **Abstract (max 500 words)**

#### Objective

Australia is a culturally diverse country. Approximately 49 percent of Australians are either born overseas or have one or both parents born overseas. However, over 820,000 Australians are not proficient in the English language and may therefore need assistance in navigating the new cultural context post-migration. Children of immigrant parents learn the language of the host culture faster than their parents. They are therefore often called upon to interpret and translate for their parents called language brokering in literature. Language brokers take the responsibility for interpreting for family members who are not proficient in the host country's language. They serve as linguistic and cultural mediators between their family members and lawyers, teachers, doctors, and neighbours whilst interpreting a range of documents from school notes to medical or tax forms. Thus, they endure a host of daily hassles and some stressful brokering situations, affecting their perceptions of their role as language brokers and their wellbeing. This mixed-method study aimed to investigate the wellbeing and acculturation-related hassles of language brokers, in particular how they manage uncomfortable brokering situations. Specifically, the factors examined were perceptions of brokering, extent of brokering, acculturation-related hassles post-migration, and wellbeing. The influence of Covid-19 on brokering was also examined. Based on existing literature, was hypothesised that: (a) Wellbeing will be

influenced by extent of brokering, perceptions of brokering, and acculturation-related hassles post-migration; (b) Acculturation-related hassles post-migration will be influenced by perceptions of brokering

### Methodology

A total of 130 self-identified language brokers (113 Females, 15 Males, Mean age = 24.20, SD = 7.28) participated in this mixed-method study. They completed an online survey consisting of reliable and valid measures and some open-ended questions. Participants were presented with open-ended questions regarding their experiences of language brokering related to balancing commitments alongside brokering, altering plans for brokering, ways to manage stressful brokering situations (reasoning/excuse making), and feelings associated with brokering such as discomfort or stress.

### Results

Perceptions of brokering were found to positively predict wellbeing, and acculturation-related hassles post-migration to negatively predict perceptions of brokering. Two central themes: language brokering as a pervasive commitment, and strategies to manage affect exacerbated by stressful brokering situations. Further, the qualitative results suggest that Covid-19 elicited participants to protect their unacquainted parents by brokering comprehensively, particularly the frequently changing rules and practices.

### Conclusion

The results have implications towards understanding relevant theories, acculturation-related hassles, and for policy makers and government bodies that work towards improving the wellbeing of Australia's migrant population.

## Acceptance type: Poster Presentation

17

### Investigation of types of subjective simultaneous mixed emotion experiences in early to middle childhood for self and other

Esther Burkitt<sup>1</sup>, Sebastian Siemieniec<sup>1</sup>, Daisy Chipperfield<sup>1</sup>, Dawn Watling<sup>2</sup>

<sup>1</sup>University of Chichester, Chichester, United Kingdom. <sup>2</sup>Royal Holloway, University of London, Egham, United Kingdom

#### Abstract (max 500 words)

Objective: Evidence is mounting that mixed emotions can be experienced simultaneously in different ways across the lifespan. Four types of patterns of simultaneous mixed emotions (sequential, prevalent, highly parallel and inverse types) have been identified in middle childhood and adolescence. Moreover, the recognition of these experiences tends to develop firstly when children consider peers rather than the self. This evidence from children and adolescents is based on examining the presence of experiences specified in adulthood. The present study therefore applied an exhaustive coding scheme to investigate whether children experience other types of previously unidentified simultaneous mixed emotional experiences. Methodology: One hundred and twelve children (59 girls) aged 5 years 1 month - 7 years 2 months ( $X=6$  years 1 month;  $SD = 10$  months) were recruited from mainstream schools across the UK. Two age groups were formed (youngest,  $n = 56$ , 5 years 1 months- 6 years 1 months: oldest,  $n = 56$ , 6 years 1 months – 7 years 2 months) and allocated to one of two conditions hearing vignettes describing happy and sad mixed emotion events in an age and gender matched protagonist or themselves. Results: Loglinear analyses identified new types of flexuous, vertical and other experiences along with established sequential, prevalent, highly parallel and inverse types of experience. Older children recognised more complex experiences in the other than the self-condition. Conclusion: Several additional types of simultaneous mixed emotions are recognised in early to middle childhood. The theoretical relevance of simultaneous mixed emotion processing in childhood is considered and potential utility of the findings in emotion assessments is discussed.

20

### Inattention as an early sign of an externalizing behavior problems among very prematurely born preschoolers

Tamara Walczak-Kozłowska, Aleksandra Mańkowska, Michał Harciarek

University of Gdansk, Gdansk, Poland

#### Abstract (max 500 words)

**Objective of the study:** Very preterm birth (gestational age: < 32 weeks) increases the risk of ADHD as well as other neurodevelopmental disorders, which are often diagnosed during school period and adolescence. This study aimed to verify whether early attentional deficits, observed among very preterm preschoolers, can serve as an early sign of behavioral disorders in this cohort.

**Methodology:** 47 children born very prematurely, and 53 full-term controls, all 5-year-old, participated in the study. Symptoms of an internalizing and externalizing problems were assessed with the Strengths and Difficulties Questionnaire (SDQ; Goodman, 2005) and the efficiency of attentional mechanisms was assessed with the Attention Network Task—Child Version (Child-ANT; Rueda et al. 2004).

**Results obtained:** Children born very prematurely manifested more increased emotional difficulties compared to children born at term in their mothers' assessment. Additionally, very preterm preschoolers, who exhibited distinct attentional deficits, were characterized by increased externalizing problems: conduct difficulties and symptoms of hyperactivity and inattention.

**Conclusion:** Attentional dysfunctions can thus serve as an early sign of a childhood psychopathology among very prematurely born preschoolers. Conduct problems and symptoms of hyperactivity and inattention are significantly more increased in those preterm children who exhibit significant deficits within attentional system. These results encourage early implementation of preventive strategies in this cohort.

## 21

### **Changes in attentional efficiency among very prematurely born children in late preschool period**

Tamara Walczak-Kozłowska, Aleksandra Mańkowska, Michał Harciarek

University of Gdansk, Gdansk, Poland

#### **Abstract (max 500 words)**

**Objective of the study:** During early years in child development an increase in attentional capacity can be observed with most prominent changes in attentional alerting and orienting. In the preschool period, along with an intense maturation of neuronal pathways underlying executive attention, we observe behavioural changes in deliberate management of child's own attentional resources. Previous research revealed diminished attentional efficiency in very preterm pre-schoolers, however neither study has investigated the discrepancy in the dynamics of changes during the transition from pre-school to school education.

**Methodology:** 34 children born very prematurely, and 37 full-term controls participated in the longitudinal study. The efficiency of their attentional processes was assessed with the Attention Network Task—Child Version (Child-ANT) twice: at the age of 5 and at the age of 6.



Results obtained: Very preterm children were characterized by a diminished efficiency of attentional alerting and orienting at the age of 5. The efficiency of attentional alerting increased between the two assessments, yet only among very preterm children, and ceased to differentiate this cohort from children born at term. However, the deficit within the attentional orienting among very preterm children remained more stable – was manifested also at the age of 6 in this cohort. Inter- and intra-group differences in the efficiency of executive attention were insignificant.

Conclusion: Change in the efficiency of attentional capacities is especially important for the effective functioning in a more complex school environment. The discrepancy in attentional orienting between very preterm children and their full-term peers can reduce the chances of an equal start at school entrance and further cause a cascade of adverse consequences. Thus, enhancing attentional capabilities in preterm children should be considered as necessary early intervention.

## 24

### **The effectiveness of Group Counselling on Emotional Function and Self-Esteem Among Female Refugees Who Suffered Sexual and Gender Based Violence**

Eid Abo Hamza<sup>1,2</sup>, Ahmed Moustafa<sup>3</sup>, Sehar Mikhamir<sup>4</sup>

<sup>1</sup>Alain University, Alain, UAE. <sup>2</sup>Tanta University, Tanta, Egypt. <sup>3</sup>Bond University, Bond, Australia. <sup>4</sup>Selouk Center, Al Rehab City, Egypt

#### **Abstract (max 500 words)**

Many refugees from Sub-Sahara Africa and the Middle East settle in large cities in Egypt, including Cairo and Alexandria. However, some female refugees face sexual violence in Egypt. The goal of this study is to provide a group counseling program to female refugees suffering from sexual violence. The group counselling program addressed the issues of Sexual and Gender Based Violence (SGBV) in Syrian, Sudanese, Libyan, and Ethiopian female refugees. Our counselling services included self-centered, rational emotive behavioural therapy (BERT), and art therapy, focusing on improving self-awareness, self-esteem, and emotional effectiveness. We have also had sessions focused on expressing feelings, managing relationships, and communication skills, reducing anxiety, anger management, and stress management. Results show that refugees in Egypt suffer different problems, depending on their country of origin. While African refugees were considered as inferior and powerless due to skin color, Middle Eastern and Syrian female refugees were targeted as they were considered husband snatchers. Our results show that our group counselling program increased self-esteem, emotional regulation, stress management, and assertiveness. Future work should help refugees by providing individualised counselling to them to help them integrate in society. To the best of our knowledge, this is the first study utilising group counselling services provided to female refugees who suffer from SGBV in the Middle East.

## 26

**Detachment process in spatial perspective-taking among 9- to 14-month-old infants using eye tracking**

Masayuki Watanabe<sup>1</sup>, Yohko Shimada<sup>2</sup>, Shoji Itakura<sup>2</sup>

<sup>1</sup>Shiga University, Otsu, Japan. <sup>2</sup>Center for Baby Science, Doshisha University, Kizugawa, Japan

**Abstract (max 500 words)**

## Introduction

Spatial perspective-taking (SPT) consists of mentally operating one's own body image into another person's position (imaginary-self operation: ISO) and computing how a scene looks from their perspective. Furthermore, ISO consists of detaching an embodied imaginary self from one's body and transforming the body schema into another person's location. However, infants are expected to be capable of mindreading without such manipulation of body representations (Southgate, 2020). Can infants really not detach themselves from the imaginary self? When will the detachment appear? Based on the hypothesis by Watanabe (2022), in which two types of perspective-taking systems were postulated regarding self-other distinction, it was predicted that it might appear within the first year of life.

## Objective

This study aims to find valid evidence of the detachment process in infants at around the age of one year.

## Methods

Participants: The valid data included 58 Japanese infants (mean age = 11.6 months; range = 9:0–14:11 months; 27 girls).

Materials: The Face Rotation Task, which employed a symmetrical figure of a child's face, was used to induce spontaneous perspective-taking and separate the detachment process from the others. It was considered that the detachment process was included in the response latencies after stimulus presentation. Tobii Pro Spectrum and Tobii Pro Lab software obtained eye-tracking data during the task with a sample rate of 300 Hz (Tobii Technology, Stockholm, Sweden) to detect the response latencies.

Procedure: The Face Rotation Task included the habituation and test sessions. In the habituation session, the right or left eye was flashed, and simultaneously one of two sounds was presented, followed by the opposite eye and other sound. This sequence was repeated three or five times. Then, the test session began, and a pair of rotated facial stimuli and sounds was presented for 4 seconds following the gazing point presentation. The infants were expected to gaze spontaneously at the associated eye. This procedure was repeated six times, with a different rotational angle and a different sound each time (3 rotation angles × 2 types of sounds).

## Results

Response latencies between the presentation of habituation or rotated stimulus and the movement of the gazing point were measured only for positive answers. A one-way ANOVA with age group (9 months, 10-11 months, and 12-14 months) as an independent variable was performed on the mean of the difference between the mean of within-individual latency on the latter and the mean in each age group on the former. The results revealed significant main effects of age group ( $F(2, 52) = 4.62, p < .05, f = .421$ ), and the Tukey's HSD test revealed that the 9 months age group ( $M = 309.28$  ms) needed more time than the other groups (10-11 months old,  $M = 99.87$  ms; 12-14 months old,  $M = 76.07$  ms).

## Conclusions

1. Some qualitative changes occurred in spatial perspective-taking when the infants were between 9 and 10 months old.
2. Infants, after the age of 10 months, might detach self-representation from their bodies to take other perspectives.

## 27

### **Persistent problem behavior in adolescence and peer relationships. On the importance of partnerships in exiting a delinquent career**

Thomas Wilke

IU International University of Applied Sciences, Nürnberg, Germany

#### **Abstract (max 500 words)**

Persistent delinquency in adolescence represents a form of externalizing problem behavior in which developmental problems are attempted to be overcome through destructive behavior toward others. Poverty and gender are structural factors that can affect persistent delinquency in a variety of ways. How do gender, social background, and age interact with each other during the delinquency trajectory among youth from precarious social environments? What role does a steady partnership play in exiting a delinquent career? How does the relationship with the delinquent clique change?

The data basis is formed by 16 guideline-based interviews with young people aged 15 to 21 years. The data collection took place in the youth detention center Berlin-Brandenburg, the youth probation center Berlin and in the context of the "street". Based on selected structural characteristics, the sample shows that the precarious milieu was well met. Many of the young people come from families with precarious backgrounds, and they themselves have a high proportion of characteristics that are associated with a high risk of living on or below the relative poverty line in the future. The data analysis was multimethod and based on the documentary method and grounded theory.

In early adolescence, homosocial peer groups have a significant influence on the onset and course of delinquency among adolescents. The young people interviewed describe how they quite consciously transgressed social boundaries and norms by behaving aggressively toward other young people and adults and also committing crimes in the group. Many young people attribute this to the stigmatization and discrimination as well as social exclusion that they themselves experience due to their social background, for example. Against this background, the strong peer influence is also to be understood: the peers give them emotional support against the discrimination they experience every day, it grants them freedom that other socialization instances do not grant them. All interviews with older adolescents show that they often develop an alternative orientation for action only with increasing age. Only from middle adolescence are boys ready for firm relationships. In early adolescence, sexual conquests and the associated recognition from the male peer group are of high importance to them. For boys and girls, entering into relationships with "good" partners creates the conditions for stopping delinquency. They enable the adolescents to reflect and de-legitimize the values and lifestyle of the delinquent peer group. The adolescents report how the partners have made them "better" people. It is the steady partners that build a bridge into the "normal" world of life. With their support, they manage to finally break with the peer group and lead a life without delinquency, which goes hand in hand with the development of an identity that conforms to norms.

The adolescents have a traditional understanding of gender. In the case of boys, delinquency is linked to their ideas of masculinity. In the case of girls and boys, the background to persistent delinquency is coping with their social situation, i.e. poverty and poor prospects for the future, and the search for social recognition and identity.

## 30

### **Future expectations of young people from precarious social milieus in Berlin. Hopes and desires in the field of tension between traditional values, uncertainties and unrealistic expectations**

Thomas Wilke

IU International University of Applied Sciences, Nürnberg, Germany

#### **Abstract (max 500 words)**

During adolescence, comprehensive changes take place, which are accompanied by demands that the social environment places on the adolescent. In the course of this process, the various socialization instances confront adolescents with diverse ideas about which values, interests, and competencies they should have developed at certain points in time in order to successfully manage the transition to adulthood. In the context of the tension between their own development and the constantly changing demands, young people formulate their ideas about who they want to be, how they want to live and what they want to have achieved in the future. How do young people, whose social situation is precarious look to the future? What wishes and hopes do they have?

The data basis is formed by 16 guideline-based interviews with young people aged 15 to 21 years. The data collection took place in the youth detention center Berlin-Brandenburg, the youth probation center Berlin and in the context of the "street". Based on selected structural characteristics, the sample shows that the precarious milieu was well met. Many of the young people come from families with precarious backgrounds, and they themselves have a high proportion of characteristics that are associated with a high risk of living on or below the relative poverty line in the future. The data analysis was multi-method and based on the documentary method and grounded theory.

The boys and girls represent traditional values that are reflected in their desires and hopes. In view of their fragile biographies and family histories, most of the young people interviewed wish for and typical, "ideal" family in which they and their partners each take on the classic, gender-specific roles and raise several children. Their parents serve the young people as a negative foil to their own life desires and dreams. They not only want to do better than their parents in raising their children, but they also want to have a "good job" one day and to be financially independent of state benefits. Many of the young people, especially the boys, would like to be "rich" and flaunt the associated status symbols. Since almost all the young people left school without a diploma, many of the plans can be described as unrealistic and unreflective. Some of the young people interviewed are already fatalistic about the future. They have often tried to catch up on school-leaving qualifications, hold down a steady and poorly paid job, or are separated from their partners and children.

The future paths of young people seem to be predetermined by their previous biography and socialization. The traditional values and the associated aspired and standardized roles seem to give them security in view of their precarious social situation and to hold out the prospect of social recognition. Many of the young people have dreams and desires that are unlikely to come true, partly because they have not learned to muster the willingness, motivation and initiative needed to master school or take on a permanent job.

## 31

### **Counseling Donor Family Members: A Guide for Mental Health Professionals**

Wendy Kramer

Donor Sibling Registry, Nederland, USA

#### **Abstract (max 500 words)**

Donor families are unique, yet are also becoming substantially more common with the exponential advancements being made in the field of reproductive medicine, and with the wider acceptance of LGBTQ+ and single-parent families utilizing donor gametes in recent decades. The accessibility of commercial DNA testing is also helping to expand these families, as many people are finding out by surprise that they are part of a sometimes quite large donor family. Individuals connected to donor families are therefore much more likely to be seen across a variety of mental health and medical settings for a range of presenting problems, either related to or separate from this part of their background. Regardless of the presenting issue, for these individuals the challenges of forming and

redefining family as they explore their own or their child's new biological connections can seem overwhelming and are therefore very likely to surface as a topic of discussion in treatment.

Given the greatly increased probability of encountering a client connected to a donor family in their practices across settings, and the specific challenges this presents, clinicians must be well informed about all perspectives in order to address such issues in a knowledgeable and sensitive manner. *Counseling Donor Family Members* will provide clinicians, mental health professionals, and all those in reproductive medicine with guidance on the unique issues that can present for egg and sperm donors (and their families), prospective parents, parents of donor-conceived children, and donor-conceived people. They will be better prepared for many of the issues that donor family members might present in regard to their family of origin and with their new donor family relationships.

*Counseling Donor Family Members* is a resource for mental health and medical professionals in any setting, and a useful reference for researchers, and donor family members themselves. It presents evolving ideas, recommendations, and talking points, that can be used in counseling everyone in the donor family. Because each stakeholder is deeply connected to the others, understanding all viewpoints is important for a successful counseling experience with any parent, egg and sperm donor (and their families), or donor-conceived person.

This discussion is relevant for psychologists, therapists, donor-conceived people, parents, and donors. I have presented several lectures/seminars on this material to psychology and reproductive medicine organizations in the US, Canada, and Argentina, and will present to the British Fertility Society's meeting next month. The material is based on my 22 years of running the DSR, and on our 30+ published papers. My *Psychology Today* blog, *Donor Family Matters* is also unfolding this material, one month at a time.

## 32

### **An Observation Study on the Strategies of Preschool Curriculum Modification**

Hsin-Yu Hsieh, Shu-Hsien Tseng

Chung Yuan Christian University, Taoyuan, Taiwan

#### **Abstract (max 500 words)**

The purpose of this research is to observe the current situation of the use of curriculum modification strategies by teachers of preschool inclusion classrooms and special education classrooms. The researcher adopted a case study approach, and observed the special education and regular inclusive classrooms in a specially recommended kindergarten for one semester, and recorded by video, and field notes. The researcher also interviewed teachers to understand their considerations and difficulties encountered in the process of using curriculum modification strategies. The research data collected were analyzed through the continuous comparison method. In addition, it also explores the differences in curriculum modification strategies used in special education and regular inclusive classrooms. The main findings are:

First, when preschool teachers conduct differentiated teaching, they used external modification strategies more than internal modification strategies.

Secondly, the difficulties encountered by preschool teachers in using curriculum modification strategies can be roughly divided into the following problems. For instance, lack of professional knowledge and ability related to special education, difficulty to take care of the needs of general and special students, few opportunities for communication with professionals, and the degree of parental cooperation varies, etc.

Researchers also found other important related issues from the interviews, such as the impact of different administrative systems between cities on the teaching quality of on-site teachers.

### 33

## Parental cognitions and child development

Dinorah de León

Universidad Católica del Uruguay, Montevideo, Uruguay

### Abstract (max 500 words)

Child development is affected by the environment. A key factor is the social relationships between parents and children and the possibilities that parents offer their children. These actions, under the term of upbringing, are highly associated with future development and success. What seems to determine the learning-oriented behaviors that parents will have are the cognitions they have, such as perceptions, attitudes and attributions. A model that explains how parenting is associated with the development of children is the standard model of three terms, where it is considered that (1) parents' thoughts and beliefs generate and give meaning to (2) the practices they carry out with their children, which in turn ends up having a later impact on (3) the development of the children (Bornstein, Putnick, & Suwalsky, 2018). In the present investigation we intend to extend the model proposed by Bornstein et al. (2018) including variables that have been related to parenthood and the performance and development of children but that have not been studied in the same investigation to date. The objective of this study is to examine the expectations of parents, the knowledge they have about child development, and the precision in estimating their children's abilities.

- Analyze the association between sociodemographic characteristics, parental expectations and their behaviors in relation to the development of boys and girls.
- Determine how accurate parents are in estimating their children's abilities
- To examine the impact of child performance information received by parents on parental expectations.
- Know parents' beliefs about their own role

An ex post facto design will be used to associate parental cognitions with different developmental factors. An experimental session will also be carried out to find out how sensitive parental cognitions are to feedback on children's performance. It is hoped to find an association between parental and child variables that allows the identification of parenting characteristics that may be beneficial if they are intervened in order to impact child performance.

Recently, considering the health emergency situation, the importance of families in promoting the education of boys and girls has become clear. However, for the involvement of parents to be effective, it is necessary that they propose activities appropriate to the characteristics of their children. For this, it is important to know how parents' beliefs and behaviors impact performance. In this sense, having specific studies that show which are the key factors that, from the family, have weight in the performance of children, is essential for education in these times and possibly for the education of the future.

## 34

### **Socio-emotional skill profiles and school engagement among Finnish adolescents during COVID-19**

Ida Huttunen, Katja Upadyaya, Katariina Salmela-Aro

Faculty of Educational Sciences, University of Helsinki, Helsinki, Finland

#### **Abstract (max 500 words)**

COVID-19 pandemic created unique challenges for young students' academic wellbeing as they quickly had to adapt to changes in learning environments such as decreases in sense of belonging due to distance learning. According to previous studies and the Finnish national curriculum (2014), socio-emotional skills can serve as a resource that fosters students' academic wellbeing. Based on the OECD framework (Kankaras-Suarez-Alvarez, 2019) this study seeks to identify profiles of four key socio-emotional skills (academic buoyancy, belongingness, curiosity, and grit) among adolescents during the COVID-19 pandemic, and examine how these profiles differ in terms of gender and school engagement.

The data was collected as part of the Bridging the Gaps longitudinal study in fall 2020 from the Helsinki metropolitan area via an online survey. The participants were 8th grade students born in 2006 (N=1364, of which 40.0% females, 37.9% males and 1.9% non-binary). The profiles were identified using Two step -cluster analysis, and the differences between profiles according to gender and school engagement were examined using one-way analysis of variance.

The four profile model fit the data the best and provided the best substantive information. The profiles were labelled as Low socio-emotional skills (26.8 %), High academic buoyancy and high belongingness (30.1%), High grit, curiosity, and belongingness (22.7 %), and High socio-emotional skills (20.4 %). The profiles varied by gender, with higher proportion of boys in the High socio-emotional skills profile and in the High academic buoyancy and high belongingness profiles, and higher proportion of girls in the Low socio-emotional skills and in the High grit, curiosity, and belongingness profiles. All profiles had significant differences in school engagement. Students in the High socio-emotional skills profile reported the



highest school engagement, whereas students in the Low socio-emotional skills profile reported the lowest level of school engagement.

The results implied that students differ in terms of socio-emotional skills and these individual differences might be related to gender and school engagement. Together with other studies these results show the importance of socio-emotional skills in promoting school related wellbeing and motivation among adolescents in times of crisis, such as the COVID-19 pandemic. It is an empirical question worthy of further studies to examine how adolescents' socio-emotional skills develop (e.g., using longitudinal design), and how the role of socio-emotional skills for adolescents' school engagement changes as the times of crisis continues. We also need more research on how students' background factors, e.g. gender, are related to their socio-emotional skills in order to develop more targeted interventions and to better support all students' wellbeing.

## 45

### **The maternal journey from childhood experiences to Attachment Parenting**

Eleana Armao, Lida Anagnostaki

National and Kapodistrian University of Athens - Department of Early Childhood Education, Athens, Greece

#### **Abstract (max 500 words)**

Attachment Parenting is a contemporary and popular parenting philosophy in western societies. It supports the advantages of a strong physical and emotional parent – child connection and to this end it encourages parents, in particular mothers, to follow practices such as long-term breastfeeding, co-sleeping, baby-wearing, etc. The public opinion on this parenting philosophy seems to be polarized between those who idealize it, and the ones who devalue it, leading to the so-called 'new mommy wars' and/or 'mom-shaming' phenomena. It seems that the passionate discussions on the topic do not allow space for understanding the perspective of the mothers who follow Attachment Parenting nor their motivations behind their parenting choice. The aim of the present study is the exploration of the reasons mothers have chosen to raise their kids following Attachment Parenting, investigating possible links with their early experiences. Twelve mothers who follow Attachment Parenting were interviewed on their parenting choices, childhood experiences and relationship to their parents. Interpretative Phenomenological Analysis was selected as methodological tool because it enables the in-depth exploration of lived experience and the examination of how people make sense of it. It includes a very detailed analysis of a small number of cases, grounded in the data itself, involving a constant interplay between observation and interpretation. Phenomenological accounts were elicited through semi-structured interviews. The analysis of the mothers' narratives revealed three master themes highlighting the connections between their childhood experiences and their parenting choices: a) satisfaction as regards the neglected child-self, b) reparation needed by the abused child-self, c) reparation for early traumatic loss. The discussion focuses on the participants' efforts to differentiate from their past and the way they were raised, and the effort to impede transgenerational transmission of trauma through Attachment Parenting.

46

## Evaluating an online platform on developmental learning disorders using the RE-AIM framework

Lior Weinreich<sup>1</sup>, Gido Metz<sup>2</sup>, Björn Witzel<sup>1</sup>, Olga Drobina<sup>1</sup>, Paula Dümig<sup>1</sup>, Gerd Schulte-Körne<sup>1</sup>, Kristina Moll<sup>1</sup>

<sup>1</sup>Ludwig-Maximilians-University of Munich (LMU) Department of Child and Adolescent Psychiatry, Psychosomatics and Psychotherapy, Munich, Germany. <sup>2</sup>Maastricht University School for Public Health and Prim Care, Fac. Health, Medicine and Life Sciences, Maastricht, Netherlands

### Abstract (max 500 words)

- **Objective of the study:** The study aims to evaluate LONDI, a German online platform dedicated to developmental learning disorders. LONDI offers an algorithm-based help system that professionals (e.g., therapists) can use to select suitable diagnostic instruments and to tailor support to individual children's needs. In addition, LONDI provides information about learning disorders for the following user groups: therapists, parents, teachers, school psychologists or social workers. The evaluation will be based on the five dimensions of the RE-AIM framework: Reach, Effectiveness, Adoption, Implementation and Maintenance. Notably, despite the abundance of online platforms with developmental psychology related content, evaluations of similar nature have been scarce.
- **Methodology:** The study methodology includes the Matomo analytics software and pop-up questionnaires. The questionnaires are composed of items on demographics, user experience (UX) and intent to reuse the platform. In line with previous literature focusing on one user group and one website section, the current study focuses on the therapist user group and the help system. Namely, the methodology will be operationalized to evaluate therapists' usage of the platform's help system based on the RE-AIM dimensions. Specifically, Reach will be evaluated via demographic information, Effectiveness via UX for both hedonic and pragmatic qualities, Adoption via intent to reuse, Implementation via Matomo analysis of online usage, and Maintenance via Matomo analysis of usage from the first three months compared with the last three months in the time period of 15.01.23-15.06.23.
- **Results obtained or expected:** Expected results pertaining each RE-AIM dimension will shed light on the effectivity of this novel platform. In particular, Reach results will be used to determine whether the platform's overall reach is representative of the overall percentage of registered therapists in Germany, Effectiveness results to determine whether the help system is sufficient in terms of pragmatic and hedonic qualities, Adoption to determine whether the help system is perceived as useful via the intention to reuse it, Implementation to analyze online behavior, and Maintenance to determine whether usage changes over time.
- **Conclusion:** The expected results will suggest whether according to the RE-AIM framework, LONDI offers an effective support system for therapists treating children with developmental learning disorders. Based on these results LONDI will be further optimized.

47

## Mother's Control and Negative Emotions as a Serial Mediators between Adolescent's Difficulties and Mother's Fearful Attachment

Dainora Šakinytė, Rita Žukauskienė

Mykolas Romeris University, Vilnius, Lithuania

### Abstract (max 500 words)

**Objective of the study.** There are various changes during children's transition to adolescence, which mothers need to control and navigate through, which can negatively impact mothers' emotions. However, it is unclear how it also can affect a mother's attachment, related to emotional health and the ability to build and maintain relationships. **Aim.** This study sought to investigate the indirect effect of adolescents' internalizing and externalizing difficulties on mothers' fearful attachment through mothers' psychological control and mothers' negative emotions. **Methodology.** Participants correspond to a sample of 166 mothers of 5th - 8th - grade students. The mean age of participants was 40.20 years (SD = 5.76). During the study, mothers were asked to fill the questionnaires assessing their child's externalizing and internalizing difficulties, mother's psychological control, mother's negative emotions and mother's fearful attachment. Serial mediation analysis was performed using SPSS. **Results.** Results indicated partial mediation where the child's internalizing difficulties predicted the mother's fearful attachment through the mother's psychological control and negative emotions ( $b = .301$ , 95% CI [.157, .446]). Full mediation was found when the child's externalizing difficulties predicted the mother's fearful attachment through the mother's psychological control and negative emotions ( $b = .249$ , 95% CI [.086, .411]). **Conclusion.** These results highlight the importance of adolescents' emotional and behavioral difficulties experienced by mothers and their possible bidirectional negative effects on children or other's family members as well.

52

## Life Satisfaction Development in the Transition to Adulthood: Differences by Gender and Immigrant Background

Juul Henkens<sup>1,2</sup>, Matthijs Kalmijn<sup>1,2</sup>, Helga de Valk<sup>1,2</sup>

<sup>1</sup>Netherlands Interdisciplinary Demographic Institute, Den Haag, Netherlands. <sup>2</sup>University of Groningen, Groningen, Netherlands

### Abstract (max 500 words)

Introduction

Life satisfaction is key for a positive transition from adolescence to adulthood (Proctor et al., 2008). This transition is a developmentally dense period in which young people often experience major life events in multiple life domains (Buchmann & Kriesi, 2011). Finding your way in this 'jungle' of changes can be stressful, confusing, or disappointing (Arnett, 2000) and as such lead to lower life satisfaction. However, successfully navigating through the transition and reaching the new developmental stage of adulthood (i.e., becoming independent) may increase life satisfaction (Schulenberg et al., 2004). So far, little is known about how life satisfaction evolves in the transition and what can be critical periods and turning points. In addition, in increasingly diverse societies it is essential to understand whether this development differs by gender and immigrant background. Based on developmental theory, a U-shaped development of life satisfaction was expected, with decreasing life satisfaction over the course of adolescence, followed by an increase in emerging adulthood. Second, following the accelerated maturation hypothesis and stress-sensitivity perspective, gendered life satisfaction trajectories were expected. Specifically, it was hypothesized that girls have lower starting levels of life satisfaction in adolescence, but that gender differences decrease into emerging adulthood. Third, driven by a cultural mismatch perspective, it was hypothesized that children of immigrants have a steeper decrease and different timing of life satisfaction development than non-immigrants. Finally, based on the double disadvantage perspective, it was expected that girls with immigrant backgrounds would have the lowest trajectories of life satisfaction.

## Methods

We used seven waves (2010-2018) of the Children of Immigrants Longitudinal Survey conducted in Germany (CILS-4EU-DE; Kalter et al., 2019, N[1] = 3757, 54% girls, 78% non-immigrants, Mage weighted = 14.6, SD = 0.6 at wave 1). CILS-4EU's longitudinal design and diverse sample of young people (aged 14 to 23) enabled us to study the transition from adolescence into young adulthood for young people with and without an immigrant background. To answer our research questions, multi-level random effect models were performed.

## Results

Results showed general M-shaped fluctuations in life satisfaction over the transition to adulthood, with decreases between ages 17 and 18 and between ages 20 and 23 (Figure 1). However, differences in developmental trajectories between subgroups were found. Compared to boys, girls, and girls with immigrant backgrounds in particular, reported larger ups and downs and lower levels of life satisfaction in adolescence. Subgroup differences disappeared in emerging adulthood. Exploratory analyses showed that these results were robust over children of immigrants from different origins and religions, although these latter results should be interpreted with caution due to small immigrant sub-group sizes.

[1] Weighted sample statistics of analyzed sample, after exclusion of age outliers, first-generation immigrants, and missing data on gender and life satisfaction.

54

## Nutrients associated with the development of compassion and self-compassion

Sofia Pihlaja, Erika Jääskeläinen, Mirka Hintsanen

University of Oulu, Oulu, Finland

### Abstract (max 500 words)

This doctoral research examines whether cholesterol, fatty acids and amino acids assessed in adolescence are associated with compassion and self-compassion in adulthood. So far, there has been research mainly on the psychosocial factors associated with compassion but biological factors should also be investigated as they might affect the activity of the central nervous system. The cultivation of compassion is essential as in previous research, being compassionate for others and for the self has been linked with better well-being and physical and mental health. As far as is known, no research to date has examined the associations between nutrition and compassion or self-compassion. The longitudinal data comes from the population-based Northern Finland Birth Cohort 1986. The sample consists of 1,466 participants (63.3 % women). Compassion and self-compassion were self-reported with Dispositional Positive Emotions Scale and Self-Compassion Scale – Short Form, respectively, in 2019 at age 33–35. Nutrients were determined from blood samples in 2001 at age 15–16. The research questions were examined with statistical methods such as correlational and regression analyses. The preliminary results suggest that in men, valine is negatively associated with compassion and alanine negatively associated with self-compassion. The nutritional perspective on compassion is exceptional and novel, thus this research enlightens research areas that have not been explored so far. The results can be utilized to support the development of compassion in adolescents. There is a public health motive for the research as compassion has been associated with a lower risk of many diseases that are threatening public health, for example depression and hypertension and more generally health behaviors.

55

## Refugee Children's Experience with Language-based Exclusion

Reem Alowaybil<sup>1,2</sup>, John Maltby<sup>1</sup>

<sup>1</sup>University of Leicester, Leicester, United Kingdom. <sup>2</sup>Princess Nourah Bint Abdul Rahman University, Riyadh, Saudi Arabia

### Abstract (max 500 words)

Abstract

**Objective:** To evaluate the level of distress that refugee children -with little to no English-speaking skills- experience at school, the study aims to develop a model and psychometric tool to be used by teachers to aid the evaluation of possible distress.

**Methodology:** Quantitative Psychometric approach was adapted in the study. Data was collected using a survey over four phases as follow: 1) to develop the language-exclusion questionnaire using open-ended questions with a sample of (n=50) UK teachers, which resulted in a 47-item questionnaire , 2) to establish the underlying factors using Exploratory Factor Analysis EFA with a sample of (n=364) teachers from the UK, 3) to confirm the factorability using Confirmatory Factor Analysis CFA with a sample of (n=406) teachers from the US, and 4) to investigate the replicability of the suggested CFA model with a sample (n=285) teachers from the UK.

**Results:** EFA and CFA results suggested a 12-item bifactor model with an overall psychosocial score and three constructs: language understanding, mental, and social well-being. The suggested model presented good validity and reliability, and the model was replicable across cultures as well.

**Conclusion:** Findings suggest a new psychometric tool can be used to measure the level of non-verbal distress with refugee children who struggle with second-language skills at school.

## 57

### **Preregistered report: Parental and Children’s Religiosity in Early Childhood: Implications for Transmission**

Isabelle Zammit<sup>1,2</sup>, Laura K. Taylor<sup>1</sup>

<sup>1</sup>University College Dublin, Dublin, Ireland. <sup>2</sup>Malta College of Arts, Science and Technology, Paola, Malta

#### **Abstract (max 500 words)**

##### **Objectives of the study**

This study examines potential ‘transmission enhancers’ in the association between parental and children’s religiosity in early childhood, ages 3 to 6. Studying religiosity in the early years poses methodological challenges as such development co-occurs with cognitive and linguistic development. In addition to the traditionally used parent-report, this study utilized measures appropriate for children aged 3 to 6 so that children can report on their own religiosity. This study contributes (a) empirically with a design that includes two reporters (parents and children), (b) theoretically it focuses on religious transmission in early childhood, (c) implicitly it examines potential enhancers of religious transmission within the family, and developmentally given the child’s linguistic and cognitive development. Overall, we hypothesize that parental and children’s religiosity will be positively associated. We also explore the potential impact of four ‘transmission enhancers’ – age, internalized parental religious motivation, active parental-child involvement, and credibility-enhancing displays. First, *age* 3 to 6 is characterized by significant cognitive and social shifts; e.g., children become aware of social categories and group-based distinctions. Second, parents with higher *internalized religious motivation* support their children

in developing autonomy demonstrating that religiosity is a way of life. Third, in *active parental-child involvement*, such as engaging children in dyadic religious discussions, children become active agents in religious transmission. Fourth, parental *credibility-enhancing displays* such as modelling religious behaviour are better predictors of religiosity than verbalisations. These “transmission enhancers” view children as active participants in their developing religiosity, thus these four potential moderators were expected to enhance the association between parental and child religiosity.

### **Methodology**

We will recruit a minimum of 231 parent-child dyads (estimated through power analysis), evenly split by child gender. In a correlational design, parents answer a questionnaire on the three dimensions of religiosity (religious social identity, prayer, and God concept), transmission enhancers (child’s age, internalized parental religious motivation, active parental-child involvement, and credibility-enhancing displays), as well as covariates (demographics, attachment security, and child’s language/communication skills). Recruited through schools, children aged 3 to 6 participate individually in tasks to assess their developing religious social identity, prayer, and God concept, as well as a covariate of theory of mind.

### **Results**

We have pre-registered ([https://osf.io/w7h3f/?view\\_only=8db5b57576e841bc9a49f7f4b68abb7f](https://osf.io/w7h3f/?view_only=8db5b57576e841bc9a49f7f4b68abb7f)) that among families with medium to high parent religiosity, child age, internalized parental religious motivation, active parental-child involvement, and credibility-enhancing displays will strengthen the association between parental and children’s religiosity. However, for parents with lower religiosity, we hypothesize that none of these variables will moderate the link to child religiosity. Specifically, the ‘enhancers’ only can show an effect when there is an association or something to be transmitted from parents to children.

### **Conclusion**

Parental religious dimensions and transmission enhancers of religiosity are key in the development of child’s religiosity. Implications of transmission enhancers in the context of family religiosity are discussed. Discussion focuses on the engagement of the child as an active thinker rather than a small person to convert. This has implications on religious education in the family and schools.

58

## **Effects of Defending Victimized Students on Social-Emotional Adjustment: Do Relationships with Peers and Teachers Matter?**

Anouck Lubon<sup>1</sup>, Chloë Finet<sup>1,2</sup>, Hilde Colpin<sup>1</sup>

<sup>1</sup>KU Leuven, School Psychology and Development in Context, Leuven, Belgium. <sup>2</sup>University of Antwerp, Department of Communication Studies, Antwerp, Belgium

## **Abstract (max 500 words)**

### **Introduction**

Bullying in school is a widespread and persistent problem, and comes with a high cost for victims, such as psychosocial and psychosomatic difficulties (Arseneault, 2018). However, peer defending has been shown to protect bullied peers from further victimization and social-emotional problems (e.g., Saarento et al., 2015; Sainio et al., 2011). Yet research on the effects of defending for defending students themselves demonstrated both positive and negative social-emotional outcomes (e.g., Lambe et al., 2019; Ma et al., 2019). These mixed findings may be explained by two hypotheses, i.e., the defender protection hypothesis and defender vulnerability hypothesis (Malamut et al., 2021). The defender protection hypothesis assumes that protective factors may weaken the association between defending and negative outcomes, and may even link defending with positive outcomes. The defender vulnerability hypothesis assumes that there is an association between defending and negative outcomes only for individuals who have a vulnerability.

This study aims to test both hypotheses by investigating whether classroom relationships, i.e., relationships with teachers (closeness and conflict) and peers (peer acceptance and peer rejection) and combinations of characteristics of both relationships moderate the association between defending behavior and social-emotional adjustment (i.e., depressive symptoms and self-esteem). Based on the defender protection hypothesis, we expected that positive characteristics of teacher-student relationships (i.e., closeness) and peer relationships (i.e., acceptance) will play a protective role in the association between defending and social-emotional adjustment. In line with the defender vulnerability hypothesis, we hypothesized that negative teacher-student relationships (i.e., conflict) and peer relationships (i.e., rejection) put defending students at risk for negative social-emotional outcomes.

### **Method**

This three-wave longitudinal study examined the association between peer-nominated defending and later self-reported social-emotional adjustment (i.e., depressive symptoms and self-esteem) in 848 fourth-to-sixth graders (53% girls; Mage = 10.61 years, SD = 0.90 at Wave 1). Positive and negative teacher-student relationships (closeness and conflict) and peer relationships (acceptance and rejection) were assessed with peer nominations.

### **Results**

Clustered multiple linear regression analyses demonstrated that defending behavior did not predict later depressive symptoms or self-esteem. Contrary to our expectations, teacher-student closeness, peer acceptance and a combination of both did not play a protective role in the association between defending and social-emotional adjustment. In addition, teacher-student conflict, peer rejection and a combination of both did not put defending students at risk for negative social-emotional outcomes.

### **Conclusions**

To conclude, teacher-student closeness, teacher-student conflict, peer acceptance and peer rejection did not moderate the association between defending and social-emotional adjustment. This study thus did not find evidence for the defender protection and defender vulnerability hypotheses.



## Implications for Research and Practice

The findings of the current study suggest that anti-bullying interventions should continue to encourage students to defend victimized peers in the future. Nevertheless, previous studies (e.g., Malamut et al., 2021; 2022) already indicated that defending students experienced different outcomes, depending on psychosocial risk and protective factors. Additional research on risk and protective factors is thus needed to formulate practical implications on which students may be encouraged to defend their victimized peers and which students may not.

59

## Ethno-religious discrimination and adjustment among Muslim adolescents: The promotive and protective roles of ethnic and religious identification

Julia Marie Christina Wenzing<sup>1</sup>, Maja Katharina Schachner<sup>1</sup>, Nadya Gharaei<sup>2</sup>

<sup>1</sup>Martin-Luther-University Halle-Wittenberg, Halle (Saale), Germany. <sup>2</sup>German Centre for Integration and Migration Research (DeZIM), Berlin, Germany

### Abstract (max 500 words)

Due to rising Islamophobia in Europe today, Muslim ethnic minority adolescents are at great risk of experiencing identity-based harassment at school with often dire negative consequences for their adjustment. This study extends previous research on ethnic discrimination by adding a focus on the religious discrimination of Muslim adolescents and its effect on their psychological (i.e., depressive symptoms and self-esteem) and behavioral adjustment (i.e., disruptive behavior at school). In addition, we consider Muslim adolescents' ethnic and religious identification as two factors that may promote the adolescents' adjustment and protect them from the negative consequences of discriminatory experiences. We used survey data from N = 105 Muslim ethnic minority adolescents (Mage = 13.30, SD = 0.75, 45% female). Factor analysis revealed that the adolescents did not differentiate between ethnic and religious discriminatory experiences. Results show that higher perceived ethno-religious discrimination (PERD) was related to more depressive symptoms. While higher ethnic identification was associated with greater self-esteem, higher religious identification was related to fewer depressive symptoms. Contrary to our expectation, Muslim adolescents who were highly identified with their ethnic group reported more depressive symptoms when experiencing more PERD. Moreover, their self-esteem was negatively affected by higher PERD when possessing high religious identification, while for low religious identification a positive effect of higher PERD on self-esteem was revealed. Thus, despite the direct promotive effects, it seems that ethnic and religious identification also make youth more vulnerable to discrimination. Results highlight the importance of developing evidence-based intervention programs for schools to tackle identity-based harassment.

## The Effects of a Mindfulness-Based Training in an Elementary School in Germany

Christiane Portele, [Petra Jansen](#)

University of Regensburg, Regensburg, Germany

### Abstract (max 500 words)

**Objectives:** The primary goal of this study was to investigate the influence of the Mindfulness Education Workbook, a six-week mindfulness-based tool, on emotion regulation, inhibition, physical self-concept, resources, and global processes. To satisfy the requirement of the current state of research to consider mindfulness with its sub-facets and the targeted effects of the components of mindfulness, we aimed to find measurements for each component and added the concept of connectedness to nature. Furthermore, we explored whether a difference in the number of hours of mindfulness practice would affect the outcome.

**Methods:** Ninety-one children from a public elementary school (M age = 9.74 years, SD = 0.76) participated in the study and were divided into three groups according to their respective school classes. The intervention group was divided into two groups that varied by the number of hours of mindfulness practice: (a) mindfulness-plus and (b) mindfulness. In addition to biweekly training, the mindfulness-plus group repeated daily exercises. The passive control group received the standard school-day instruction. Before and after the mindfulness intervention, the five concepts of emotion regulation (Questionnaire for the assessment of emotion regulation in children and adults, FEEL-KJ), inhibition (Flanker task), physical self-concept (Physical self-concept questionnaire for elementary school-aged children, PSK-K), resources (Questionnaire for resources in childhood and adolescence, FRKJ 8-16), and global processes (Disposition to connect to nature scale, short version, DCN measured. Repeated-measures ANOVAs, with the total scores of the FEEL-KJ, FRKJ 8-16, PSK-K, and DCN; the subscale scores of the FEEL-KJ and the FRKJ 8-16; and reaction times and hit rates in the Flanker task as dependent variables were conducted. The time of measurement (pre, post) serves as a within-subject factor and the three groups (mindfulness-plus, mindfulness, control) as between-subjects factors. For the Flanker task, another within-subject factor condition (congruent, incongruent) was added for a three-way analysis.

**Results:** For the measurement of emotion regulation, there was a significant effect in favor of the two mindfulness groups compared with the control group for the adaptive strategies in total as well as for their comprising emotions anger, fear, and sadness, separately, revealed a significant effect ( $p < .05$ ). Solely for the subscale mood elevation, the mindfulness-plus group showed significantly higher scores compared to the control group. Both mindfulness-plus and mindfulness groups varied from the control group on the measure of emotion regulation strategies, but not on the other four domains that were assessed (self-reports of resources, physical self-concept, connectedness to nature, as well as inhibition). There was no evidence that the additional practice in the mindfulness-plus group significantly added to the intervention's effectiveness.

**Conclusions:** The Mindfulness Education Workbook is a promising tool for elementary schools. Follow-up studies may provide further insights into the various effects of offering mindfulness training in

schools. Further research with objective markers may also allow individual aspects under the umbrella term mindfulness to be investigated in more detail.

78

## **There is More to Parental Mediation of Adolescent Gaming Behavior than Restriction: Developing a Differentiated Measure for Need-supportive and Need-thwarting Mediation Practices in Gaming**

Lowie Bradt, Maarten Vansteenkiste, Bart Soenens

Ghent University, Ghent, Belgium

### **Abstract (max 500 words)**

Gaming is one of the most prevalent and popular leisure time activities of adolescents today. Because gaming, and problematic gaming in particular, may contribute to undesirable behaviors (e.g., online gambling) and reduced adjustment in important life domains (e.g., school), parents may be concerned about their adolescent's gaming behavior. One important way in which parents may play a role in their children's gaming behavior is by setting rules and introducing restrictions, a practice referred to as restrictive parental mediation. In addition, parents can engage in active mediation, thereby engaging in discussions about the content of the games played by their adolescent. However, parental mediation correlates only weakly with maladaptive gaming outcomes, such as gaming addiction (Chen & Shi, 2019). Scholars have therefore suggested that the way in which parents communicate mediation efforts may be important as well (Fikkers et al., 2017). Research has indeed begun to show that parents' style of communicating restrictive and active mediation predicts important gaming outcomes, such as media aggression and gaming addiction, above and beyond the degree of parents' mediation as such. Most studies on the communication style of parental mediation are based on Self-Determination Theory (Ryan & Deci, 2017) and focused on the distinction between autonomy-supportive and controlling communication styles. Because most measures of parents' communication styles are relatively crude and generic, a more differentiated and situation-specific assessment is needed.

The present study aims to develop a more comprehensive measure of parents' mediation styles in the domain of gaming, thereby assessing parents' practices in a more situation-specific manner and attending also to parents' degree of structure (versus chaos). Based on the circumplex model of communication and motivating styles by Aelterman et al. (2019), we developed a new vignette-based questionnaire differentiating between four overall styles (i.e., autonomy-support, control, structure, and chaos), with each one being differentiated into two zones (e.g., participative and attuning approaches within the autonomy-supportive style). These styles are organized in a structure with two dimensions: need-supportiveness and directiveness. The questionnaire consists of twelve situations involving gaming-relevant episodes that take place in the family context and that require some kind of parental mediation. For every situation, we offer parents eight possible reactions, each one corresponding with a different zone in our conceptual circumplex model. Parents are asked to score how probable it is that they would react to that situation in the given way. In this poster, I will present results from two samples of parents of adolescents (N=400 and N=180) demonstrating the internal structure of the questionnaire.

Results show theoretically plausible associations between the need-supportive styles and adaptive gaming outcomes, whereas the need-thwarting styles correlate with maladaptive gaming outcomes. Overall, these two studies provide preliminary evidence for the proposed fine-grained approach to parental mediation in gaming.

79

## **The Investigation of Psychosocial Impact of Social Isolation due to the Covid-19 Pandemic on Preschool Children and Family Functioning**

Farah Aleyna Doğan

Altınbaş University, İstanbul, Turkey

### **Abstract (max 500 words)**

The main purpose of the study is to evaluate the families who spend their time in lockdown with their children during the pandemic process and to determine the psychosocial development of the children in this environment. In the study, family relations and the psychosocial development of preschool children will be evaluated with questions that will be directed to Turkish parents who have children between 3-6 ages. The perceived difficulty experienced by parents and its relation with children's psychosocial development will be explained.

For the method of research, data collection is in the process via online channels (e.g., social media platforms; Instagram, Twitter). The questions of the survey will be asked of parents who are living in Turkey and have children between the ages of 3-6 (35-74 months). The online survey consists of three parts. The first part is the Demographic Information Form which consists of questions such as peer relationships of the child at that period, perceived difficulty by the parent at that period, and difficulty that parent's state for the possible pandemic situation. The second part is The McMaster Family Assessment Device (FAD) which will be used for understanding family processes. The third part is Psychosocial Status Assessment Scale for 3-6 Years-Old Children-Parent Form (PSAS 3-6) which is used to demonstrate the child's psychosocial development.

Data collection is in process. Expected results of this research can be listed as finding a relationship between a) the child's psychosocial development and a family member who was with the child during that period; b) the children who spent time with their peers and their psychosocial development; c) perceived difficulty during the pandemic period and expected difficulty in any pandemic situation; d) family functioning and child's psychosocial development.

In conclusion, this research will explain the psychosocial development of the child and family functioning during the pandemic. Perceived difficulty by parents will be indicated. The most affected and disadvantaged groups of families and children during the pandemic period will be identified. Then, intervention programs may be developed related to those groups of families.

82

## **PARENTAL PARTICIPATION IN PREVENTION AND INTERVENTION OF BULLYING – THE CASE OF SERBIA**

Adrijana Grmuša

Institute for Political Studies, Belgrade, Serbia

### **Abstract (max 500 words)**

This paper is based on a wider research conducted in order to determine bullying in secondary schools in Serbia in the context of the Epstein's model of the school-parent partnership. The situation in the educational system in Serbia is particularly considered in terms of parental participation in the prevention and intervention of bullying. The legislative framework of the Serbian educational system nominally enables parents to participate in all forms of Epstein's parent involvement model. In order to determine the level of participation of these opportunities in practice in Serbian schools, the empirical research was conducted in 19 secondary schools within the Belgrade Statistical Region. The research data which refer to the 2019/2020 school year were collected by interviewing 44 members of the schools' Teams for protection, whereby thematic analysis was used as a method of analyzing these qualitative data. The findings of this research show that participation of these opportunities is at low level in practice. Therefore, the paper suggests some possible solutions for improving parent participation in practice.

87

## **Predicting outcomes of children and adolescents with person-oriented analysis in extramural psychosocial care**

Georg Spiel<sup>1,2</sup>, Elisabeth Stefanek<sup>2</sup>, Tanja Bleis<sup>1</sup>, Markus Heinz<sup>1</sup>

<sup>1</sup>pro mente: kinder jugend familie, Klagenfurt, Austria. <sup>2</sup>pro mente forschung, Vienna, Austria

### **Abstract (max 500 words)**

Pro mente: children youth family (pm:kijufa) is a non-governmental organization that offers care for children and young people experiencing psychosocial problems in outpatient (e.g. outpatient clinics, vocational rehabilitation) and inpatient settings (crisis intervention centers, supported residential care). So far these services have been evaluated with respect to project-specific outcomes, such as mental health, individual goals, and placement on the first-labour market by using variable-centered methods. However, due to the heterogeneity of the clients regarding sociodemographic characteristics, psychosocial problems, psychiatric diagnoses, person-oriented analyzes could be helpful for identifying more homogeneous subgroups of young people who face either higher risk for negative outcomes or

have chances for positive outcomes. For those young people who are in the high risk group, specific measures could be designed and provided in order to improve their outcome or to reduce dropouts.

Questionnaires for the supervising staff, clients as well as caregivers were delivered at the beginning and the end of the program. Furthermore, socio-demographic data such as age, gender, family situation, school education, as well as psychiatric diagnoses were assessed.

Data from 150 young people (60% male; average age 17 years) of vocational rehabilitation were analyzed using configuration frequency analysis (CFA; Krauth & Lienert 1973) with the R-package confreq (Heine et al. 2020). Results of these first exploratory analyzes with sociodemographic variables and diagnosis as dimensions did not reveal any specific pattern of subtypes regarding outcomes.

In a next step together with the supervising staff of the services, hypotheses will be generated, which further characteristics of the attendees (differentiating dimensions and categories) might be candidate parameters for types and antitypes for negative or positive outcomes.

96

## **Children’s private gestures help them control their attention and behavior in the first years of life: paradigmatic examples from everyday contexts of interaction**

Irene Guevara de Haro, Iván Moreno Llanos, Cintia Rodríguez Garrido

Universidad Autónoma de Madrid, Madrid, Spain

### **Abstract (max 500 words)**

Literature on gesture development has focused primarily on the gestures that children produce to communicate with others (e.g., McNeill, 2016). However, different studies with adults and school-age children claim that gestures also have relevant cognitive functions, for instance, lightening loads on working memory and optimizing the learning of abstract contents (Goldin-Meadow; Kita et al., 2017). This has led authors to wonder if early gestures could also perform similar functions.

During the first year of life, studies report that children produce pointing gestures in the absence of interlocutors. Authors, such as Carpendale & Carpendale (2010), propose that self-directed pointings might have functions of attention control, relating them to the first orientation systems (see also Bates et al., 1975). Other authors claim that they have “self-declarative functions” (Delgado et al., 2010). Recent investigations report that children not only self-direct pointing gestures but also ostensive and symbolic gestures. These investigations argue that self-directed gestures might be one of the first means that children use to control their own attention and behavior when trying to accomplish the use of complex objects (Basilio et al., 2017; Moro et al., 2015). They refer to these gestures as private gestures, in analogy to private speech’s function as a key instrument for cognitive self-regulation (Winsler et al., 2000). If language can perform a dual function of communication and self-regulation, it can be assumed that previous non-linguistic semiotic systems, such as gestures, can also fulfill functions of early cognitive self-regulation (Guevara & Rodríguez, submitted). This idea is in line with research that claims

that cognitive control begins to develop during the first year, before language becomes the main instrument of communication and self-regulation (for example, Devine et al., 2019).

Our objective in this communication is to describe the development of different types of private gestures in daily interactions with objects and others. We aim to answer the question: Could children's gestures have functions of self-regulation during the first years of life? To do so, we will present three longitudinal studies carried out in the classrooms of early-years-schools in Spain, in which we have microgenetically observed and analyzed the everyday interactions of children between 4 and 24 months (Guevara et al., 2020; Guevara et al., 2022; Rodríguez & Moreno-Llanos, 2020). We have looked at the relationship between the development of early cognitive control and the development of gestures through the study of children's private gestures.

Through paradigmatic examples, we will show that private gestures are usually observed when children have difficulties in achieving the conventional or symbolic use of a complex object. Specifically, we will present examples of how private gestures are used by children to (1) orient their behavior towards relevant goals, (2) explore alternative solutions to obstacles, and (3) evaluate their actions. Additionally, (4) we will provide examples of children alternating between private and other-directed gestures to request their teacher's help or specific intervention when the goal is too complex. Finally, the teacher's role in the origin and development of private gestures will be discussed.

**97**

## **Infants' evaluation of abstractly depicted comforting behavior**

Szilvia Biro

Institute of Education and Child Studies, Leiden University, Leiden, Netherlands

### **Abstract (max 500 words)**

**Objective:** A large body of evidence suggests that infants can evaluate pro-social behavior in third-party interactions. One form of pro-social behavior however, namely comforting someone, received much less attention. The few existing studies paint a mixed picture about the understanding of comforting behavior. While expectations for comforting behavior in third-party interactions have been shown to emerge universally as early as 4 months (Jin et al, 2018), individual differences of such expectations have also been identified in older infants (Johnson et al, 2007; Biro et al, 2015). The current study, using a manual choice paradigm, examined whether 12-month-olds, after having watched animated abstract characters comfort or ignore a third party in distress, would show a preference for the comforting character. In addition, we investigated the role of animacy cues and infants' self-distress in evaluating comforting behavior.

**Methodology:** Infants were presented with two types of animations in which two abstract figures ("parent" and "baby") got separated and the baby figure started to cry. The parent figure then either returned (Comforting) or moved further away (Ignoring). The color and the shape of the parent figure were different for the two types of behavior, see Figure 1. In Experiment 1 (n = 64, 32 female), both

figures had eyes, while in Experiment 2 (n = 64, 38 female) they did not. Each animation was repeated four times in alternating order. Following the animations, infants were presented with 3D objects of the parent figures. Infants touching, grabbing or pointing at one of the objects were counted as choice. Color, shape, order of animations and object placement were counterbalanced. Infants' distress during the watching of the animations was coded using a 3-point scale based on vocalization and facial expressions.

Results: In Experiment 1, 47 infants made a valid choice with 32 choosing the Comforting and 15 choosing the Ignoring character,  $p = .02$ . In Experiment 2, 51 infants made a valid choice with 21 choosing the Comforting and 30 choosing the ignoring character,  $p = .26$ , see Figure 2. The interaction between the two experiments in terms of the distribution of infants' choice was also significant,  $\chi^2 = 7.13$ , Fisher's Exact Test  $p = .009$ , thus infants only in Experiment 1 were more likely to choose the comforting character. Infants' distress ratings did not contribute to the distribution of the choices in either experiment,  $B <= -.54$ ,  $SE <= .93$ ,  $Wald <= .34$ ,  $p >= .59$ .

Conclusion: Infants by 12 months of age prefer to see comforting behavior when someone else is in distress and infants' own self-distress did not prevent them to evaluate the behavior of the characters. A lack of preference in Experiment 2 could be either explained by the necessity of the presence of human surface feature to categorize the abstract characters as animate entities, or by the attention enhancing effect of eyes to process the observed interactions and connect 2D images to 3D objects. Our findings support the idea of an early presence of "moral sense" in infancy.

98

## Development and evaluation of an intervention to support teachers in tackling bullying and promoting positive classroom relationships

Chloë Finet<sup>1,2</sup>, Heidi Vandebosch<sup>2</sup>, Anouck Lubon<sup>1</sup>, Hilde Colpin<sup>1</sup>

<sup>1</sup>KU Leuven, Leuven, Belgium. <sup>2</sup>University of Antwerp, Antwerp, Belgium

### Abstract (max 500 words)

#### Objective

Bullying victimization is a highly prevalent problem associated with numerous negative outcomes. Teachers may play a central role in preventing and reducing bullying, because they exert an influence on the peer ecology of the classroom. More specifically, according to the classroom peer ecology model of Gest and Rodkin (2011) teachers can impact bullying (1) by their peer-network oriented strategies (e.g., responses to bullying), and (2) by promoting positive relationships with their students. Nonetheless, despite their central role, teachers often feel insecure regarding how to best prevent and intervene against bullying. Therefore, the current study aims to evaluate a new teacher training targeted at supporting teachers to adequately deal with bullying and to promote positive classroom relationships. The training, called the Teachers SUPporting Positive RelaTionships (T-SUPPORT), consists of three half-day sessions for grades 4-6 teachers of primary school.



This presentation will focus on the effects of the intervention on teacher responses to bullying, on the quality of teacher-student relationships and on the level of bullying victimization. We expected that the training would lead to (A) better teacher-student relationships, (B) more frequent use by teachers of active strategies for dealing with bullying and less frequent use of non-intervention, and to (C) lower levels of bullying victimization among students.

### **Methodology**

Ten Belgian primary schools were randomly assigned to either the training or the control condition. During a pre- and post-test assessment, questionnaire data on various constructs including teachers' responses to bullying, the quality of teacher-student relationships and levels of bullying victimization were collected from the grades 4-6 teachers and their students. The schools in the training condition received the training sessions between the pre- and post-test assessment. In this presentation, student-report data (Npre-test= 1059 students in 58 classes) will be used.

### **Results**

To assess the intervention effects, two-level mixed model analyses with a random class group specific intercept to account for the clustering of students (level 1) in class groups (level 2) were performed. A separate model was fitted for each Wave 2 outcome variable of interest. In all models, the wave 1 response on the outcome variable and age and gender were included as covariates. No significant effects of the training on the included outcomes were found (Table 1).

### **Conclusion**

Contrary to expectations, the T-SUPPORT training did not have a significant effect on the included outcome measures. Given the existing theorizing and literature on the role of teachers in bullying prevention, it would be unfair to conclude based on the current study that supporting teachers in tackling bullying and promoting positive classroom relationship is not an effective way to reduce bullying. Rather, the question is raised why the training did not result in the hoped-for effects. Possible explanations relate to (a) the impact of the covid-19 pandemic on the implementation of the training, (b) the relative short time span between the final training session and the post-test assessment, and (c) the potential impact of the training on more proximal intervention outcomes (such as teacher cognitions).

**101**

## **Process of removing measures to prevent accidents among children at home: a Japanese study**

Yasuo Kojima

Chukyo University, Nagoya, Japan

**Abstract (max 500 words)**

Accidental injuries and deaths of children are more likely to occur in the home at younger ages, and parents of infants and toddlers adopt a variety of measures to prevent such accidents. The author previously examined where and what kind of accident prevention practices are implemented in the home among mothers with their first child ranging from 5 months to 1.5 years of age. These measures can be categorized into different groups based on their intended effect: (1) restrict the infant's activities, and (2) prevent the infant from accessing specific places or from touching certain items (Kojima, 2013). These measures represent an effort to explicitly or implicitly impose physical limitations and boundaries inside the home space to separate the environment for adults from that for children, and suggest that this is necessary to ensure children's safety. Meanwhile, as children grow older, it is anticipated that such protective measures will no longer be used, and that the home environment will be shared by parents and children. Thus, a cross-sectional study was conducted to clarify the process by which the home space is shared between parents and children, by identifying when and how measures for protecting children from accidents in the house are removed.

This study was conducted through an online survey via the Internet. A total of 887 mothers from families with preschool children (aged 6 months to 6 years) were presented with 31 accident-prevention measures collected in a previous study (Kojima, 2013) and asked to respond whether or not they were currently implementing these measures. A correspondence analysis was conducted for 21 of the 31 items, excluding those for which the proportion of mothers implementing the practices was less than 30%, etc., and three dimensions were considered (cumulative proportion: 42.0%). The first dimension was the axis of whether or not protective measures were taken. The second dimension was the axis of whether objects that could lead to accidents were kept away from children, or the children were kept away from the objects. The third dimension was the axis of whether measures were implemented on a case-by-case basis or were fixed according to the parents' intentions. Additionally, a cluster analysis (Ward's method) was conducted on the basis of the scores on these three dimensions calculated for each respondent, and the respondents were classified into four clusters. The relationship between the classification of these clusters and the age of the children implies that parents generally progress from the stage of "keep hazardous objects away from children and take countermeasures when necessary" (~1.5 years old), through the stage of "block access to and contact with hazardous places and objects (without keeping the objects away)" (around 1.5 to 3 years old), and to the stage of "reduce countermeasures overall" (around 4 to 6 years old).

These findings indicate that, from their child's infancy to school age, parents' efforts to prevent injuries gradually decrease, and the home environment is eventually shared by both parents and children.

**107**

## **Development and validation of the Online Hate Speech Scale**

Federica Stefanelli, Enrico Imbimbo, Annalaura Nocentini, Ersilia Menesini, Benedetta Emanuela Palladino

University of Florence, Florence, Italy

**Abstract (max 500 words)**

Online Hate Speech (OHS) has become a widespread public concern (e.g., Fortuna & Nunes, 2018). Indeed, recent data show that adolescents' Exposure to OHS ranges from 26% to 63% (Kansok-Dusche et al., 2022). Encouraging bystander interventions in OHS situations (Speaking Up) could be an effective strategy to reduce OHS and/or its negative impact. Indeed, the literature on bullying and cyberbullying suggests that interventions aimed at improving online and offline defensive behaviors are effective in reducing victimization (e.g., Palladino et al., 2016). However, only a few studies have focused on Speaking Up against OHS and little is known about the processes that trigger this prosocial response.

Generally, scientific research on OHS is still scarce and has been challenged by some important limitations. Firstly, although the complexity of the phenomenon requires a multi-item assessment tool to capture its facets, a psychometrically sound scale has not yet been developed (Kansok-Dusche et al., 2022). Despite that, this preliminary step is necessary to deeper the study of the phenomenon.

The aim of this study was to develop a scale for assessing OHS and to analyze its psychometric properties. The scale includes two related factors: Exposure and Speaking Up. The Exposure scale assesses the different nuances of exposure to OHS, distinguishing, for instance, between an exposure that occurs casually while "scrolling" the SNs home page, and the type of Exposure resulting from the friends' network. Similar nuances are detected in the Speaking Up sub-scale too. For example, it is possible to react by anonymously flagging a SN post, while others take action by leaving a comment on a public OHS post.

1855 students ( $M_{age}=15.07$ ;  $SD_{age}=1.18$ ) of 8th, 9th, and 10th grade, nested in 40 schools, were involved in the study.

The construct validity of the OHS Scale was tested through Confirmatory Factor Analysis (CFA). Specifically, a two-factor model including the correlation between the two latent factors OHS Exposure and Speaking Up was run. Moreover, Item Response Theory analyses for polytomous items were applied to investigate the items' properties.

CFA on OHS Scale showed good fit indices ( $\chi^2(19)=228.637$ ,  $p<.001$ ;  $CFI=.962$ ;  $RMSEA=.077$ ;  $SRMR=.050$ ). Moreover, the OHS Scale shows good reliability (Exposure  $\alpha = .74$ ; 95% CI [.71 - .75]; Speaking Up  $\alpha = .86$ ; 95% CI [.85 - .87]). According to discrimination and severity parameters obtained from IRT analysis, all items were able to distinguish people with different levels of Exposure and Speaking Up. Moreover, as expected, the four b threshold parameters increase in the level of the latent trait at each subsequent response.

In conclusion, the OHS Scale may be helpful for future quantitative studies that will shed more light on the OHS phenomenon in terms of predictors, consequences, and developmental trajectories. In addition, the OHS assessment with a psychometrically sound measure could be useful to test the efficacy of interventions aimed at preventing OHS Exposure and boosting Speaking Up against OHS among adolescents.

109

## Development and Validation of the Emotion Regulation Scoring System (ERSS) - an Observational Tool to Assess Emotion Regulation in Preschoolers in Play Situations with Peers

Pablo Nischak<sup>1</sup>, Sonja Lorusso<sup>1</sup>, Tatiana Diebold<sup>1</sup>, Carine Burkhardt Bossi<sup>1</sup>, Sonja Perren<sup>1,2</sup>

<sup>1</sup>Thurgau University of Teacher Education, Kreuzlingen, Switzerland. <sup>2</sup>University of Konstanz, Konstanz, Germany

### Abstract (max 500 words)

The ability to understand, express and control emotions and behaviors has often been linked to children's developmental outcomes. Young children who experience intense negative emotions and who cannot regulate them are likely to suffer social relationship difficulties with caregivers and peers that can further impact or shape the children's socio-emotional development.

When intensity, duration or other parameters of the experience and expression of emotion are 'too much' or 'too little' to meet goals and expectations of the child and/or social partners, emotion regulation is needed. Emotion regulation can be understood as the modulation of an emotional experience or the behavior or situation associated with the emotional experience. Thus, emotion experience and expression, emotion modulation and self-regulation strategies are part of the emotion regulation process.

Even though emotion regulation has gained strong interest in the research community in the past decades, there is still a shortage of suitable instruments to assess this construct in early childhood. Researchers heavily rely on teacher and caregiver report as well as standardized assessments that aim to measure emotion regulation in hypothetical situations. There are only few tools that are suitable to observe young children's emotion regulation in semi-standardized or real-life situations and even less that are applicable in the peer context. Therefore, we developed and validated the Emotion Regulation Scoring System (ERSS) - an instrument to observe preschoolers' behavioral aspects of emotion regulation and social behavior in semi-standardized dyadic play situations.

The ERSS was developed and tested in a pilot study and aims to operationalize the afore mentioned parts of the emotion regulation process. Four observable subscales were developed - emotion expression (e.g., excitement/joy, anger/frustration), responses to emotion-eliciting situations (e.g., distraction, self-soothing), emotion regulation (e.g., remains on a high emotional level, inhibits emotion related actions) and social behavior (e.g., sociability, cooperation). The ERSS will be validated in a new study.

3- to 4-year-old preschool children (N = 120) from Swiss playgroups were videorecorded playing each three times with different peers (N = 360 observations) in two semi-standardized play situations (building blocks, micro robotic bugs). The recordings were coded by trained raters using the ERSS. Furthermore, the playgroup educators and the children's parents completed a variety of well-established questionnaires regarding the children's emotion regulation (CBQ-VSF (Putnam & Rothbart,

2006), ERC (Shields & Cicchetti, 1997), ERSQ (Mirabile, 2014), KOMPIK (Mayr, 2012)). In addition, the children's emotion regulation was assessed with standardized tests to induce frustration and surprise from Lab-TAB (Gagne et al., 2011).

The factorial validity will be analyzed with a confirmatory factor analysis. Furthermore, the aggregated ERSS scores will be correlated with the parents' and educators' questionnaire results as well as the results of the Lab-TAB tests to assess the convergent validity. The analyses will be carried out in R and SPSS.

The results will be discussed whether the ERSS is a suitable instrument to observe the emotion regulation of preschoolers in semi-standardized play-situations and thereby fill the gap of observational instruments to assess emotion regulation in preschoolers.

## 123

### Patterns of early developmental milestones in children with atypical development

Dalia Nasvytienė, Tomas Lazdauskas

Vilnius University, Vilnius, Lithuania

#### Abstract (max 500 words)

**Objective** of the study was to identify the actual developmental level and temperament attributes in infants and children with atypical development. **Methodology.** The sample consisted of 97 children between 5 and 36 months of age ( $M = 23.64$ ,  $SD = 9.57$ ), with 55 being boys and 42 girls. In this sample, 27 children were born preterm ( $\leq 36$  weeks of gestation), 54 children had a diagnosis of specific developmental disorder (SDD), and 16 children were diagnosed with a pervasive developmental disorder (PDD). Lithuanian version of the Child Development Scale (CDS; Matczak et al., 2007) was used. It is a standardized, individually administered instrument to assess actual developmental status of infants and children from 1 to 36 months. CDS consists of Performance and Observation scales. Performance scale is made up of 10 tests, each of an age-specific set of tasks to evaluate motor, language, cognitive, and socio-emotional domains. Infant and child performance yields overall score as well as particular scores on each age-specific domain. For this research we analyze only the overall score classified into five qualitative developmental levels i.e., very low, low, medium, high, and very high. The Observation scale provides data on the test takers' behavior during testing according to nine temperament characteristics summarized into four attributes of adaptability (ease of adaptability, positive mood, freedom from distractibility, and persistence), vigor (high activity, approach to novelty, and intensity of reaction), rhythmicity, and sensitivity. The distribution of overall developmental level across the three clinical groups was analyzed using a contingency table. Comparisons between groups were made using the Kruskal-Wallis H test, and the Dunn's post-hoc test was used for pairwise comparisons. A significance level of 0.05 was chosen; Cramer's V and eta-squared values were considered as effect sizes for the contingency table and the Kruskal-Wallis test, respectively. **Results.** Very low and low developmental levels predominated in the sample (74%). A more detailed examination revealed that the distribution of

developmental level was significantly different across the three clinical groups ( $X^2(8) = 20.871, p = 0.007, V = 0.328$ ). This result was also supported by the comparison of developmental level estimates between groups ( $H(2) = 14.106, p = 0.001; \eta^2_H = 0.129$ ): preterm babies had a significantly higher developmental level than both the SDD ( $p < 0.001$ ) and PDD ( $p < 0.001$ ) groups, whereas the latter two groups did not differ in this regard. Differences in temperament attribute of adaptability were most pronounced across the three groups ( $H(2) = 16.765, p < 0.001; \eta^2_H = 0.157$ ), with the highest score in the preterm group and the lowest one in the PDD group. The PDD group also had less expressed rhythmicity ( $p = 0.007$ ) and more expressed vigor than the SDD group ( $p = 0.013$ ). **Conclusions.** Each clinical group has a characteristic set of developmental achievements and temperament attributes. This is important in predicting the timing and targeting of early intervention.

## 128

### **A Psycho-Educational Program for Self-Help Skill Improvements — Issues Identified by Comments and Impressions Expressed by Japanese University Students Who Experienced the Program—**

Mika Sakurai

Kokushikan University, Tokyo, Japan

#### **Abstract (max 500 words)**

##### (1) Objective

The objective of the study is to determine potential issues in the current version of the psycho-educational program so that adequate improvements can be made. This program is based on the choice theory, and is designed to promote Japanese youths' certain self-help skills that help to reduce stress or enable them to cope with other distress. Potential issues of the program were ascertained from thoughts and comments expressed by the Japanese college students who participated in the psycho-educational program. By analyzing the participants' thoughts and comments, we aimed to find out what could be improved so that the program can help more college students to help themselves.

##### (2) Methodology

261 students (male=132, female=129) attending a private Japanese university in Tokyo participated in the above mentioned psycho-educational program three times over a three week period. After the third participation, students were given open-ended questions to which they answer by freely writing down their thoughts and comments on the experience, e.g., what they thought they have experienced, how they felt about going through this experience, etc. The qualitative results were analyzed by using the KJ Method. The KJ Method is used quite frequently in Japan for qualitative data analysis. A group consisting of two university students (non-participants) and one professor categorize responses by similarities. Each category is labeled.

### (3) Results

According to the data, 69 participants responded they understood themselves better after the participation. Of the 53 who gave favourable comments on the program, 3 commented they intended to continue using self-help skills. 20 participants who did not have any particular psychological distress or problems in life at the time said they hoped to put this self-help skills in use if and when they felt a need in the future. There were 3 participants who expressed a possibility of considering counsellor as their carrier. However, there were 8 students that wrote they did not understand the intent of the program, or the work itself was too difficult for them.

### (4) Conclusion

Overall, the program has provided the participants with positive experience, such as better understanding of oneself. Some of them has expressed their willingness to continue using the self-help skills they acquired through this program. On the other hand, there were some who commented they could not understand the intent of the program, or the tasks were difficult. It is our conclusion that we need to make improvements to the program so that its intents will be better understood. One of such improvements could be achieved by providing more detailed explanation on self-help skill acquisition.

132

## Online Parent-mediated Family Cognitive Therapy for Anxiety Symptoms in Children with Developmental Disorders in Japan

Keiko Nogami<sup>1,2</sup>, Takahiro Yamane<sup>1</sup>

<sup>1</sup>Graduate School of Human Development and Environment, Kobe University, Kobe, Japan. <sup>2</sup>Japan Society for the Promotion of Science Research, Tokyo, Japan

### Abstract (max 500 words)

**Objective:** Many children with developmental disorders (e.g., autism) have comorbid anxiety disorders. Long-term efficacy studies have confirmed the superiority of family based cognitive behavioral therapy (FCBT) over child-only CBT for developmentally disabled children with anxiety. This study aimed to develop and examine the effectiveness of an online FCBT program for mothers of highly anxious children with developmental disorders. Moreover, we aimed to examine the relationship between changes by the intervention and daily engagement with the program content.

**Method:** Our program comprised six weekly sessions of 60 minutes each, teaching psychoeducation, family mechanism to maintain child anxiety, how to support anxiety symptoms in children with developmental disorders (e.g., effective communication, graded exposure, step ladders), and management methods for maternal mental health (e.g., breathing exercises). Recruited from a community sample, mothers of children aged 6–12 years who were diagnosed with developmental disorders participated in our intervention. We measured anxiety symptoms, strength and difficulties in children, maternal mental health, parenting stress, and parenting style. Concerning the difficulty of self-

measurement of anxiety in children with developmental disorders, all measurements were conducted by the mothers. The intervention outcome was examined by comparing the participants' average scores in the intervention group ( $n = 24$ ) with those of the control group ( $n = 9$ ). There were no dropouts in the intervention group.

**Result:** In the intervention group, the children were 6–12 years old ( $Mage = 9$ ,  $SD = 1.91$  years) and included 15 boys, and the mothers were 34–52 years old ( $Mage = 43.13$ ,  $SD = 4.99$  years). Contrarily, in the control group, the children were 6–12 years old ( $Mage = 9.11$ ,  $SD = 2.06$  years) and included 7 boys, and the mothers were 30–42 years old ( $Mage = 38.78$ ,  $SD = 4.21$  years) (Table 1). At pre-treatment, there were significant differences in parenting styles between the intervention and control groups. Pre-post analysis revealed significantly meaningful improvement in social anxiety scores of children ( $F(1, 31) = 4.20$ ,  $p < .05$ ,  $\eta^2 p = .12-.16$ ) and maternal parenting styles ( $t(31) = 3.57 \sim 2.20$ ,  $p < .05$ ,  $g_{adj} = .84 \sim 1.36$ ) in the intervention group (Tables 2 and 3). Moreover, we conducted a partial correlation analysis of pre-post intervention difference scores (deducting Post from Pre) with the degree of daily engagement with the program content (Table 4). Some reductions in children's anxiety symptoms and emotional problems showed positive correlations with the practice of graded exposure and exposure to counterconditioning. Significant positive correlations were also found between harsh discipline and negative parenting with breathing exercises ( $r = .45-.50$ ,  $p < .05$ ).

**Conclusion:** As mothers and children increased the frequency with which they conducted the two types of exposure, some anxiety symptoms and emotional problems tended to decrease. Regarding improvements in social anxiety, there was no correlation with any program initiative; other aspects of the intervention may have been responsible for this change. Moreover, breathing exercises may help manage parental and child anger and anxiety symptoms.

147

## Children's resilience to sibling victimisation: the role of family, peer, school, and neighbourhood factors

Elise Sellars<sup>1</sup>, Bonamy R. Oliver<sup>2</sup>, Lucy Bowes<sup>1,3</sup>

<sup>1</sup>Department of Experimental Psychology, University of Oxford, Oxford, United Kingdom. <sup>2</sup>IOE, UCL's Faculty of Education and Society, University College London, London, United Kingdom. <sup>3</sup>INVEST Flagship, University of Turku, Finnish Institute of Health and Welfare, Turku, Finland

### Abstract (max 500 words)

#### Objective

Siblings feature prominently in the lives of most children. The relationship between siblings is formative for children's development and adjustment, and if negative difficult to escape from. Although many siblings experience occasional conflict, some sibling relationships can be the source of victimisation.



There is emerging evidence to suggest that experiencing sibling victimisation is associated with harmful mental health outcomes, such as depression, anxiety, and self-harm.

Identifying the factors which predict better or worse mental health and wellbeing outcomes following exposure to sibling victimisation is important, to inform future interventions to support children who have experienced sibling victimisation. We explored the association between sibling victimisation and later mental health and wellbeing outcomes, and the promotive and risk factors which predicted better or worse mental health and wellbeing following sibling victimisation.

### **Methodology**

We analysed data (N = 12, 521) from participants in the Millennium Cohort Study, a representative longitudinal birth cohort of children born in 2000–2002 across the UK, who reported on sibling victimisation at age 11 and/or 14 years. We identified potential risk and promotive factors from data collected at age 14 at the family (financial strain, overcrowding in the home, parental monitoring, and parent-child relationship), peer (whether cohort member has any close friends), school (school engagement and motivation) and neighbourhood level (whether cohort member feels safe in their neighbourhood). Mental health and wellbeing outcomes (child reported internalising and externalising problems, mental wellbeing, and self-harm) were identified from data collected at age 17.

### **Results obtained**

Our results suggest that over and above pre-existing vulnerabilities at the individual and family level, any experience of sibling victimisation in early and/or mid-adolescence was associated with significantly worse mental health and wellbeing in later adolescence. There was also evidence of dose–response associations between exposure to sibling victimisation and all mental health and wellbeing outcomes at age 17 years.

Factors at the family, peer, school, and neighbourhood level were uniquely associated with better or worse than expected mental health and wellbeing outcomes at age 17 years. Associations were particularly strong for factors in the school environment. For example, having no close friends was a risk factor for worse than expected outcomes following victimisation; whereas higher levels of school motivation and engagement was a promotive factor for better-than-expected outcomes.

### **Conclusions**

Our findings indicate that aspects of the school environment may offer both risk and promotive factors for children experiencing sibling victimisation at home. We argue that a synergy between school and families is needed for effective sibling victimisation interventions.

**149**

**Lexical skills and spontaneous gestures: A comparison between receptive-expressive and expressive late talkers**

Caterina Verganti<sup>1</sup>, Chiara Suttora<sup>1</sup>, Mariagrazia Zuccarini<sup>2</sup>, Arianna Aceti<sup>3,4</sup>, Luigi Corvaglia<sup>3,4</sup>, Arianna Bello<sup>5</sup>, Annalisa Guarini<sup>1</sup>, Alessandra Sansavini<sup>1</sup>

<sup>1</sup>Department of Psychology "Renzo Canestrari", University of Bologna, Bologna, Italy. <sup>2</sup>Department of Education Studies "Giovanni Maria Bertin", University of Bologna, Bologna, Italy. <sup>3</sup>Neonatal Intensive Care Unit, IRCCS Azienda Ospedaliero-Universitaria Bologna, Bologna, Italy. <sup>4</sup>Department of Medical and Surgical Sciences, University of Bologna, Bologna, Italy. <sup>5</sup>Department of Education, Roma Tre University, Rome, Italy

### Abstract (max 500 words)

**Objective of the study:** Studies on late talkers highlighted the importance of describing different profiles within this population. This study examined noun and predicate comprehension and production and use of spontaneous gestures in late talkers according to type of language delay, receptive/expressive-language delay (R/E-LD) vs expressive-language delay (E-LD), and controlling for birth condition, in a structured picture naming game.

**Methodology:** Forty-six children (43.5% low-risk preterm, 56.5% full-term), exposed to the Italian language from birth, with no neurological, sensory, motor or cognitive deficit, were identified as late talkers at 30 months of age (i.e., expressive vocabulary size  $\leq 10$ th percentile at the Italian MacArthur-Bates Communicative Development Inventories). They were distinguished in two groups, i.e., R/E-LD children (n= 11) and E-LD children (n= 35), based on their receptive score at the Bayley Scales of Infant and Toddler Development – third edition. The two groups did not significantly differ on birth condition. Noun and predicate comprehension and production and spontaneous gesture production were investigated by administering an Italian standardized picture naming game (PiNG) that was videorecorded. Spoken answer accuracy (correct, incorrect, no response), modality of expression (unimodal gestural, bimodal spoken-gestural, unimodal spoken) and type of gestures produced (deictic, representational) were coded.

**Results obtained:** Findings highlighted differences between the two groups in terms of spoken answer accuracy, showing that E-LD children provided significantly higher correct answers than R/E-LD children in both comprehension and production subtests. In addition, in the production subtests E-LD children provided significantly more incorrect answers and less no responses than R/E-LD children. Differences emerged also in the modality of expression, where E-LD children produced significantly more unimodal spoken answers than R/E-LD children. Concerning the type of gestures spontaneously produced, E-LD children produced significantly more representational gestures than R/E-LD children.

**Conclusion:** These findings confirmed the presence of more impaired lexical skills, in terms of both noun and predicate comprehension and production, and lower use of representational gestures to express meanings in R/E-LD children with respect to E-LD children. These results underlined the need of assessing not only late talkers' language skills but also gestures, that contribute to characterize distinct communicative profiles, throw light on the nature of late talkers' difficulties and play a valuable role in identifying those children at a higher risk for developmental language disorder.

150

## Pre-Schoolers Attachment Representations, Father Involvement, and Emotion Comprehension in a Portuguese Sample

Maria Costa, Lígia Monteiro, Patrícia Arriaga, Carolina Santos

ISCTE-IUL, Lisbon, Portugal

### Abstract (max 500 words)

The literature has robustly suggested the associations between attachment security and emotional experiences (for reviews, see Cooke et al., 2016; 2019). However, as in many other domains, the literature mainly focuses on mothers, regarded as the primary caregivers, and in many cases considered the main attachment figure, with fathers being viewed as the breadwinners or the fun play companions (e.g., Cabrera et al., 2018). In this study, we explore the role of father involvement in activities implying engagement with the child (e.g., childcare, teaching/discipline, play) (Lamb et al., 1987), in the relations between child attachment representations and their emotional comprehension, during the preschool years, while controlling for the child's sex, age, and verbal IQ.

### Method

**Participants:** The preliminary data apply to 52 Portuguese nuclear families with preschool-aged children (ages 4-6; 29 are boys). Parent's education ranged from high school to graduate studies, and the majority work (>90%). All children attended preschool, and none had identified developmental delays. We are still collecting data and aim to reach 75 families.

**Instruments/Procedures:** Mental representations of attachment were assessed with the Attachment Story Completion Task (Bretherton et al., 1990; Maia et al., 2009). Emotional comprehension (EC) was measured with the Test of Emotion Comprehension (Pons et al., 2004; Dâmaso et al., 2011), and Verbal IQ was assessed via the Wechsler Preschool and Primary Scale of Intelligence-Revised (WPPSI-R, 1989; Seabra-Santos et al., 2003). Both parents independently reported on the parental involvement scale (Monteiro et al., 2008). Due to high ICC between parents reports a composite measure for father involvement (engagement) was calculated. Data collection and coding are ongoing. Regarding children's attachment representations, the security score is presented, but we expect to identify who the child uses in each story (mother, father, or both) to cope with the problems/stressors. Inter-rater agreement for 25% of the 52 participants included is .85; for those subjects, the final Security score corresponds to the mean of both raters' scores.

### Results

Bivariate correlations showed that attachment security ( $r = .34$ ;  $p = .012$ ), and the emotion comprehension ( $r = .48$ ;  $p < .001$ ) scores were significantly associated with the child's age. No associations were found with verbal IQ, and child's sex. Attachment security was marginally associated with EC ( $r = .27$ ;  $p = .055$ ). Father involvement was positively correlated with EC ( $r = .29$ ;  $p = .047$ ). With the full sample, we will test a model with EC as an outcome, attachment security as the predictor and father involvement as the moderator.

## Discussion

Results will be discussed considering attachment theory as well as father involvement, and its contributions to child development.

**151**

## **The social perception of victims. Studies on children and adult participants.**

Katarzyna Myślińska Szarek, Wiesław Baryła

SWPS University, Sopot, Poland

### **Abstract (max 500 words)**

The main aim of the current project concerns the social perception of victims. In particular, we aimed to investigate the perceptions of victims of immoral behaviour in terms of ascribing them agentic and communal traits (warmth and competency) among children aged 4-6 years and adults. In the present project, we intended to verify three main hypotheses: 1) Both children and adults perceive victims as more moral than non-victims, 2) victims are perceived as less competent than non-victims, 3) neither children nor adults will want to affiliate with the victims,

The project consists of three experimental studies with children (2 studies) and adults (1 study) participants. The 175 children (4-6 years old,  $M = 5.20$ ,  $SD = 0.75$ ) and 469 adults ( $M_{age} = 29.15$ ,  $SD = 8.84$ ) participated in the experiments. During the procedure, each participant was presented with a story (adults) or a puppet show (children) in which one of the characters was the victim of immoral behaviour. In the children's experiments, the immoral behaviour was stealing a block needed to build a tower; in the case of adults, it was stealing an iPad. In each of the three studies, we also included two additional conditions: accidental (the transgression happened by a mishap) and control (without a transgression). Then each participant was asked about their attitude towards the victim: how moral and competent the victim was, and about willingness to affiliate with the victim as well as whether they would prefer to punish the perpetrator vs. compensate the victim.

The results of the first study with children showed that children assessed the victim in the experimental condition as more moral than in the accidental and control conditions. Also, children assessed the victim in the experimental condition as less competent and intelligent than in the accidental and control conditions. Figure 1 presents the results. The results of Study 2 replicated the effect found in Study 1. In Study 2, we also asked children which potential partners they would like to: a) do the goal-oriented task and b) play with (be friends). Consistently with perceived competency, children did not want to choose the victim puppet for doing a goal-oriented task. Surprisingly, children did not also choose a victim puppet for being a friend; only 11 (out of 41) in the experimental and seven children in accidental harm condition preferred the victim. The results of the study on adults also confirmed the hypotheses. Participants perceived victims as more moral than non-victims. More importantly, participants assessed the victim as less agentic (competent/intelligent) than non-victims. Figure 2 presents the main results.

Moreover, the results showed a significant, moderate correlation between the perception of the victim's agency and blaming the victim in the experimental condition (but not in other conditions).

The present studies extend the existing research showing that victims of the immoral act are perceived as more moral but less competent than non-victims by children and adults, which might result in their social rejection.

**154**

## **A Clinical Report on the Hidden Phenomenon of Parental Burnout in China, like a Fragile Sandwich without Scaffold**

Yan Fei WU

UCL, LLN, Belgium

### **Abstract (max 500 words)**

Parental burnout in China is still an unspoken phenomenon that has been largely overlooked by society possibly due to certain particularities of the Chinese culture and society. This research shed light on this issue, revealing the struggles of Chinese parents who are caught in the middle of two generations like the fragile filling of sandwiches- having stress from both sides (own parents and children) without a scaffold (government service) around to support it. The researcher is a family therapist specializing in adolescent disobedience. The data come from the researcher's 6-year intervention with noncompliant, suicidal, and dropout adolescents from more than 300 families with parents aged between 35 and 46 years old. It is observed that even though adolescents were sent in for treatment by their parents, the parents themselves are where the real/serious problems factually lie. Such an observation is in line with the latest research findings that parental burnout bears consequences in child-related outcomes. During the intervention with their adolescents which also involved their parents, Chinese parents are found overwhelmed since childhood by the psychological demands of their own parents, who are from a traumatized generation due to historical reasons. They are meanwhile, also overwhelmed by their children, who are part of a more individualized generation than the parents themselves. This leaves the parents feeling like the fragile filling of a sandwich in the family, with insufficient resources to live up to all their responsibilities. Resources include socio-economic resources such as money and guanxi and personal resources such as psychological capital, time, and physical energy. Further, the Chinese government provides no substantial support yet for parents in need, leaving this "fragile sandwich" without a scaffold. Consequently, parents get burnout. IPA (Interpretative Phenomenological Analysis) was employed to profoundly capture the nuanced lived experiences of Chinese parents with their burnout. The researcher has developed a therapeutic intervention model to help Chinese parents cope with their parental burnout as a necessary step to help solve their adolescents' so-called problems. This model has been proven to be effective, it encourages parents, particularly mothers, to prioritize self-love and employ a more balanced approach to fulfilling all their responsibilities. This research has three contributions. Firstly, it calls up attention to a phenomenon that is necessary to be urgently addressed as well as provides valuable qualitative insight into this phenomenon; secondly, a therapeutic intervention model is provided which suits the Chinese context; and thirdly, current literature on

parental burnout finds parental burnout more prevalent in individualistic countries than in collective countries, this research provides further explanations to consider on this point. The major limitation of this research is that some parents are not ready to confront the reality that they might be burnt out and more problematic than their children, hence the diagnosis of burnout was sometimes made in an indirect and discrete way, instead of a straightforward question-and-answer fashion.

155

## Relationship between finger gnosis and number line strategy at children.

Atsushi Asakawa<sup>1</sup>, Mayo Yamada<sup>2</sup>

<sup>1</sup>Ehime University, Ehime, Japan. <sup>2</sup>Fukuyama City University, Hiroshima, Japan

### Abstract (max 500 words)

Finger gnosis, the ability to identify the form and position of fingers without visual feedback, has been shown in previous studies to have a correlation with and to selectively predict arithmetical abilities in children (Noël, 2005; Gracia-Bafalluy & Noël, 2008; Wasner, Nuerk, Martignon, Roesch, & Moeller, 2016). Furthermore, Zhang, Wang, & Zhang (2020) discovered that finger gnosis correlated with the mental number line in young children. However, previous studies have not yet clarified the relationship between finger gnosis and number line estimation in children.

In this study, an experiment was conducted on 68 elementary school students (33 first graders and 35 second graders) to clarify the relationship between their finger gnosis and number line strategy. Number line estimation was measured through an estimation task, in which printed number lines (20 cm in length) with anchor points of 1 (to the left) and 10 (to the right) were presented to the children, and they were asked to mark the position of a given number (2-9). The accuracy of the estimates was measured by calculating the error rate (ER) using the formula  $ER = |\text{estimate} - \text{real value}| / \text{interval of real value}$ . The strategy during the number line estimation task was classified as either relational or counting strategies.

To investigate the relationship between finger gnosis and number line strategy, a t-test was performed using ER and finger gnosis scores as dependent variables, and number line strategy (relational or counting strategies) as independent variables. The results indicated that the relational strategy group had a lower ER compared to the counting strategy group ( $t(65) = -2.013$ ,  $p = .048$ ,  $d = -.496$ ), but there were no significant differences in the mean of finger gnosis between the relational strategies and counting strategies. These findings suggest that there is no association between finger gnosis and number line strategy.

157

## **ARE GENERAL MOVEMENTS IN INFANCY RELATED TO COMMUNICATION SKILLS AT THE AGE OF 15 MONTHS IN TYPICAL NEWBORNS**

Ivana Jandroković<sup>1</sup>, Maja Cepanec<sup>2</sup>

<sup>1</sup>Centre for Clinical Practice and Education, Faculty of Education and Rehabilitation Sciences University of Zagreb, Zagreb, Croatia. <sup>2</sup>Faculty of Education and Rehabilitation Sciences University of Zagreb, Zagreb, Croatia

### **Abstract (max 500 words)**

Communication skills are the foundation for learning verbal and social skills and for overall good social and cognitive development later in life. Delays in early communication are considered early markers and contributors to several neurodevelopmental disorders later in life. General movements (GMs) assessment is a well-documented and valid approach for predicting motor development with the highest prognostic value for high-risk neonates at 8-20 weeks of age after birth (fidgety movements). Recent studies show that assessment of GMs can be predictive for general development, including cognitive development, ADHD, and autism spectrum disorders. There remains a paucity of research on the predictive value of general movements in healthy infants, particularly for later development of language and communication skills. The aim of this study is to measure correlation of GMs with communication development at 15 months of age after birth. The study will be conducted on 40 typically newborn infants. General movements will be assessed 5 weeks after birth and 9 weeks after birth using the Hadders-Algra validated General Movement Assessment. The final assessment of communicative skills will be performed at the age of 15 months using the Croatian version of Communicative Development Inventory (CDI). Based on previous research on the quality of general movements and their predictors of non-motor disorders in children, we expect that the quality of GMs at 5 and 9 weeks of age will be related to communication outcomes at 15 months of age.

159

## **Pathways to Children's Emotional Eating: Child Self-Regulation, Parental Feeding Styles, and Emotional Eating Behaviors**

Merve Nur Altundal, İbrahim Hakkı Acar

Özyeğin University, İstanbul, Turkey

### **Abstract (max 500 words)**

Children's early emotional eating (EE) is related to later weight problems in children (Webber et al., 2009), depression and anxiety (Eddy et al., 2007), the onset of binge eating (Stice et al., 2002), and bulimia nervosa (Ricca et al., 2012). Emotional eating (EE) refers to children's eating responses

regardless of the presence of satiety when they are emotionally aroused to cope with these intense emotions, such as when they feel stress, anxiety, anger, or boredom (Sleddens et al., 2008). Parents may reinforce or discourage children's EE behaviors through feeding styles (Carper et al., 2000; van Strien & Bazelier, 2007). Parental use of food when the child is emotionally aroused may result in children pairing the food and comfort to escape the unpleasant emotions (Blissett et al., 2010). Due to this association, self-regulatory problems -referring to difficulties in managing behaviors, emotions, and thoughts according to the context- and maladaptive forms of eating, like emotional eating, may occur (Bruch, 1948; 1964; Karoly, 1993). EE is considered a maladaptive form of eating behaviors, determined by both individual and environmental factors. Revealing the child-driven and parent-driven antecedents of EE will shed light on understanding the underlying mechanisms of EE in children. From this perspective, we aimed to explore transactional association among parental feeding styles and children's self-regulation in predicting EE during preschool years.

We collected data from a total of 231 children between 36 and 76 months ( $M (SD) = 59.4 (8.7)$ , girls %45.9) in the fall semester and six months later in the spring semester. Children's EE was measured with the emotional overeating subscale of the Children's Eating Behavior Questionnaire (Wardle et al., 2001; Yilmaz et al., 2011), and parental feeding styles were measured with emotional feeding and control feeding subscales of Parental Feeding Style Questionnaire (Wardle et al., 2002; Özçetin et al., 2010) via parental report. Children's self-regulation was measured via Preschool Self-Regulation Assessment (Smith-Donald et al., 2007; Carlson, 2005), including Balance Beam, Pencil Tap, Tower Task, Snack Delay, and Gift Wrap tasks. All the measures have been widely used with Turkish children (Acar et al., 2019; Veziroglu-Celik et al., 2018).

Cross-lagged panel models were run using the Mplus 8.4 (Muthen & Muthen, 2017). Children's emotional eating behaviors in spring were predicted by child self-regulation ( $\beta=.22$ ) and parental emotional feeding ( $\beta=.17$ ) in the fall. Parental emotional feeding and control feeding are also related to children's emotional eating concurrently, ( $\beta=-.40$ ,  $\beta=-.22$ ) in fall, respectively, and ( $\beta=-.37$ ,  $\beta=-.22$ ) in spring, respectively.

Our results show that children's emotional eating behaviors are significantly related to both child- and parent-driven factors. This result also suggests that emotional eating is a complex and multifaceted behavior based on both individual and environmental factors (Puder & Munsch, 2010). Grounded on the findings from the current study, intervention programs could tailor their content by including both child and family characteristics to understand children's emotional eating behaviors.

**160**

## **Comparing full- and pre-term neonates' heart rate variability between neonates' rest state and spontaneous interactions with their parents**

Theano Kokkinaki<sup>1</sup>, Maria Markodimitraki<sup>2</sup>, Giorgos Giannakakis<sup>3</sup>, Giannis Anastasiou<sup>4</sup>, Eleftheria Hatzidaki<sup>5</sup>

<sup>1</sup>Child Development and Education Unit, Laboratory of Applied Psychology, Department of Psychology, University of Crete, Rethymnon, Greece. <sup>2</sup>Department of Preschool Education, Rethymnon, Greece.



<sup>3</sup>Institute of Computer Science, Foundation for Research and Technology, Heraklion, Greece. <sup>4</sup>Cardiology Department, University Hospital of Heraklion, Heraklion, Greece. <sup>5</sup>Department of Neonatology/Neonatal Intensive Care Unit, University Hospital of Heraklion, School of Medicine, Heraklion, Greece

### **Abstract (max 500 words)**

**Objective of the study:** Environmental challenges in the postnatal days play a crucial role in the development of parasympathetic system and maturational course of sympathetic regulation may be altered by physiological challenges in the Neonatal Intensive Care Unit (NICU). Preterm infants in NICU experience chronic exposure to stressors. Preterm neonates show decreased Heart Rate Variability (HRV) compared to full-terms. The research question of this study was: Are there differences and similarities in HRV metrics of full-terms and pre-terms from neonate rest state to neonate-parent spontaneous interaction?

**Methodology:** Short-term recordings of HRV parameters (time and frequency-domain indices and non-linear measurements) of 28 premature healthy neonates were compared with metrics of 18 full-terms. HRV recordings were performed at home at term-equivalent age from neonate rest state (T11) to neonate interaction with the parent (T12).

**Results:** Between T11 and T12, heart rate and total power increased while  $\alpha_2$  decreased for both full-terms and preterms. Very Low Frequency (VLF) peak decreased for full-terms and VLF (%) increased for preterms. These imply a common coactivation of sympathetic and parasympathetic systems for both preterm and full-term neonates and an additional increase of the parasympathetic function for preterms.

**Conclusions:** Premature neonate-parent spontaneous interaction may reinforce neonates' autonomic nervous system maturation. The findings of this study may have implications for interventions to reduce the adverse environmental impacts on preterms' autonomic nervous system development, to mitigate exposure to stressors in NICUs and to enhance maturation of the autonomic nervous system of preterm neonates.

**Keywords:** heart rate variability (HRV), time-domain indices, frequency-domain indices, non-linear measurements, very low-frequency band (VLF), preterm neonates, full-term neonates, spontaneous neonate-parent interaction

**161**

### **Mindfulness-based imagery training program for parents (MBIP): A qualitative study of the user experience of MBIP**

Timo Teräsahjo

University of Turku, Turku, Finland

**Abstract (max 500 words)**

Mindfulness-based imagery training for parents, MBIP, is a mobile application in which the practice of mindfulness is directed to the imagined parent-child interaction situations. The MBIP contains a 10-day training program (10-15 minutes per day) to support parental mentalization e.g. capacity of the parents to envision their child as being motivated by internal mental states. In this study, three parents are interviewed about their experience of using MBIP recordings. Interviews are analyzed by a phenomenological method used to uncover subjective experience of mindfulness-based imagery training. The results are discussed in relation to mentalization theory.

163

**Differences in parental stress and parental self-efficacy among parents of gifted children with ADHD compared to parents of gifted, ADHD, and neither gifted nor ADHD children: preliminary results.**

Juliette François-Sévigny, Mathieu Pilon

University of Sherbrooke, Montréal, Canada

**Abstract (max 500 words)**

**Background:** The emotional and behavioral characteristics of gifted children with attention deficit hyperactivity disorder (ADHD) can be sources of stress for their parents. Although parental stress has many negative consequences on physical and psychological well-being, no study has yet investigated at the parental stress of parents of gifted/ADHD children. The scientific literature raised the importance of studying parental stress by addressing its relationship with parental self-efficacy. The purpose of this study aimed to examine the levels of parental stress and parental self-efficacy of parents of gifted/ADHD children compared to parents of: gifted children (1), ADHD children (2), neither gifted nor ADHD children (3).

**Methods:** Although 105 parents of children between the ages of 6 and 16 years were currently recruited, the present preliminary analyses were conducted on 40 of them. Based on clinical assessment utilizing the K-SADS, the WISC-V and other neuropsychological tests, parents of children were allocated in four groups: gifted/ADHD (n = 21), ADHD (n = 8), gifted (n = 5) and control (n = 6).

**Results:** Mann-Whitney U-Test analyses indicated that parents of gifted/ADHD children have significantly higher levels of parental stress than parents of gifted children or ADHD children. Parents of gifted/ADHD children also felt the least effective in seeking support to help them as parent. Further analyses of all participants will be included in the formal presentation.

Conclusion: The results of this study will help fill gaps in the scientific literature on parenting stress in parents of gifted/ADHD. A few avenues of intervention arising from these results, aimed at psychosocial professionals, will be put forward to help parents of gifted/ADHD children in the management of their parental stress, who are too often left out of account.

**167**

## **The Association between Personal, Parental, and School-Related Factors and Resilience among Arab and Jewish Adolescents**

Heba Awawdi

University of Haifa, Haifa, Israel

### **Abstract (max 500 words)**

According to the developmental and ecological systems perspective of resilience (Masten, 2021; Ungar, 2018), individuals draw on internal and external factors such as family, school, community, and culture to counter adversity. The main objective of the current research is to examine associations between personal and contextual factors, and Arab and Jewish adolescents' resilience. The research applies culturally sensitive explorations, since Arab and Jewish societies hold different values (i.e., collectivism vs. individualism). It also integrates the self-determination theory, which suggests that satisfaction of the basic psychological needs (autonomy, competence, and relatedness) is critical for psychological health (Ryan & Deci, 2017).

Resilience is examined through the three-factor model of personal resiliency (Prince-Embury, 2014), which is comprised of two protective factors - sense of mastery, and sense of relatedness, and a vulnerability factor - emotional reactivity. Personal factors that will be examined are hope, help-seeking, religiousness, and satisfaction of basic psychological needs. Parental factors that will be examined are autonomy-supportive and psychological controlling parental practices. Findings of previous studies are inconsistent regarding the importance of autonomy needs, and the association between parental psychological control and adolescents' adjustment within collectivistic societies. Within wider social systems, sense of school connectedness is examined.

This report is based on initial data collection from 77 participants, including 46 Arab and 31 Jewish adolescents (64% female, 36% male, mean age= 15.9), from low to middle socioeconomic status. Research hypotheses are: 1) adolescents' hope, religiousness, satisfaction of basic psychological needs, willingness to seek help and school connectedness will be positively associated with resilience, while a negative association will be found with self-stigma of seeking professional help; 2) parental autonomy support will be positively associated with resilience, while parental psychological control will be negatively associated with resilience.

Preliminary findings show that all scale reliabilities were good to excellent (0.79-0.97). Hope, satisfaction of basic psychological needs, and sense of school connectedness correlated positively with sense of mastery and sense of relatedness, and negatively with emotional reactivity. Additionally, religiousness

correlated positively with sense of mastery. Negative correlations were found between self-stigma of seeking professional help, and sense of mastery and sense of relatedness. Furthermore, parents' autonomy support correlated positively with sense of mastery and sense of relatedness, and negatively with emotional reactivity. Results also show that parents' psychological control correlated negatively with sense of mastery and sense of relatedness, and positively with emotional reactivity. Differences between groups were examined by a one-way ANOVA analysis. Results show significant effects of several factors, such as hope, self-stigma, satisfaction of basic psychological needs, and parental psychological control.

The initial results suggest that adolescents with high levels of hope, satisfaction of basic psychological needs, and religiousness, and lower levels of stigma of seeking professional help, are likely to have high levels of sense of mastery and sense of relatedness, and low levels of emotional reactivity as vulnerability factors. Future analysis will be applied using quantitative and qualitative approaches. The results will be discussed with possible implications for clinical work with adolescents from different socio-cultural contexts.

**174**

## **Educators' Mental State Language During Group Level Instruction and Children's Theory of Mind in the Preschool Setting**

Aisling Mulvihill, [Charlotte Casey](#), Rebecca Armstrong, Jonathan Redshaw, Nerina Scarinci, Virginia Slaughter

The University of Queensland, Brisbane, Australia

### **Abstract (max 500 words)**

During the preschool years, children begin to acquire an understanding of their own and others' mental states (e.g., desires, knowledge, beliefs and emotions), typically referred to as theory of mind (ToM). Linguistic experiences in a child's environment contribute to their ToM development. In particular, the frequency and quality of maternal mental state language use explains individual differences in ToM for preschool children (Tompkins et al., 2018). Beyond the home context, research that examines associations between caregiver or educator mental state language use and child ToM is noticeably sparse. Internationally, the Organisation for Economic Co-operation and Development (OECD) reports an Early Childhood Education and Care enrolment rate of 87.2% for 3- to 5-year-old children across 27 OECD countries (OECD, 2019). Notwithstanding this statistic, the role of educators' naturalistic mental state language has undergone limited examination as an environmental determinant of child ToM. This study examined the relationship between 13 early childhood lead educators' mental state language content and quality, and 77 preschool children's (3- to 5-years) ToM. Additionally, this study considered whether a relationship between the lead educators' mental state language and child ToM varied according to the child's exposure to their educator or maternal self-reported preference for elaborated mental state language use. Educator language samples were elicited during two naturalistic group-level classroom activities (i.e., wordless picture book storytelling and an instructional building task) and later transcribed and coded for mental state content and quality. To account for well-

established determinants of ToM, child language, family socio-economic status, and the presence of same-aged siblings were measured. Using generalized linear mixed models, results indicated no significant relationship between the content and quality of educator mental state language use and children's ToM in the preschool setting, even when accounting for the time a child spent with their educator and maternal self-reported mental state language preference. Null findings persisted for measures of mental state language content and quality elicited during two conventional forms of group instruction in the preschool setting. Although the findings of this study challenge the assumption that educators' mental state language is important for children's ToM development, it is important to acknowledge that there may be a relationship between other, unmeasured features of mental state language and preschool children's socio-cognitive development. Important directions for future research will be discussed.

**176**

## **Young Children's Awareness and Endorsement of Group-Based Inequality in Society**

Michal Reifen-Tagar<sup>1</sup>, Ghadir Zreik<sup>2</sup>, Roni Partouch<sup>1</sup>

<sup>1</sup>Reichman University, Herzliya, Israel. <sup>2</sup>Max Stern College, Emek Yezreel, Israel

### **Abstract (max 500 words)**

How early are children aware of (and endorse) group-based inequality in their society? We examine this question with 4-9-year-olds (N=345) in the context of Jewish (majority) and Arab (minority) relations in Israel, a context rife with institutional discrimination. Among adults, awareness of social hierarchy has different consequences for high-power and low-power group members. For members of high-power groups, realizing their advantage often increases justification (and therefore perpetuation) of inequality. For members of low-power groups, realizing their disadvantage can motivate a desire for social change but often also harms mental and physical well-being. As such it is important to examine how early children become aware of power disparities in their society. We developed a new measure to gauge children's expectation for discrimination based on ethnic identity in the allocation of State-funded resources. Specifically, we presented children with a joint pictorial representation of two towns – one in which everyone speaks Hebrew and one in which everyone speaks Arabic. Children were then asked to locate where in between the two towns they expected the Government to build different public structures (a playground, a mall, a hospital). The structures were presented one at a time and described as desired and valuable for both towns. Next, we asked the children to indicate where they themselves would build each of these structures if they had the power to decide. We found that Jewish-Israeli and Arab-Israeli children differed in their expectations but not their preferences for inequality. Jewish children expected the Government to advantage Jewish over Arab communities, whereas Arab children did not expect inequality. Furthermore, when asked for their own preferences, children from both groups similarly located the public structures closer to their own ingroup's town. Considering children's expectations and preferences for inequality in unison yielded a strong difference between the two groups. Whereas Jewish children demonstrated a match between their own preferences and what they expected the government would do, Arab children demonstrated a gap between the two. We discuss

potential sources and consequences for these findings as they relate to the perpetuation of hierarchy between groups in society.

**184**

### **Family Factors to Predict Adolescents' Emotional Health by Decision Tree Model: A Comparison Between Normally Developed Group and Chronic-Condition Group**

Yi Huang

Faculty of Social Studies, Masaryk University, Brno, Czech Republic

#### **Abstract (max 500 words)**

The increasing trend of adolescents' emotional symptoms has become a global public health problem. Especially, adolescents with chronic diseases or disabilities face more risks of emotional problems. Ample evidence showed family environment associates with adolescents' emotional health. However, the categories of family-related factors that most strongly influence adolescents' emotional health remained unclear. Additionally, it was not known that whether family environment influences emotional health differently between normally developed adolescents and those with chronic condition(s). Health Behaviours in School-aged Children (HBSC) database provides mass data about adolescents' self-reported health and social environmental backgrounds, which offers opportunities to apply data-driven approaches to determine critical family environmental factors that influence adolescents' health. Thus, based on the national HBSC data in the Czech Republic collected from 2017 to 2018, the current study adopted a data-driven method, classification-regression-decision-tree analysis, to investigate the impacts of family environmental factors, including demographic factors and psycho-social factors on adolescents' emotional health. The results suggested that family psycho-social functions played a significant role in maintaining adolescents' emotional health. Both normally developed adolescents and chronic-condition(s) adolescents benefited from communication with parents, family support, and parental monitoring. Besides, for adolescents with chronic condition(s), school-related parental support was also meaningful for decreasing emotional problems. In conclusion, the findings suggest the necessity of interventions to strengthen family-school communication and cooperation to improve chronic-disease adolescents' mental health.

**192**

### **Influences of school closure due to COVID-19 on the physical fitness of Japanese kindergarteners**

Sho Aoyama

Faculty of education, Yamaguchi university, Yamaguchi city, Japan

### **Abstract (max 500 words)**

The present study aimed to clarify differences in physical fitness between Japanese kindergarteners who experienced school closure due to COVID-19 (COVID-19 pandemic group) and those who did not (control group). For the COVID-19 pandemic group, 51 three-year-old children underwent physical fitness measurements at three years old in November 2019, four years old in November 2020, and five years old in November 2021. In the control group, 52 three-year-old children underwent similar measurements at three years old in November 2017, four years old in November 2018, and five years old in November 2019. For physical fitness measurements, we performed an analysis of variance (ANOVA) of group  $\times$  time for each gender. Regarding body support duration, the COVID-19 pandemic group performed significantly lower than the control group at four and five years old. The present study longitudinally revealed that muscle endurance among Japanese kindergarteners who experienced school closure due to COVID-19 was impaired.

**193**

### **Social Cognition and Cognitive Planning in Gifted Children**

Celia Josefina Rodríguez Cervantes, Maria de los Dolores Valadez Sierra, María Fernanda Lomelí Salazar

Universidad de Guadalajara, Guadalajara, Jalisco, Mexico

### **Abstract (max 500 words)**

In the educational context, the behavioral manifestation of impulsiveness and the expectations derived from the identification of the condition of giftedness leads to difficulties in relationships between peers and relationships with authority. Among the expectations is the correct solution in conflict situations. Social cognition is a process that allows the modulation of behavior through the interpretation of social signs. Planning is an executive function that allows the use of a series of steps in a given situation.

**OBJECTIVE:** To evaluate social cognition and cognitive planning in gifted children.

**METHODOLOGY:** This is a quantitative, descriptive, cross-sectional, correlational study. Children enrolled in the High Capacities program at the Institute of Psychology and Special Education INPSIEE participate. Instruments: WISC IV, Faux Pas Test and BANFE-2 (Tower of Hanoi and Mazes subscales).

**RESULTS:** The data analyzed with Statistical Package for the Social Sciences SPSS are shown. Descriptive and correlation data are shown.

**CONCLUSION:** It is necessary to broaden the study of social cognition in children with High Intellectual Ability, as well as to develop a subsequent intervention plan.

194

### **Intervention of Executive Functions for children with Twice Exceptionality**

María Fernanda Lomelí Salazar<sup>1</sup>, María de los Dolores Valadez Sierra<sup>1</sup>, María Leonor Conejeros Solar<sup>2</sup>, Ana María Méndez Puga<sup>3</sup>, Celia Josefina Rodríguez Cervantes<sup>1</sup>

<sup>1</sup>Universidad de Guadalajara, Guadalajara, Mexico. <sup>2</sup>Pontificia Universidad Católica de Valparaíso, Valparaíso, Chile. <sup>3</sup>Universidad Michoacana de San Nicolás de Hidalgo, Morelia, Mexico

#### **Abstract (max 500 words)**

Considering the development of a poorly attended population, there are the children and students with Twice Exceptionality (2e), particularly these have Giftedness and Attention Deficit Hyperactivity Disorder (G+ADHD). These students require a psychoeducational response according to their characteristics, attending their strengths and also their needs. In order to design a proposal for a Psychoeducational Intervention for students with 2e (G+ADHD) from Elementary school, a qualitative study was carried out where semi-structured interviews were conducted with five specialists in Twice Exceptionality, they are from Chile, Brazil, Puerto Rico and the United States of America. The results obtained from the analysis of these interviews indicated the relevance of addressing the two exceptionalities, with emphasis on the Executive Functions, particularly with regard to Attention, Working Memory and Planning. These results shed light on the design of a Psychoeducational Intervention program for this population. In summary, the last would be of big benefit for the psychological development and school performance of the children.

196

### **TEACHING INTERVENTION PROGRAM AIMED AT GIFTED AND ATTENTION-DEFICIT/HYPERACTIVITY DISORDER**

Brianda Franco Lopez, María de los Dolores Valadez Sierra

University of Guadalajara, Guadalajara, Mexico

#### **Abstract (max 500 words)**

In the double exceptionality Gifted-ADHD, some characteristics maintain similarity with those who exhibit Giftedness, such as superiority in abstract reasoning, verbal fluency, and great creativity. As well as the coexistence of impulsivity and hyperactivity (Pardo de Santayana, 2002) and symptoms of inattention or daydreaming (Valadez et al., 2018). Characteristics that make it difficult to identify the Gifted-ADHD double exceptionality and result in their socio-emotional characteristics not being addressed, as well as inefficient educational interventions (Domínguez & Pérez, 2000). Teachers' ignorance about this duality causes students to perceive themselves as misunderstood and experience frustration in an environment that does not meet their requirements (Packiam et al., 2014). Therefore,



the teacher's work is crucial in the identification and intervention of this double exceptionality. However, given teachers' ignorance due to lack of training, this represents a challenge. Therefore, teachers must be trained to identify the cognitive-behavioral characteristics that lead to adapting their psycho-pedagogical practice to diversity in their classrooms. Therefore, a proposal is presented for creating an intervention program that allows the development of psycho-pedagogical skills in teachers for identification and differentiated educational attention to students with double exceptionality Gifted-ADHD. Objective: Design an intervention program that provides psycho-pedagogical tools to teachers to detect and give a differentiated educational response to gifted-ADHD doubly exceptional students. Method: This is based on a qualitative study with a descriptive scope and participatory action research design. Regular and special education teachers from elementary schools with gifted students will participate by answering three instruments. Two of these instruments will be applied before the implementation of the intervention program and the third after: 1) Semi-structured interview to characterize their awareness and training in the detection and educational attention to doubly exceptional students; 2) Gifted-ADHD doubly exceptional student identification scale (Conejeros et al., 2018b) for the precise evaluation of this double exceptionality; 3) Questionnaire to evaluate the psychoeducational strategies and tools acquired in the intervention. The information obtained will be processed according to the protocol of the scale. The data collected in this and the intervention evaluation questionnaire will be analyzed using the statistical analysis program SPSS. The qualitative information obtained from the interview transcripts will be analyzed with ATLAS.ti. Results expected: It is expected to design an intervention program that is effective by providing psycho-pedagogical tools that benefit the teacher's pedagogical practice and, with it, the differentiated educational attention to Gifted-ADHD students. Conclusion: There is a great need for teachers to have the training to recognize the cognitive and behavioral characteristics that define Gifted-ADHD that allow adapting their psycho-pedagogical practice to the requirements of these students. Therefore, it is necessary to use approaches based on their strengths and focus on their talents (Baum et al., 2021). A great possibility for this is represented by the diagnosis around the psycho-pedagogical competencies and their improvement from effective intervention programs.

**197**

## **Learning Capital and Educational Capital in Gifted and Talented Mexican Children and Adolescents**

Grecia Emilia Ortiz Coronel, Juan Francisco Flores Bravo

University of Guadalajara, Jalisco, Mexico

### **Abstract (max 500 words)**

The objective of the research was to learn about the educational and learning capitals of gifted students in Mexico. The research was divided into two studies, the adaptation of the Questionnaire of Educational and Learning Capital in which 374 elementary school students with an age range of eight to 15 years, enrolled in public schools in the city of Guadalajara, Jalisco, participated. The mean age was 11.18 ( $\sigma = 1.362$ ); 189 (50.5%) of the participants were female and 185 male (49.5%). Sampling was non-probability purposive. The original German version of the Fragebogen für das Bildungskapital der Schüler

und das Lernkapital (Questionnaire of Educational and Learning Capital [QELC]) was used. In order to adapt the QELC, the cultural variables of the addressees were taken into account, according to the criteria described for this type of study, and the items of the original scale were transformed using the forward translation method. Thus, the adaptation procedure consisted of four phases: translation into Spanish, correspondence analysis, cultural adaptation and empirical validation. A Confirmatory Factor Analysis (CFA) was carried out. Prior to CFA, the distributions of the items and subscales were checked for normality and to determine whether there was a need for data transformation. Similarly, an internal consistency analysis was conducted using the subscales to identify threats to reliability. In addition, the analysis of the instrument using the 10 subscales as first-order factors and the original factors (Educational and Learning) as second-order factors was added to Vladut et al's factor solution. In the second study, 146 gifted students (N=73,  $\sigma = .502$ , 50%) and general population (N=73,  $\sigma = .502$ , 50%) with an age range of eight years to 15 years, belonging to public (79 [54.1%]  $\sigma = .502$ ) and private (67 [45.9%]  $\sigma = .501$ ) schools. A matched sample was used. Statistical analyses of a Student's t-test were performed to make comparisons between the gifted population and the general population as well as a Pearson's correlation to find out the relationship between the capitals. The results show that gifted students have higher Educational Capitals and Learning Capitals compared to the general population. Discussion. The results confirm the data obtained from research conducted by Ziegler, Chandler, Vialle, and Stoeger, who state that identification should be based on recognizing resources that are partially located within the learner and partially outside the learner in order to achieve excellence.

**199**

### **Importance of parental involvement in the early detection of their child's twice exceptionality. A case study**

María de los Dolores Valadez Sierra, Grecia Emilia Ortíz Coronel

Institute of Psychology and Special Education, University Center of Health Sciences, University of Guadalajara., Guadalajara, Mexico

#### **Abstract (max 500 words)**

Within the child population we can find children with high abilities and autism spectrum disorder known as twice exceptionality. Unfortunately these children are little identified and their diagnosis and attention are made late. That is why the participation of parents is essential to reach a diagnosis as early as possible, because they are the first to identify some behaviors out of the expected, which makes them suspect that something is wrong with their child and seek help.

Objective. To describe the indicators observed by some parents regarding the behavior of their two and a half year old child, which led them to seek professional help.

Methodology. After the interview with the parents, incorporating the Benito and Moro developmental observation scale, the child was assessed with the McCarthy Test and the ADOS Module T, the Autism Diagnostic Interview-Revised (ADI-R) and the Childhood Autism Rating Scale (CARS).

Results obtained. Indicators of cognitive precocity were observed and the diagnosis of Autism Spectrum Disorder Grade 1 was confirmed.

### Conclusion

Parents as early identification agents in the recognition of challenges and strengths in children, is of utmost importance to recognize the necessary attention patterns in infants. In the case study, the parents observed that the child had a high receptive language, recognized geometric figures, had the numerical concept, identified the complete alphabet, however, showed difficulty in social interaction, in pragmatic language, had echolalia and stereotyped behaviors, one of the alarming aspects identified by the parents, was the lack of interest in bonding with the mother and older brother, disinterest in communicating desires and interests and lack of imaginative play. The early recognition of these challenges and advantages allowed us to give adequate attention to their areas of opportunity and promote their cognitive resources, thus favoring the child's quality of life.

200

## **Experimental Evidence for the Property Realism of Photographs in Early Childhood – Can children distinguish between the weight of the photograph and the weight of the object being photographed? –**

Minako Kimura

Meijo University, Nagoya, Japan

### **Abstract (max 500 words)**

**Study objective:** When and how do children begin to understand the representational nature of photographs? Research suggests that children begin to make behavioral distinctions between photographs and real objects by late infancy, with some confusion at age one or two, but full understanding by age three. However, Beilin and Pearlman (1991) argued that the tendency to view photographs as having the same sensory properties as the real object they depict persists beyond early childhood. In this study, we focused on the property of weight and examined the extent to which young children understand that the weight of a photograph is determined solely by the size of the frame, regardless of what the subject is, using nearby materials that children can touch to see the difference in weight.

**Methods:** Forty-nine four-year-olds participated in this study. The materials used were as follows: scales, two boxes of caramels, two feathers, two photos (large and small) of the boxed caramels and the feather, and blank photo paper in two sizes. The procedure was as follows. For training tasks, children weighed the boxes of caramels, the feathers, and the blank photo paper (large and small) on the scales to learn how to use the scales and prepare to answer the questions about the latter tasks. For the scales task, we presented pictures of the boxed caramels and a feather in the combinations shown in Table 1 and asked the children, "If you put these photos on the plates of the scales, which side of the scales do

you think will fall down? Or do you think they will balance each other?" Each child went through five trials (A to E).

**Results and Conclusion:** The number of children who answered correctly or incorrectly and the total score (out of five points) for A to E, with 1 point for a correct answer, were calculated, and the average score was summarized in Table 2. The correlation coefficient was calculated to determine the relationship between the age of the children and the total score, and the percentage of correct answers increased as the age of the children increased. Next, to determine the level of difficulty of each trial, the McNemar test was used to compare the distribution of correct and incorrect responses for all combinations of A through E. Trial C had significantly fewer correct responses than any of the other trials. These results suggest that even those participants who were able to respond correctly by attending to the size of the photo paper when the size of the paper was different were unable to respond correctly when the size of the paper was the same but the subject was different, as in Trial C, because they focused their attention on the subject.

202

## Maternal Beliefs about Screen Device Use Predict Preschool Children's Screen Time

Anni Tamm, Tiia Tulviste

University of Tartu, Tartu, Estonia

### Abstract (max 500 words)

Numerous studies have shown that many preschool-age children use screen devices significantly more than is recommended. As excessive use of screen devices may pose a risk for subsequent development, it is crucial to understand the factors affecting children's screen time. Our study aimed to examine mothers' beliefs about the risks and benefits of children's use of screen devices for different aspects of child development, and how these beliefs, along with mothers' own entertainment screen time, relate to preschool children's screen time. The sample included 196 mothers of 2.5-4.5-year-old children in Estonia. Mothers reported their beliefs regarding children's use of screen devices as well as their own and children's screen time. The findings showed that mothers considered the use of screen devices most beneficial for children's knowledge acquisition, math skills, and verbal skills, and most harmful to children's sleep and physical activity. Higher socioeconomic status predicted mothers' less positive views about screen devices and mothers' and children's lower screen time. The less mothers used screen devices for entertainment at the weekend and the less positive views they had about screen device use, the lower was their children's screen time on weekdays and weekend days. The findings show that parents can reduce their children's screen time by acting as positive role models and limiting their own use of screen devices.

204

## The Co-occurrence of Social Adversities at age 14 years and their Relationship to Cognitive Outcomes at age 16 years

Man Shiu Kwok, Amber Inman, Kathryn Bates, Delia Fuhrmann

King's College London, London, United Kingdom

### Abstract (max 500 words)

Adverse experiences during development are potentially stressful life events occurring during childhood and adolescence, such as abuse and neglect. Numerous studies have shown that adverse experiences during childhood predict poorer cognitive functioning in adolescence. However, our understanding of how adversities occur during adolescence and impact cognitive outcomes is limited. Previous studies on adversities have focused on early childhood adversities but neglected adversities unique to adolescents. Additionally, previous research using univariate approaches does not capture the co-occurrence of adversities.

To address these limitations, we adopted a person-centred, multivariate approach. We selected participants that completed self-report questionnaires on social adversities at age 14 and assessed their cognitive abilities at age 16 from the UK Household Longitudinal Study (UKHLS;  $N = 493$ ). We conducted a latent profile analysis to investigate how seven adolescent social adversities co-occur at age 14. These include peer bullying, peer relationship problems, number of close friends, school issues, lack of family support, sibling bullying, and familial socioeconomic status. We then conducted linear regression analyses with the derived latent social adversity profiles as predictors and three cognitive abilities: working memory, fluid reasoning and verbal fluency, as the outcome variables. We hypothesised that: 1) There will be distinct profiles of social adversity at age 14 years and 2) The profiles would predict cognitive abilities at age 16 years.

Results from the latent profile analysis suggested that the 4-profile solution best fits the data (SABIC = 26857.23, entropy = .91, BLRT  $p = .01$ ). We interpreted the four profiles as poly-adversity, low adversity, sibling bullying and peer difficulties. The results from linear regression analyses showed that the social adversity profiles at age 14 did not significantly predict any cognitive abilities at age 16: working memory ( $F(3,490) = 0.94, p = .423$ ), fluid reasoning ( $F(3,490) = 1.02, p = .382$ ) and verbal fluency ( $F(3,490) = 0.49, p = .688$ ).

The study highlights the co-occurrence of adversities in adolescents. It demonstrates the importance of considering how the interactions between adversities may shape individual differences and inform theories of adversity in adolescence. Additionally, although our linear regression models are non-significant, it is possible that the effect of social adversities on cognitive functioning has not emerged by age 16 years. Our next step is to replicate the study in another longitudinal cohort dataset: Avon Longitudinal Study of Parents and Children (ALSPAC). Data analysis is expected to be completed by June 2023.

206

### **The associations between social self-efficacy, discrimination and youth aggression: A moderated mediation analyses**

Isik Ulubas, Johan Korhonen

Åbo Akademi University, Vaasa, Finland

#### **Abstract (max 500 words)**

Youth aggression is a complex issue that has several concomitants. Social self-efficacy and peer discrimination are two of the factors that are related to bullying behavior of adolescents. However, limited studies have investigated the relationship between these three concomitants. In the current study, we examined (1) the mediating role of peer discrimination between social self-efficacy and bullying behavior, and (2) the moderation role of immigration status, language proficiency, and sex on this effect among 800 junior high school students ( $M = 14.2$ , 49% female). We assessed the factors with structural equation modelling, and applied moderated mediation analysis. Preliminary analyses indicated that experiencing peer discrimination have partially mediated the effect of social self-efficacy on bullying behavior. The moderating effect of immigration status, language proficiency and sex on mediation will be examined. The results will be discussed under the scope of the prevention of discrimination and bullying behavior.

209

### **Spotting psychopaths: reading it easier in the eyes when we're high in psychopathy?**

Miruna Stefania Larion, Mihaela Boza

Alexandru Ioan Cuza University of Iasi Romania, Iasi, Romania

#### **Abstract (max 500 words)**

The objective of the study is to explore some individual factors, such as self-reported psychopathy, theory of mind, gender of the target and gender of the evaluator, which could influence the perception of psychopathy, when the only information available is a photograph.

Introduction. People infer personality traits fairly accurately, including psychopathy (Holtzman, 2011; Alper et al, 2021), just by looking at photographs. Psychopathy is associated with difficulties to recognize emotions in others (Schmitt et al, 2020) and deficits of theory of mind (Ali & Chamorro-Premuzic, 2010, Vonk et al 2015). The traits are more accurately inferred when participants report higher levels of own psychopathy (Mahaffrey & Marcus, 2006) and when the target is male (Shiramizu et al, 2018). We assume

that higher levels of mindreading and self-reported psychopathy, as well as evaluating male targets, will improve participants accuracy of psychopathy perception.

**Method.** The 250 participants (208 females) aged 18 to 64 ( $M = 22.47$ ;  $SD = 5.36$ ) were recruited and filled the questionnaires online. The Short Version of the Self-Report Psychopathy Scale (SRPS -Paulhus et al, 2015), Reading the Mind in the Eye Test (RMET- Baron-Cohen et al, 2001), and a demographic questionnaire were used to measure the independent variables. The dependent variable, the perception of psychopathy, was measured using 4 pairs of photos (2 pairs with a female face, 2 pairs with a male face), each pair contained one face perceived as belonging to a psychopath, the other not of a psychopath, from the study of Alper et al (2021), rated on a 6 point Likert scale, low scores mean more accuracy.

**Results.** ANOVA gender x RMET on perception of psychopathy (male + female target faces), show two main and one interaction effect. Participants high in RMET and male participants are the most accurate. The interaction show that male participants high in RMET have the best recognition of psychopathy, while female participants had less accuracy, regardless of their RMET score.

When evaluating male target faces, there is one main effect of SRPS, and an interaction effect SRPS x gender. Participants high in psychopathy are more accurate and this difference is higher in males. Also for male target faces, there is one main effect of RMET and an interaction effect RMET x gender. Participants high in RMET are more accurate and this difference is higher in males.

When evaluating female target faces, there are two main effects of gender and RMET. Male and participants high in RMET are more accurate, with no significant effect of SRPS.

**Conclusion.** The results show that, generally, male participants are more accurate in perceiving psychopathy, based only on facial cues, regardless of their mind reading abilities, gender of target or their own level of psychopathy. Higher mind reading abilities increase accuracy in spotting psychopaths. The level of self-reported psychopathy increases accuracy in evaluating male target faces. Training mind reading abilities as well as awareness of own personality traits may increase the accuracy when evaluating and forming impressions about people with potentially toxic personalities.

**210**

## **School-based targeted prevention for children with mild intellectual disabilities and behavior problems: A pilot implementation study**

Eva Kühn<sup>1</sup>, Maja Deković<sup>2</sup>, Sander Thomaes<sup>1</sup>, Ina Koning<sup>3</sup>, Juliette M. Liber<sup>1</sup>

<sup>1</sup>Department of Developmental Psychology, Utrecht University, Utrecht, Netherlands. <sup>2</sup>Department of Clinical Child and Family Studies, Utrecht University, Utrecht, Netherlands. <sup>3</sup>Department of Interdisciplinary Social Science, Utrecht University, Utrecht, Netherlands

**Abstract (max 500 words)**

**Objective:** Children with mild intellectual disabilities to borderline intellectual functioning (MBID) display more behavior problems (e.g., aggressive and oppositional defiant behavior) than typically developing children. Effective targeted prevention programs for children with MBID and behavior problems are thus needed. However, research into psychosocial interventions for children with MBID is sparse. The first aim of this pilot study was thus to evaluate the implementation process of Keeping Control of Anger, a school-based targeted prevention program addressing behavior problems that was specifically adapted for children with MBID. Our second aim was to conduct a preliminary test of the intervention's effectiveness to reduce behavior problems in children with MBID. Our study took place in a routine school mental health care, allowing us to evaluate the implementation process and behavior problem changes as they naturally occur.

**Methodology:** Thirteen children ( $M_{age} = 12.1$ ,  $SD_{age} = 1.6$ , 76.9% male,  $M_{IQ} = 75.5$ ,  $SD_{IQ} = 6.4$ ) who met all eligibility criteria (i.e., age between nine and fourteen years old, IQ between 65-85, and elevated behavior problems) were included. Children received one individual session, ten group sessions, and one group booster session. We examined *what* was implemented (i.e., dosage and reach) and *how well* implementation occurred (i.e., responsiveness, satisfaction, and comprehension), using questionnaires completed by children and trainers. Behavior problems were measured using questionnaires for teachers and children before, during, and after the intervention. We evaluated intervention effects both at the group level and at the individual level.

**Results:** Regarding intervention reach, we found that mental health professionals in this naturalistic setting did not exclusively reach children of the target population: 41.7% of the children they initially selected to take part in the intervention did not meet all inclusion criteria. Thus, only the thirteen children who did meet eligibility criteria were included in the main analyses. To these children, all intervention sessions were delivered and children attended on average 85% of the sessions, indicating acceptable dosage. Children and trainers reported acceptable responsiveness, satisfaction, and comprehension. Group-level behavior problem decreases were small to medium for both child- and teacher-report, as indexed by unbiased Cohen's *d*. Reliable Change Indices showed large heterogeneity in behavior problem changes. Ad hoc analyses on the non-eligible sample selected by school mental health professionals suggested that they did not benefit from the intervention.

**Conclusion:** The results of this pilot study illustrate that a school-based targeted prevention program can be successfully adapted and implemented for the treatment of children with MBID in a routine school mental health setting. It provides the cautious suggestion some children in this group may benefit from such interventions in terms of behavior problem reductions, although large individual differences existed. Our study also highlights the importance for mental health professionals to adhere to screening procedures to ensure that only children who can actually benefit from intervention participate in it. Our findings warrant the need for rigorous follow up research (e.g., a randomized controlled trial) to further evaluate the effectiveness of Keeping Control of Anger for reducing behavior problems.

212

**Rural youth's conceptions of geographical life biographies**



Christoffer Hornborg

Sociology and work science, Göteborg, Sweden. Campus Västervik, Västervik, Sweden

### **Abstract (max 500 words)**

**Objective:** The aim of this paper is to investigate how identity development among secondary school youth relate to issues such as place, geographical mobility, and the rural-urban dichotomy. The study is part of a licentiate research project investigating how young people in rural parts of Sweden envision their future life biographies in terms of occupation, identity, and spatiality.

**Methodology:** Semi-structured interviews were conducted with 14 participants in eighth grade. The participants were recruited from two schools in rural parts of southern Sweden. Transcriptions of interviews were processed by utilizing thematic analysis.

**Results:** The local conditions of place influenced perceptions of specific occupations, but also which occupations were accommodated within the young people's future horizons. This had implications for occupational orientation. Of those who resided in sparsely populated areas, some expressed a mobility imperative, asserting that they needed to get away from the countryside in order to access a meaningful livelihood strategy. At the same time, it was not always conceptions of future profession that were prioritized in geographical orientation, as mobility could also depend on factors linked to lifestyle and leisure interests. Among those who expressed a desire to stay, rational considerations of work alternatives were downplayed in favor of an affective component relating to place attachment. This was not contingent on individuals having a history of residing in an area, as even newly arrived immigrants expressed feelings of place identity. The dichotomy between staying and moving was nuanced, illustrated by how some young people imagined geographical mobility as an almost mandatory developmental course, after which they could return home and enter a new phase of life. These stories contained what I call a *developing imperative*, where norms about moving suggested a kind of rite de passage, which transformed the youth's identity into one associated with notions of family formation and comfort. When it came to staying or moving on a more definitive basis, this was in some cases associated with ambivalence and psychological stress, where identity development related to dichotomies such as security and stability vs. opportunities and self-actualization.

**Conclusion:** This study illustrates the centrality of geographic context for the identity development of youth. Despite young people across geographic distances having become more similar, due to living in a connected world where information and knowledge are standardized, locality is still of importance in the shaping of youth's perceptions and sensemaking. Young people's world views are molded by what they experience in local encounters, and attachment to place has implications for how youth envisage their future identity.

215

**"I have a gift for you, but you have to wait." - Coping Strategies as an Indicator of the Emotional Self-Regulation Development in Preschool Age - Pilot Study**

Gabriela Kania, Natalia Józefacka

The Pedagogical University of Krakow, Krakow, Poland

### **Abstract (max 500 words)**

This study aims to analyse and categorise coping strategies based on the structured observation of the delayed gratification task in preschool age. There is an emerging body of literature which confirms the importance of self-regulation as a predictor of classroom behaviour and social competence (e.g. Garner, Waajid, 2012). Unfortunately, no theories have been specifically developed to explain children's coping processes. As a result, many studies of children's coping mechanisms are atheoretical or based on theories designed for adults. Emotional self-regulation is the ability to monitor one's emotions and adapt to environmental requirements (Calkins, 1994; Kopp; 1982; 1989;). Coping strategies are generally described as a reciprocal process of cognitive appraisal of both stressors and coping resources (Wenger, 1992). Coping strategies could indicate ways of developing self-regulation. Children (n = 27) in small subgroups, performed the task "Gift Wrap" in their preschool classroom to ensure an ecologically appropriate context. All children attended a therapeutic kindergarten and had various developmental difficulties. Children were video-recorded, and their behaviours were coded through a computerised coding system, in the quantitative research paradigm. All parents signed informed consent, with children's consent negotiated verbally in the ongoing process at each stage of the research. Children could stop participating anytime they wanted. The results led to the identification of two main strategies: behavioural (group-oriented) and cognitive (self-oriented). Moreover, younger children preferred to use behavioural strategies, and older children (above 5 years of age) preferred cognitive ones. Developing teachers' knowledge of coping strategies can help identify and implement more advanced strategies in children. Even if a child is unable to complete a task the first time, he or she can do it with the support of advice (Wygotski, 1978).

**216**

### **The direct and indirect effects of parenting behaviors and functional brain network efficiency on self-regulation from infancy to early childhood: A longitudinal mediation model**

Marissa Hofstee

Utrecht University, Utrecht, Netherlands

### **Abstract (max 500 words)**

There is growing interest in the hypothesis that early parenting behaviors impact children's self-regulation by affecting children's developing brain networks. Yet, most prior research on the development of self-regulation has focused on either environmental or neurobiological factors. The aim of the current study was to expand the literature by examining direct and indirect effects of variations in parenting behaviors (support and stimulation) and efficiency of functional brain networks (small-worldness) on individual differences in child self-regulation, using a three-wave longitudinal model in a

sample of 109 infants and their mothers. Results revealed that parental support predicted child self-regulation at 5 months, 10 months, and 3 years of age. This effect was not mediated by infants' small-worldness within the alpha and theta rhythm. Parental stimulation predicted higher levels of infants' alpha small-worldness, whereas parental support predicted lower levels of infants' theta small-worldness. Thus, parents may need to stimulate their infants to explore the environment autonomously in order to come to more efficient functional brain networks. The findings of the current study highlight potential influences of both extrinsic environmental factors and intrinsic neurobiological factors in relation to child self-regulation, emphasizing the role of parental support as a form of external regulation during infancy, when the brain is not yet sufficiently developed to perform self-regulation itself.

**217**

## **A Longitudinal, Cross-Lagged Path Analysis of Parenting, DNA Methylation, and Loneliness in Early Adolescence**

Yentl Koopmans<sup>1</sup>, Stefanie Nelemans<sup>2</sup>, Stephan Claes<sup>3</sup>, Patricia Bijttebier<sup>1</sup>, Guy Bosmans<sup>4</sup>, Wim Van Den Noortgate<sup>5</sup>, Karla Van Leeuwen<sup>6</sup>, Luc Goossens<sup>1</sup>

<sup>1</sup>School Psychology and Development in Context, KU Leuven, Leuven, Belgium. <sup>2</sup>Department of Youth & Family, Utrecht University, Utrecht, Netherlands. <sup>3</sup>Department of Neuroscience, KU Leuven, Leuven, Belgium. <sup>4</sup>Department of Clinical Psychology, KU Leuven, Leuven, Belgium. <sup>5</sup>Methodology of Educational Sciences, KU Leuven, Leuven, Belgium. <sup>6</sup>Parenting and Special Education, KU Leuven, Leuven, Belgium

### **Abstract (max 500 words)**

**Objective:** Both parenting behaviors and DNA methylation have been associated with adolescent loneliness. Most of the research on these associations has been cross-sectional in nature, which precludes conclusions about the direction of effects between these constructs. Hence, this study adopted a longitudinal design to examine the potential bidirectional longitudinal associations between parenting, DNA methylation, and loneliness in early adolescence.

**Methodology:** The sample consisted of 622 Flemish adolescents (55% girls,  $M_{\text{age T1}} = 10.77$  years,  $SD_{\text{age T1}} = 0.48$ ) who were followed annually from Grade 5 to 7. At each measurement occasion, adolescents reported on perceived parental support and psychological control, and saliva samples were collected to assess DNA methylation levels in stress-related genes. Among others, these genes include the glucocorticoid receptor gene (NR3C1), the serotonin transporter gene (SLC6A4), the brain derived neurotrophic factor (BDNF), and the oxytocin receptor gene (OXTR).

**Results:** By means of cross-lagged panel models, evidence was found for bidirectional longitudinal associations between parental psychological control and loneliness. Not only were higher levels of perceived parental psychological control associated with more loneliness over time ( $\beta_s = .08 - .09$ ,  $ps = .030 - .037$ ), but higher levels of loneliness were also predictive of higher levels of perceived parental psychological control over time ( $\beta_s = .11 - .13$ ,  $ps < .001$ ). For parental support only a unidirectional

association was found: higher loneliness was associated with less perceived parental support over time ( $\beta$ s = -.10 – -.11 .09,  $p$ s = .006 – .007). Furthermore, higher levels of loneliness were found to be associated with higher DNA methylation levels of NR3C1 ( $\beta$ s = .04 – .05,  $p$ s = .029 – .042) and BDNF ( $\beta$ s = .08 – .10,  $p$ s = .001 – .005) over time.

Conclusion: This is the first study to suggest so-called ‘child-driven’ effects of adolescent loneliness on parenting behaviors, suggesting that loneliness elicits a process of relationship erosion over time. In addition, these findings suggest that loneliness precedes increased methylation in some stress-related genes. Further research should aim to investigate different measures of the stress response as intermediary mechanisms by which loneliness influences the methylation levels of NR3C1 and BDNF.

## 226

### TickTock! The pendulum swings from adolescence to adulthood: An exploratory analysis of quarter-life crisis contents on TikTok

Kübra Berber<sup>1</sup>, [Zehra Yeler](#)<sup>2</sup>

<sup>1</sup>Ankara University, Ankara, Turkey. <sup>2</sup>Ted University, Ankara, Turkey

#### Abstract (max 500 words)

##### Objective of the Study

Quarter-life crisis is a phenomenon that first emerged from mass media and popular culture, and since then investigated through several academic studies. It occurs approximately between 20-35 ages and refers to the challenges of achieving steady “adult” roles or fitting in current life roles (Robinson, 2016; Robinson, 2019). Early adults may experience intense negative feelings and question their identity during quarter-life crisis (Robinson, Wright, and Smith, 2013).

TikTok is an application widely used by teenagers and twentysomethings. It is not necessarily based on following familiar people and building a social network. Thus, they might express themselves and their experiences more freely on the app than by speaking to a researcher or a mental health professional. Twentysomethings may have trouble receiving professional help about their quarter-life crisis due to their financial status (Robbins and Wilner, 2001). TikTok may provide a platform for them to share their experiences and support each other.

The purpose of the study is to analyze the content of the hashtag #quarterlifecrisis on TikTok. For this purpose, the videos on this hashtag, and comments on some of the videos were analyzed.

##### Methodology

The study’s design includes both manifest content analysis and latent pattern content analysis. The videos with the hashtag #quarterlifecrisis were gathered by utilizing TikTok’s discover feature and the hashtag search of #quarterlifecrisis. A sample of the top 100 most-viewed videos will be analyzed. The

hashtag had 216.1 million cumulative views until January 2023. Only English-language videos are included in this sample. The researchers recorded the date of posting as well as the engagement data such as the number of views, comments, shares, and likes. All videos tagged with #quarterlifecrisis will be transcribed, analyzed, and coded for the presence of additional content categories. Aside from the content analysis of the sample of videos, the comments written down on some posts will be also subjected to content analysis.

### **Expected Results**

The overarching purpose of this study is to investigate the quarter-life crisis experiences of early adults. Through analyzing the manifest and the latent content of the TikTok videos tagged with #quarterlifecrisis, researchers aim to find genuine self-expressions of challenges early adults confront as they navigate adulthood without know-how.

### **Conclusion**

It is anticipated that the findings will align with previous research studies on the quarter-life crisis. In this section, we will address some suggestions for mental health professionals as well as researchers by taking into account the results and related literature.

**228**

## **RESTRICTIVE AND REPETITIVE BEHAVIORS IN CHILDREN WITH TYPICAL DEVELOPMENT AND CHILDREN WITH AUTISM SPECTRUM DISORDER**

Ivona Mršić Runtas<sup>1</sup>, Sanja Šimleša<sup>2</sup>

<sup>1</sup>Teaching and Clinical Centre, Faculty of Education and Rehabilitation Sciences University of Zagreb, Zagreb, Croatia. <sup>2</sup>Department of Speech and Language Pathology, Faculty of Education and Rehabilitation Sciences University of Zagreb, Zagreb, Croatia

### **Abstract (max 500 words)**

Repetitive and restrictive behaviors ( RRBs ) are among the clinical features of various developmental disorders, but also occur in children with typical development (TD). In addition, such behaviors are often associated with autism spectrum disorder (ASD) and, along with deficits in social communication, are diagnostic criteria for ASD (DSM-V). In general, there is a lack of data and standardized measurement tools to determine RRBs in TD and ASD. The aim of this study is to examine the presence, frequency, and perceived severity of RRBs in children with ASD compared to children with TD.

The sample consists of two groups: Children with TD (N=50, chronological age between 2 and 4) and children with ASD diagnosis (N=50, mental age between 2 and 4). RRBs are assessed with the Repetitive Behavior Scale - Revised (RBS-R), a questionnaire completed by parents.

Controlling for nonverbal cognitive abilities, RRBs are expected to occur in both groups, with the frequency and severity of these behaviors being higher in children with ASD. In addition, certain items of the RBS-R scale that occur in most children with ASD are highlighted.

The contribution of this study is clearer data on the variety of repetitive behaviors in preschool children with TD and with ASD. It also highlights the need for standardized diagnostic instruments that more clearly identify repetitive behaviors in children with ASD.

**231**

### **Quality of life and the risk of internalizing and externalizing disorders in adolescents having disabled siblings: Results of the pilot study.**

Ariadna Łada-Maśko<sup>1</sup>, Urszula Sajewicz-Radtke<sup>2</sup>, Bartosz Radtke<sup>2</sup>, Kornelia Lipowska<sup>3</sup>, Małgorzata Lipowska<sup>1</sup>

<sup>1</sup>University of Gdańsk, Gdańsk, Poland. <sup>2</sup>Laboratory of Psychological and Educational Tests, Gdańsk, Poland. <sup>3</sup>University of Amsterdam, Amsterdam, Netherlands

#### **Abstract (max 500 words)**

The presence of a disabled child affects the family life in many aspects. Especially, siblings of disabled children will be affected by their mutual relationship in different way than sibling of typically developing children. However, adolescents have more cognitive capacity to understand the sibling's disability and presented symptoms, as well as the higher ability to help parents in taking care of sick siblings, thus they often may be identified as "young carers". Taking too much time taking care of disabled sibling and engaging in doing housework are often an additional responsibility that a healthy child must take on, which may result in emotional problems, or even maladjustment. Research also indicates that adolescent sibling of disabled child more often exhibit higher levels of internalizing and externalizing disorders. Furthermore, other research also suggest that siblings of disabled children are bullied at school and has difficulties in relations with peers.

Therefore, the purpose of this study was to examine the quality of life and to assess the risk of internalizing and externalizing disorders in healthy adolescents who have disabled sibling.

62 diads of a healthy adolescent and one of its parents ( $N = 124$ ) participated in the study. Participants were divided into two groups - 30 diads in the group with disabled sibling ( $M_{adolescent's\ age} = 16.63$ ;  $SD = .67$ ) and 32 diads in the group with a healthy sibling ( $M_{adolescent's\ age} = 16.78$ ;  $SD = .83$ ). The following measures were used in the study: KidScreen-27 (Robitail et al., 2007; Mazur et al., 2008) and the Child Behavior Checklist for Ages 6-18 (CBCL/6-18; Achenbach, 2001).

Surprisingly, the results showed no statistically significant differences in any of the measured dimensions of quality of life in adolescents with disabled sibling, comparing to the control group. However, it should be noted that in terms of quality of life connected with physical well-being, parent relationships and autonomy, school environment, as well as in general quality of life, they presented

lower mean scores, whereas in terms of quality of life related to psychological well-being and social support and peers, the presented higher mean scores. Furthermore, adolescents with disabled sibling were found to have a significantly higher risk of externalizing disorders as assessed by their parents compared to adolescents with healthy siblings. We have also identified negative correlation between the quality of life and the risk of occurrence of both, internalizing and externalizing disorder in adolescents with disabled sibling, but only between the quality of life and internalizing disorders in control group.

The results of the above research indicates that the relation between the quality of life and possible risk of internalizing and externalizing disorders in adolescents having disabled sibling is not unambiguous and requires in-depth analysis. In addition, comprehensive psychological support should be addressed towards the above group and their families, as they are at higher risk of occurrence of clinical problems.

**232**

## **The contribution of sibling relationships to mental health outcomes in young adults**

Wui Ling Chu, Vanessa Sellars, Lamprini Psychogiou

University of Exeter, Exeter, United Kingdom

### **Abstract (max 500 words)**

Abstract

*Objectives of the study:* Depression and loneliness are common among youth and predict impaired functioning and comorbid mental health difficulties (e.g., Goodman et al., 2011; Pitman et al., 2018). While existing studies have examined the role of parent-child relationships in mental health outcomes in children and adolescents, sibling relationships have been largely overlooked. This is a serious omission because up to 85% of youth in the United Kingdom have a sibling and sibling relationships are often the most long-lasting relationships. Better social skills, empathy, emotional competence, and higher quality of friendships have been found among children and adolescents with positive sibling relationships (e.g., McHale et al., 2012). Yet the role of sibling relationships in youth's depression and feelings of loneliness remains understudied. The proposed study is designed to address this gap and aims to examine associations between quality of sibling relationships and levels of loneliness and depressive symptoms in young adults.

*Methodology:* The sample will consist of 100 young adults aged 18-25 recruited from the university of Exeter, United Kingdom. Each participant will complete the Patient Health Questionnaire to assess current depressive symptoms and the UCLA Loneliness scale to assess feelings of loneliness (Russell et al., 1978; Spitzer et al., 1999). Sibling relationships will be assessed with the Lifespan Sibling Relationship Scale (Riggio, 2000). In addition to that, each participant's Expressed Emotion towards their sibling will be assessed using the Five Minute Speech Sample (Daley et al., 2003). Each participant will be asked to talk about their thoughts and feeling towards their sibling and their relationship with them over the past

6 months. The speech samples will be coded by the two first co-authors (CWL, VS), while inter rater reliability will be tested by the last author (LP) in 20% of the sample.

Each participant will be assessed individually and face to face. However, to maximise the research team's effort to recruit the required sample, participants will be given the option to be assessed online using a confidential platform supported by the University of Exeter.

*Results expected:* It is likely that positive sibling relationships will be concurrently associated with lower levels of depressive symptoms and loneliness when controlling for important characteristics including the participant's gender and ethnicity. It is also expected that positive sibling relationships assessed with the Lifespan Sibling Relationship Scale will be significantly associated with Expressed Emotion (e.g., positive sibling relationship, warmth, and more positive and fewer negative comments about their sibling).

*Conclusion:* The findings will provide preliminary support for significant and concurrent associations between sibling relationships and youth's mental health. Future longitudinal studies and experiments should examine if positive sibling relationships predict decreased loneliness and depressive symptoms across the lifespan. Such findings have implications for prevention and intervention strategies aimed at improving mental health.

235

## **State and trait mathematics anxiety in children with Specific learning disorders: the predictive role on performance**

Rachele Lievore, Sara Caviola, Irene C. Mammarella

Department of Developmental and Social Psychology, University of Padova, Padova, Italy

### **Abstract (max 500 words)**

**Objective of the study:** A specific form of anxiety has been related to mathematics, named mathematics anxiety (MA), which has been described as a combination of negative feelings of tension and fear experienced when thinking about and performing mathematical tasks. The negative correlation between MA and math performance has been largely observed in the general population, but less is known about children with Specific Learning Disorders (SLD). Moreover, MA has been frequently evaluated using "offline" trait-like self-report questionnaires, implicitly empowering the idea that MA is a permanent trait, whereas less has been done to investigate state components. The general aim of the study was to examine trait and state MA, and their predictive power on a real-time math task in children with SLD compared to non-diagnosed (ND) participants. In particular, the focus will be given to understand which affective state components (i.e., arousal, valence, perception of competence and worries) might be associated with math performance in the two groups.

**Methodology:** The study involved 112 children aged between 8 and 14 years old divided in two groups: 56 (33 boys) children with SLD, and 56 (28 boys) ND participants, matched for age, gender and IQ. First,



we tested children and their parents with questionnaires on general anxiety and trait MA. Then, a real-time math task with time constraints was administered to participants. Children were also asked to report some aspects related to their subjective experience in respect of the stressful math test (namely, state MA). To do so, before and after completing the task, children were asked to rate their affective responses (i.e., arousal, valence, perception of competence, and worries).

**Results:** A hierarchical logistic mixed models approach was conducted to investigate the association between the math performance and the hypothesized predictors (trait and state MA). The best-fitting model,  $AIC=-6233.3$ ,  $\Delta^{\circ}AIC=69.7$ , revealed that after controlling for age, general anxiety and pre-test baseline anxiety, the main effects of age,  $z= 3.58$ ,  $p<.001$ , trait MA,  $z= -2.07$ ,  $p=.04$ , perceived competence,  $z= 3.45$ ,  $p<.001$ , and worries,  $z= 2.50$ ,  $p=.01$ , were significantly associated with math performance. Moreover, two interaction effects were found to be statistically significant: the interaction between group and arousal,  $z= 2.41$ ,  $p=.01$ , and between group and worries,  $z= -3.47$ ,  $p<.001$ . In children with SLD, a higher arousal was consistent with a better performance, whereas greater worries were linked to worse math execution. Instead, greater worries were associated with better math performance in ND children.

**Conclusions:** Both trait and state MA seem to predict math performance in children with and without SLD. However, specific state patterns distinctly emerged in the two groups. Findings could be interpreted as if the reported arousal might be both protective and predictive of success in time-pressure math tasks in children with SLD. On the contrary, worries might represent a risk factor for math achievement in children with SLD. School and clinicians should consider how vulnerabilities, affective responses and negative thoughts, may impact the process of math learning in children with SLD.

238

### Sorting out the developmental trajectory of inhibition control among preschool age children at risk of developmental disorder - a cross-sectional pilot study.

Konrad Guzowski, Natalia Józefacka

Pedagogical University of Kraków, Kraków, Poland

#### Abstract (max 500 words)

The goal of this study is to analyze the development of inhibition control in preschool children. The development of executive functions, especially inhibition control, is the most intensive in preschool age. Initially, children developed response control, followed by interference control, which demands more advanced cognitive skills. Moreover, the improvement in speed and accuracy on impulse control tasks can be visible up to 6 years of age. This study was carried out on a group of children at risk of developmental disorder, in the quantitative research paradigm. The tasks used to measure inhibition were short, game-like assessments - the Early Years Toolbox battery consists of go-no-go and card-sorting tasks. The first task was to measure response inhibition, and the last subtest of card sort was to measure interference control. The assessment was performed in the preschool - children's natural environment - to prevent unnecessary stress. Furthermore, the assessment was conducted by trained

researchers. The children could stop playing anytime they wanted. As a result, a difference was observed in the trajectory of both constructs. The inhibition response as well as interference control showed significant improvement among 5-year-old children. Although it seems that children reached a ceiling in inhibition response, interference control seems to continue its development. The findings suggest that the development of inhibition response could complete at the end of the preschool period, and interference control is still an ongoing developmental process.

**242**

## **Social and Emotional Skills in Five-Year-Old Estonian Children: A New E-Instrument for Assessment**

Astra Schults, Eve Kikas

Tallinn University, Tallinn, Estonia

### **Abstract (max 500 words)**

Children's social and emotional skills (SES) are linked with many short- and long-term positive outcomes like school adjustment, academic engagement and achievement, and higher well-being in adulthood. SES include activities connected to behaving adaptively like asking for help, being empathetic, taking turns, and making responsible decisions. SES also include activities related to social awareness, like recognizing others' emotions, ascribing reasons to the acts by others, and evaluating their actions. Based on these activities and on Social Information Processing Model (Crick & Dodge, 1994; Lemerise & Arsenio, 2000), an e-instrument was developed to assess SES of five-year-old children. The project was lead by the Estonian Education and Youth Board and the Estonian Ministry of Education and Research. The aim of the paper is to describe the instrument and its reliability.

The whole instrument includes three thematic tests, one of which – 'on the playground' – assesses SES. All items include either picture or video presentations of assignments, audio instructions and are entirely computer-based. The items include daily social situations familiar to five-year-olds (e.g., taking turns on a slide). For each of the items an answer could be chosen from three alternatives (i.e., prosocial, neutral/distant, not adaptive/aggressive). In total, 289 Estonian speaking five-year-olds (138 boys) participated in the study together with their teachers from 42 kindergartens all over Estonia. Only children whose parents had given written consent were included. The assessments were done on one-on-one basis with the child and the teacher. A tablet computer was used for administration. The teachers received a manual for carrying out the assessments, and online training. The teachers were instructed to encourage the child to complete the assessment but could provide help only with technical questions.

It was found that for each of the items all of the alternative answers had been chosen by at least some of the children. Spearman rank order correlations between items including the same activity (e.g., making a responsible decision) ranged from .20 to .41. Cronbach alphas ranged from .28 to .66 for items including the same activity. Cronbach alpha for activities connected to behaving adaptively in different situations was .73, and for activities connected to social awareness (not including emotion recognition)

.74. Cronbach alpha for the whole instrument was .83. According to exploratory factor analysis the solution with one factor was most suitable to describe the instrument (loadings ranging from .34 to .60, expl. var. 4.84, prp. totl. .25). According to confirmatory factor analysis the solution with one factor (social skills) was the best fit ( $\chi^2 = 284.16$ ,  $df = 152$ ,  $p < .001$ ,  $CFI = 0.919$ ,  $TLI = 0.908$ ,  $RMSEA = 0.048$ ) as two expected factors (behaving adaptively and social awareness) were highly correlated. There were no systematic differences between boys and girls.

In conclusion, the instrument provides information on five-year-olds' social information processing related SES. Combined, the items included in the instrument provide an overview of each child's SES related strength and weaknesses. Further studies should focus on person-oriented approach to differentiate the patterns of SES observed more frequently.

## 248

### Development of Storytelling in Young Children

Junko Seto<sup>1</sup>, Etsuko Hatano<sup>2</sup>

<sup>1</sup>Teikyo Heisei University, Tokyo, Japan. <sup>2</sup>Shirayuri University, Tokyo, Japan

#### Abstract (max 500 words)

##### Background

Narrative skills are the ability to describe experiences and events that is temporally sequenced and are an important aspect of language development. Narrative skills in early childhood are emphasized as language skills that can be linked to learning and literacy skills later in school. Early identification of narrative skills problems is particularly important in identifying children who are expected to be at risk for post-school learning. However, there is insufficient research on the process of development of preschool children's narrative skills and methods of assessment. The purpose of this study was to examine the development of storytelling skills among typically developing Japanese preschoolers.

##### Methods

Participants in this study were 182 Japanese children (90 boys and 92 girls) with typical development aged 4 to 6 years (48 to 82 months). The children were presented with a wordless picture-story show consisting of 14 scenes while listening to a 4-minute CD story, were then asked to retell the story without looking at the pictures. The story has a five-part dramatic structure (introduction; rising action; climax; falling action; resolution) in which a boy draws a ladder with a magical crayon that can draw anywhere, climbs up to the Land of Thunder, and returns home.

##### Results

The retelling of the story was characterized by a high rate of occurrence of important events and the actions of the main character, and a low rate of occurrence of mimetic words, dialogue, the characters' emotional feeling, and repetitive parts of the content.

To assess story retelling skills, 10 basic propositions necessary for story plotting were extracted as macrostructure elements. Each proposition consists of sentences connected by a conjunction, e.g., The boy drew a ladder to climb down but ran out of crayons on the way down. The propositions told by the children were scored, and the total score was used as the ST-score (storytelling score) to evaluate story retelling skills.

The results showed that 4-year-olds often focus on one or two actions or characters. Narrative structure developed and language became more complex as the children got older. ST-scores increased significantly, especially from age 5 to 6 years of age, with the median ST score for 6-year-olds reaching a high score. Macrostructural analysis also showed that the clarity of the story's plot was related not only to ST-Score, but also to word count, appropriate word use, clause structure, and cohesion.

## Conclusion

In this study, we created a story retelling task as an early childhood narrative skills assessment tool, proposed an effective scoring method for developmental assessment, and presented criterion data for early detection of narrative skills problems.

## 260

### **Musical dynamics and interaction as a pedagogical strategy with 0 to 3 years old children**

Noemí Martín-Ruiz<sup>1</sup>, Ana Moreno-Núñez<sup>1</sup>, Eva Jiménez<sup>2</sup>

<sup>1</sup>Universidad Autónoma de Madrid, Madrid, Spain. <sup>2</sup>Universidad Europea de Madrid, Madrid, Spain

#### **Abstract (max 500 words)**

The first years of life are core for the development of basic skills, such as the acquisition of various cognitive and communicative milestones (Gardinal-Pizato et al., 2012). During this period, daily interactions with adults and objects could facilitate the progressive participation of infants in shared activities (Moreno-Núñez et al., 2021) by incorporating, for example, musical components (rhythmic, sonorous and/or melodic) that structure the interchanges. If a similar dynamic were observed in the early childhood education classroom (0-3 years), it could contribute to designing meaningful learning spaces, where daily routines are shaped by the use of sound and rhythm. Ultimately, this could favor children's opportunities for participation and development both with their environment and with others (Liliana et al., 2014).

The aim of this study is to explore the interactive dynamics that take place in early childhood education classrooms (with 0-1, 1-2 and 2-3 years old children), both with and without musical structure. To this

goal, we propose (1) to identify whether the educator-children interactions incorporate musical components like those observed in parent-child exchanges; if they exist, (2) to describe how these interactions are organized, in order to (3) illustrate the microgenetic variations over time that may occur at the structural level.

Our study follows a longitudinal design based on classroom observations. Two researchers filmed each classroom on a quarterly basis during circle time, i.e. at the beginning of the school day. Observations consist of group interactions between the educator and children, and they had an average duration of 15 min. Participants used the objects and toys that were typically available at the school. We collected data from 18 classrooms of public early childhood education centers of the Madrid region (Spain), comprising 133 participating children and 15 educators. Our proposal follows a novel, pragmatic and functional research approach based on ecological data and a mixed analytical design. First, it focuses on depicting and comparing the characteristics observed during interactions, and then, on the quantitative analysis of recurrent musical patterns during the activities.

Results of this study are expected to allow describing musicality in educators-children interactions. The combination of different software guarantee a detailed analysis, and contribute to understand the role of adults in infant socio-communicative development. Preliminary results confirm that adopting a dynamic approach to the study of early development through classroom interactions could foster evidence-based pedagogical decision making at this stage.

This study contributes to the scientific literature on early childhood education under three years of age, which has been underexplored in previous research. Our findings have the potential to enrich and promote quality pedagogical practices, while identifying forms in which adults could facilitate children's opportunities of development and learning.

**262**

## **Cognitive deficits and enhancements in youth from adverse conditions: An integrative assessment using Drift Diffusion Modeling in the ABCD study**

Stefan Vermeent<sup>1,2</sup>, Ethan Young<sup>1</sup>, Meriah DeJoseph<sup>3</sup>, Anna-Lena Schubert<sup>4</sup>, Willem Frankenhuis<sup>1,2</sup>

<sup>1</sup>Utrecht University, Utrecht, Netherlands. <sup>2</sup>Max Planck Institute for the Study of Crime, Security, and Law, Freiburg, Germany. <sup>3</sup>University of Minnesota, Minnesota, USA. <sup>4</sup>University of Mainz, Mainz, Germany

### **Abstract (max 500 words)**

The effects of early-life adversity—such as growing up in poverty or experiencing high levels of violence—on cognition are complex. Studies linking adversity and cognitive abilities tend to adopt either a deficit-oriented framework or an adaptation-based framework. However, these frameworks may produce complementary or opposing predictions. An integrative approach will allow us to uncover more nuanced patterns of developing cognitive abilities, inform interventions, and identify sources of strength that can be leveraged to promote thriving across contexts. two challenges prevent us from integrating

and better understanding these two perspectives. First, studies commonly use and interpret raw performance differences, such as mean response times or overall accuracy. However, raw scores conflate different stages of cognitive processing. Second, research tends to either isolate or aggregate abilities, obscuring the degree to which individual differences reflect task-specific or task-general processes. Ignoring these issues may hide adversity-related individual differences in performance, or perhaps worse, lead us to infer a cognitive deficit or enhanced ability when none might exist. We plan to simultaneously address both methodological challenges in a Registered Report. We will analyze the data of a large, representative sample of 9-10 year-olds from the Adolescent Brain Cognitive Development (ABCD) study. Our methodological approach consists of two steps. First, we will use computational modeling (Drift Diffusion Modeling; DDM) to formalize the stages of processing underlying RTs and accuracy on four cognitive tasks. DDM breaks overall performance down into 1) the speed of initial task preparations, 2) the speed of information uptake, and 3) the level of response caution. Second, we will use structural equation modeling (SEM) to distinguish specific abilities (e.g., attention-shifting or inhibition) from general abilities common to most tasks (e.g., general cognitive efficiency). We investigate the unique effects of key dimensions of adversity—material deprivation and household threat—on these specific and general cognitive abilities to generate novel empirical knowledge and theoretical insights about the link between early adversity and cognition. In line with adaptation-based frameworks, we predict that any adversity-related enhancements will manifest at the task-specific level and not the task-general level. In contrast, we expect deficit patterns to emerge at both levels. Our approach holds promise for both deficit and adaptation-oriented researchers. It will add much-needed nuance to adversity-related performance differences, which can inform theory and intervention.

**265**

## **Design, Implementation, and Evaluation of ALS-PBL Model in the EMI Classroom**

Yen-Hui Lu

Chung Yuan Christian University, Taoyuan, Taiwan

### **Abstract (max 500 words)**

In the past two decades, in order to increase university visibility and internationalization, English as a medium of instruction (EMI) has become one of the main language policies in higher education institutions where English is not a dominant language. However, given the complex, discipline-embedded nature of academic communication, academic literacy does not come with students' everyday language experience and it is a challenge for all students. Particularly, to engage students in effective learning process of discipline concepts in the EMI classrooms, teachers need to provide explicit academic language instruction to assist students in deep understanding of discipline concepts.

To bridge the gap between academic language development and discipline learning in the EMI classrooms, the researcher incorporates academic language strategies and key elements of project-based learning (PBL) into an Academic Language Strategy driven PBL (ALS-PBL) model. With clear steps and strategies, the model helps EMI teachers to scaffold students' academic language development in the EMI classrooms.

ALS-PBL model includes three major stages: preparation, implementation, and assessment. First, in the preparation stage, ALS-PBL teachers need to identify learning goals for both content and language learning and to design PBL topics for investigation. Second, during the implementation stage, ALS-PBL teachers use the model as a guideline to create a lesson structure and class routine. There are five important elements in the implementation stage: (1) academic language preparation, (2) connecting background knowledge, (3) comprehensible input, (4) academic language reinforcement, and (5) sustained inquiry and project presentation. Finally, ALS-PBL teachers use formative assessments such as student learning logs, teachers' feedback, and peer evaluation to collect detailed information that demonstrates students' academic language development in the learning process.

In this study, ALS-PBL model was implemented in an interdisciplinary course, entitled "Science is Everywhere", which was co-taught by five professors from different discipline backgrounds, English education, civil engineering, business administration, international business and chemical engineering. The purpose of the course was to cultivate students' interdisciplinary knowledge as well as English competency in disciplinary areas.

This study used a case-study design to systematically investigate students' learning experiences in the class using ALS-PBL model. The participants of the study were 22 college students with different majors. This course was one of the elective EMI courses in this focal university. The students enrolled in this EMI course to fulfill the school language policy which requires the students to complete two EMI courses before their graduation. For the credibility, this study used multiple methods to collect data including classroom observation, teachers' feedback, peer assessment, student learning log, and student focus-group interviews.

Research findings show four major successful aspects of implementing ALS-PBL model in the EMI classroom: (1) clear focus on both content and language learning, (2) meaningful practice in authentic communication, (3) reflective learning in academic language strategies, and (4) collaborative support in content knowledge. This study will be of value to teachers involved in delivering English as well as content lessons to language learners by providing a theoretically-sound practical model for application in the classroom.

**267**

## **Children's perception of schadenfreude intensity in envy situations: The role of zero-sum reasoning**

Elena Gaviria, Laura Quintanilla

Spanish University of Distance Education, Madrid, Spain

### **Abstract (max 500 words)**

Objective: The purpose of this study is to show the relationship between zero-sum thinking and the emotions of envy and schadenfreude.

Studies on the development of children's understanding of envy have shown that children up to the age of five attribute schadenfreude to an envious character when he/she witnesses the envied object getting damaged, although they know that the envied character is saddened by the loss. In contrast, children six and older attribute sadness to the envious character for this loss. Envy implies a sense of inferiority to the favored person. If this inferiority ceases when the favored person loses the advantage, why do children attribute sadness rather than joy to the envious person when both characters are in equal conditions? One possible reason is that children assume that if someone loses the advantage, the envious person who would like it should get it. This is a zero-sum principle (Foster, 1972).

**Methodology:** Participants (N =178, aged 5 to 11 years) were randomly assigned to two groups and listened to 4 stories with two characters whose relationship was characterized by an upward social comparison (envy). In one condition, the envious character received an advantage when the envied character lost it (you lose, I win); in the second condition, he/she received no advantage, so they ended up in equal terms (nobody wins).

We asked participants to attribute the emotions experienced by the characters, and their answers were classified as either benign or malicious envy. Benign envy consisted of children attributing sadness to the envier because he/she was in an unfavorable position, and sadness when the envied person lost his/her advantage. Malicious envy consisted of children also attributing sadness to the envier because of the disadvantage, but joy when the envied person lost.

**Results:** Our results showed that in the "you lose, I win" condition, the children attributed joy (schadenfreude) to the envious character when the envied person lost his/her advantage. On the other hand, in the "no one wins" condition, children attributed more sadness than joy at the loss. Age differences were found. In the "nobody wins" condition, the 10-year-olds attributed more sadness about the loss than younger children. In the "You lose, I win" condition, the intensity of schadenfreude decreased with age. In this condition, benign envy disappeared. The justifications children gave for their responses indicate that gain, but not equality, is a motive for schadenfreude.

**Conclusions:** Envy and schadenfreude are emotions strongly associated with zero-sum thinking. This type of thinking occurs when goods are seen as limited, such as in competition for an advantage. It is possible that in competitive situations where one party loses, an equal outcome for the two parties is an "anomaly" for zero-sum thinking. This might arouse the feeling of benign envy, where one regrets the loss.

**268**

## **Examining university student academic success and emotional well-being: A cluster analysis approach.**

Giovanni Maria Vecchio<sup>1</sup>, Salvatore Ioverno<sup>1</sup>, Susanna Pallini<sup>1</sup>, Elena Cattelino<sup>2</sup>, Federica Zava<sup>1</sup>

<sup>1</sup>University of Roma Tre, Rome, Italy. <sup>2</sup>University of Valle d'Aosta, Aosta, Italy

**Abstract (max 500 words)**



### 1) Objective of the study

Several studies have demonstrated the specific role of intrinsic motivation, study strategies, social relationships, self-efficacy, and positive attitude toward oneself in predicting academic achievement (Morelli et al., 2022) and psychological adjustment to university (Cattellino et al., 2020). Based on Socio-Cognitive Theory (Bandura, 1997), this study intended to identify different profiles of students based on these variables and examine how these profiles differ in levels of academic achievement, emotional well-being, and depressive symptoms.

### 2) Methodology

Participants were one hundred and ninety university students attending the Developmental Psychology for Inclusion course at the Roma Tre University, Department of Education (Mage = 25.46; SD= 6.07; 96.8% women). A series of scales were used to measure academic motivation (Academic Motivation Scale; Alivernini & Lucidi, 2008;  $\alpha = 0.93$ ), study strategies (Questionnaire on Study Strategies; Cornoldi, et al., 2005;  $\alpha = 0.88$ ), the perceived academic self-efficacy (University Self-efficacy Scale; Pastorelli et al., 2001;  $\alpha = 0.81$ ); positive attitude toward oneself (Positivity Scale; Caprara et al. 2012;  $\alpha = 0.84$ ), depressive symptoms (DASS Depression scale; Bottesi et al., 2015;  $\alpha = 0.83$ ), and emotional well-being (Positive and Negative Affect Scale; Terraciano et al., 2003;  $\alpha = 0.86$ ). In addition, students were asked how many friends they had at the university (0= None; 5 = More than 6). Self-report data were merged with the grades of the participants obtained at the university. We performed a two-step cluster analysis to form distinct groups based on the number of university friends and measures of academic motivation, study strategies, university self-Efficacy, and positivity. ANOVA tests were used to test differences between clusters on academic achievement, emotional well-being, and depressive symptoms.

### 3) Results

We identified four clusters of students who differed in the number of university friends (sociality) and measures of Academic Motivation, Study Strategies, University Self-Efficacy, and Positivity (academic functioning). Students in cluster 1 had high sociality and high academic functioning, those in cluster 2 had low sociality and academic functioning, those in cluster 3 had high sociality but low academic functioning, and finally, those in cluster 4 had high academic functioning but low sociality. ANOVA tests showed significant differences between clusters in grades,  $F(3,111) = 2.48$ ,  $p = .065$ , depression,  $F(3,186) = 10.48$ ,  $p < .001$ , and hedonic balance,  $F(3,186) = 10.46$ ,  $p < .001$ . Post hoc analyses revealed that students with high sociality and high academic functioning had the highest grades and the greatest hedonic balance, whereas students with low sociality and low academic functioning had the lowest grades and levels of hedonic balance and the highest levels of depression.

### 4) Conclusion

Preliminary results showed that specific types of students, differently characterized by interpersonal, motivational, and regulatory factors, are differently related to academic achievement, emotional well-being, and depressive symptoms. The implications of the study concern the prevention of students' psychological distress and the promotion of their well-being, both through individual interventions to improve social-emotional skills and through practices that aim to create collaborative and supportive environments.

270

## Effectiveness, Working Mechanisms, and Implementation of Youth Initiated Mentoring for Juvenile Delinquents: A Mixed-Methods Study Protocol

Angelique Boering<sup>1</sup>, Annabeth Groenman<sup>1</sup>, Levi Van Dam<sup>1,2,3</sup>, Geertjan Overbeek<sup>1</sup>

<sup>1</sup>University of Amsterdam, Amsterdam, Netherlands. <sup>2</sup>Dutch YIM Foundation, Amersfoort, Netherlands.

<sup>3</sup>Levvel Academic Centre for Child and Adolescent Psychiatry, Amsterdam, Netherlands

### Abstract (max 500 words)

**Objective:** The societal costs associated with juvenile delinquency and reoffending are extremely high, which highlights the need for effective prevention strategies. An innovative approach is Youth Initiated Mentoring (YIM), in which youths are supported by professionals to nominate a non-parental adult from within their own social network. This approach is especially promising in the field of juvenile delinquency because it focuses on strengthening factors that build resilience and promote desistance against delinquency, such as strengthening the familial and informal social networks. However, until now, little research has been conducted on YIM in the field of juvenile delinquency. We will examine the effectiveness, working mechanisms, and implementation of YIM as a prevention strategy for juvenile delinquents.

**Methods:** This is a mixed-methods study consisting of a quasi-experimental trial and a qualitative study. In the quasi-experimental trial, we aim to include 300 juvenile offenders referred to Halt. In the Netherlands, all juvenile offenders (12-18 years) are required to complete the Halt-intervention, which is aimed at preventing reoffending. Youths will be non-randomly assigned to educational level and region matched non-YIM trained and YIM-trained Halt professionals implementing respectively Care-as-Usual (CAU) or CAU-plus-YIM. This approach will lead to comparable conditions in: (1) professionals' characteristics, and (2) case type and severity. Youth and parents self-report data complemented with official Halt records will be collected at pre- and post-test and at a 6 month follow-up. Multilevel analyses will test whether youths following CAU-plus-YIM show a stronger increase in resilience as well as a stronger decline in need for formal support and self-reported delinquency than youths following CAU. In the qualitative study, we will organise focus group interviews with YIM-trained professionals to explore boosters and barriers experienced during implementation. Focus groups will be recorded (audio) and transcribed for analyses. To identify patterns in the data, we will perform multi-step thematic analyses.

**Expected results:** During ECPD 2023 we will present the protocol for the described study, because data collection will end in February 2024. With regard to the effectiveness of YIM, we expect that YIM is effective in strengthening youth resilience factors and halting or decreasing both the need for formal support and self-reported delinquency. With regard to the working mechanisms of YIM, we expect that the effect on the need for formal support and self-reported delinquency can be explained by parallel increases in youth resilience factors. Moreover, we expect YIM to work better for some youth than for others (e.g., depending on moderators such as mentor-mentee relationship quality, psychosocial problems). With regard to the implementation of YIM, we expect to identify determinants that impact implementation outcomes in four domains (i.e., innovation, youth case characteristics, individual, inner setting).

**Conclusion:** The proposed study will help to determine the effectiveness of YIM in the field of juvenile delinquency. In addition, it may offers insights in how and for whom YIM works. Finally, by examining implementation level based on professionals' experience this study can help to strengthen YIM in the future.

**271**

### **Joke or insult? The perception of hostility in instant messages in the context of envy: A preliminary study.**

Guillermo Tasero, Elena Gaviria, [Laura Quintanilla](#)

Spanish University of Distance Education, Madrid, Spain

#### **Abstract (max 500 words)**

**Objective:** Hostile messages in text messaging apps have not been studied before. In this study, we examine the interpretation of a hostile, exclusionary message on WhatsApp and the reaction to it when placed in a context specific to envy.

**Methodology:** Using stories read by 190 adolescents aged 13 to 16 (47.6% girls) in two experimental conditions (envious versus not envious), we compared whether they found the hostile message offensive or funny when the character was envious (upward comparison) and when the character was not envious (like comparison). In addition, participants had to weigh whether the sender intended to make fun of or ridicule the character to whom the message was addressed. Finally, participants were instructed to evaluate the status of both characters as superior or inferior as a function of the number of “likes” received in Instagram, whether they were friends, and the possibility that the sender was trying to exclude the recipient.

**Results:** Results showed that the hostile response was perceived as offensive in both envy and non-envy situations, and that the sender was attributed an intention to mock, not to joke. Gender differences were even more striking. Boys rated the hostile response as more humorous and less offensive than girls. Accordingly, girls were more likely than boys to rate the hostile response as intending to ridicule the recipient. In addition, girls, in contrast to boys, considered that the sender was trying to exclude the recipient. On the other hand, status evaluation of both characters depended on the context, the sender being perceived as inferior when envious in comparison to when not. Finally, the interpretation of friendly relationship was not affected by the context nor by the gender.

**Conclusions:** We discuss the role of extralinguistic information in hostile messages via online apps and the role of gender in the perception and understanding of hostility-producing situations related to envy.

272

## From concept to validation: The Global Scales for Early Development (GSED) for children 0 to 3 years of age

Magdalena Janus<sup>1</sup>, GSED Team<sup>2</sup>

<sup>1</sup>McMaster University, Hamilton, Canada. <sup>2</sup>WHO, Geneva, Switzerland

### Abstract (max 500 words)

#### Objective

To measure early development equitably and comparably, the measures need to be holistic, inclusive, and feasible. The urgency of Sustainable Development Goals which require monitoring of the developmental status of children under 5 years, combined with lack of such measures for the youngest children, led the World Health Organization to propose creation of a new tool and to engage with a variety of experts and methodologies. The objective of this study is to provide evidence of feasibility and validity of the new tool, Global Scales for Early Development (GSED) to measure early development of children aged 0-3 years.

#### Methodology

To achieve the goal of addressing child development globally, the item bank for the new measures was constructed based on existing cross-sectional and longitudinal datasets including data from 54375 unique, anonymised children (84672 visits), 29 countries, and 16 instruments with 2021 different developmental items. The process of creation of GSED measures involved merging empirical data and statistical modelling with expert judgement on comparability, feasibility, and developmental domain coverage. The GSED includes three measures: 1) short form (SF) for population-evaluation (caregiver-report), 2) complementary long form (LF) for programmatic-evaluation (direct assessment), and 3) psychosocial form (PF) for psychosocial development evaluation (caregiver-report).

The SF and LF prototype measures were validated in a cross-sectional study conducted in Tanzania, Bangladesh, and Pakistan, with 3744 children (0 to 41 months); with subsamples including a prospective cross-sectional design with a 6-month longitudinal component of age- and sex-stratified samples, and additional instruments such as Home Stimulation scales and the Bayley Scales of Infant Development III (BSID). Item-level data and development-for-age z-scores (DAZ) were used to evaluate the psychometric properties of GSED.

#### Results

The internal reliabilities of both LF and SF were above 0.80; for the combined form, the internal reliability was above 0.90, with slightly lower reliability at the ends of the scale. Results from all three countries showed strong inter-rater and test-retest reliability for both forms (correlations of 0.98-0.99). The D-score, based on results combined from both forms, showed statistically significant correlations with all hypothesized construct relevant variables, e.g. Home Stimulation (0.23, 95% CI 0.20-0.26) and Height-for-Age (0.19 95% CI 0.160-0.22). Short-term predictive validity of GSED DAZ, as shown by

correlation with scores 6 months later, was 0.59 (95% CI 0.56-0.53). D-score correlations based on directly-administered LF (n=450 children) with the BSID scores were 0.98 (95% CI 0.98-0.98).

### Conclusion

Even though the study was so far conducted only in three countries, the indication of global comparability and validity of GSED SF and LF is promising. Our study also demonstrates the feasibility of the D-score to measure child development under 3 years of age at the population level using culturally neutral, open access and easy to implement GSED measures. Further results from four additional countries (Brazil, China, Cote d'Ivoire, and the Netherlands) will be available in 2023. Ongoing work is focused on further investigations of validity of all three forms, and adaptation of the GSED SF for inclusion into large-scale and national household surveys.

**273**

## **Mother-Nanny Sensitive Parenting and Coparenting in Triadic Mother-Nanny-Child Interactions and Their Associations with Child Well-Being**

Nazli Akay<sup>1,2</sup>, Basak Sahin Acar<sup>1</sup>, Pasco Fearon<sup>3</sup>

<sup>1</sup>Middle East Technical University, Ankara, Turkey. <sup>2</sup>Anna Freud National Centre for Children and Families, London, United Kingdom. <sup>3</sup>University of Cambridge, Cambridge, United Kingdom

### **Abstract (max 500 words)**

In this study, we aimed to investigate associations between two factors related to child well-being: the nanny-child relationship and mother-nanny coparenting. Through home visits, we observed the play interactions of 83 triads consisting of mothers, nannies, and young children in a semi-structured format. We used the ratio between support and conflict coding schemes from the Family Alliance Assessment Scales to measure coparenting, Ainsworth's Maternal Sensitivity Scale to measure the mothers' and nannies' sensitivities towards the child, and Child Behavior Checklist to measure child well-being. Even though the linear regressions did not reach significance, two curvilinear regressions were found to be significant: The first one, between nanny sensitivity and internalizing problems, was interpreted as very high and low levels of nanny sensitivity being related to higher internalizing problem scores. The second significant association, between coparenting and externalizing problems, demonstrated that children had higher externalizing problem scores when the cooperation and conflict levels on the mother-nanny relationship were similar (e.g., when both were low, or both were high). These findings revealed an association between nanny care and child well-being, directly for internalizing problems and indirectly for externalizing problems via mother-nanny coparenting. Given the paucity of research concerning nannies and nanny care, these results point to the potential value for future researchers to consider nannies and their roles in child well-being.

274

## Are there really sex differences in the development of sympathy? Parent-reports vs self-reports of sympathy in children

Mariana Costa Martins<sup>1</sup>, Marília Fernandes<sup>1</sup>, Carla Fernandes<sup>1</sup>, Tina Malti<sup>2</sup>, Manuela Veríssimo<sup>1</sup>

<sup>1</sup>ISPA, Lisbon, Portugal. <sup>2</sup>University of Toronto, Toronto, Canada

### Abstract (max 500 words)

Sympathy for others is one of the indicators of socio-emotional development and is important for the understanding of how humans interact, especially when considering prosocial behaviors. Described by Eisenberg as an emotional response derived from the apprehension of another person's emotional state or condition, sympathy is the feeling of concern for the other. It may or not imply sharing others' emotional states. Despite this marked interest in recent literature, there is still a lack of studies on sympathy using different informants (parents, teachers, and self-report). The two adapted versions of the sympathy scale created by Eisenberg (for caregivers and for children from ages 4 to 12 years old), can be considered a valid alternative to interviews and observations. Previous studies revealed that adults (parents and teachers) perceive girls as more expressive and capable of feeling sympathy. These results may reflect adults' personal and social conceptions of what boys and girls are supposed to be like rather than how they behave. Despite being less explored, from a developmental perspective, older children are also expected to show a higher ability to express sympathy. However, this disparity is still unclear, as different methodologies and reports, alongside a challenging conceptual delimitation, have led to incongruent conclusions (e.g., observational measures of sympathy have not shown this difference in function of sex). The main goal of the present research was to test this social preconception and explore possible sex and age differences using two informants - children themselves and their parents. Participants were 53 dyads of parents and their respective sons (47.2%) or daughters (52.8%). Children were between 4 and 9 years old (*M age* = 6.49 years, *SD* = 1.30). Sociodemographic data and the Eisenberg Sympathy Scale (both versions) were collected. As expected, parents (mostly mothers, 84%) perceived girls as more sympathetic than boys [ $t(49)=2.60, p < .01$ ]. However, results from children's reports, revealed no significant differences in function of sex [ $t(51)= .150, p = .88$ ], boys describe themselves as sympathetic as girls. In contrast to what would be expected, no significant association between sympathy (self-reported or parent-reported) and child's age was found. Our results are in line with what was previously found in the literature – parental reports reveal sex differences, but observational measures, or reported by the children themselves, do not. These results stress the importance of using both parents and children's perspectives and support the idea that boys being less emotionally skilled is a construct associated with gender roles and social preconceptions. More studies are necessary to determine how parents' social and cultural backgrounds affect their perception of gender roles and consequently, impact their parenting practices and implied dynamics and different perceptions in the relationships with their sons and daughters. Future studies should also compare indirect with direct measures and differences between fathers and mothers.

275

### **Alabama Parenting Questionnaire (Parent Form): Psychometric properties and validation in a population of Greek parents of young children (3–6) with and without disabilities**

Maria Kypriotaki<sup>1</sup>, Maria Markodimitraki<sup>1</sup>, Garyfalia Charitaki<sup>2</sup>, Eirini Amanaki<sup>2</sup>

<sup>1</sup>Department of Pre-school Education, Rethymnon, Greece. <sup>2</sup>Hellenic Open University, Patra, Greece

#### **Abstract (max 500 words)**

Alabama Parenting Questionnaire (APQ), in its global and short parent self-report version, has been analyzed through different statistical paths (confirmatory factor analysis-CFA, principal components varimax analysis, principal components oblique analysis, principal components promax analysis and principal components oblimin analysis). The APQ studies were conducted in typical and atypical population of different ages, from 4 to 18 years old children. The factors that were pointed out in the APQ studies were either three, four or five. The aim of the present study was to evaluate the psychometric properties, such as factor structure, reliability, and construct validity of the Greek translation of the parent report version of the APQ for children younger than four years old. Four hundred sixty-six parents of children 3-6 years old were enrolled in the study. Firstly, a Principal Components Analysis was conducted with the use of EFA in a subsample comprised of  $n = 294$  participants. Four factors were extracted. Afterward, it was conducted CFA in the entire sample where the internal four-factor structure (Involvement – Positive Parenting – Inconsistent Discipline – Corporal Punishment) was evaluated. All goodness of fit indices generated by CFA were found satisfactory ( $\chi^2/df = 1.54 < 2$  and  $p = .213$ ,  $TLI = 0.976 \geq 0.95$ ,  $RMSEA = .027 < 0.08$ ,  $CFI = 0.95 \geq 0.90$  and  $SRMR = 0.015 < 0.08$ ). No floor-ceiling effects were observed. Assessment of measurement invariance provided us with strong evidence that the proposed structure is both meaningful and valid in families with a child with a disability, as well. Our findings indicate that the APQ-GR (3–6) is a methodological tool easy to be applied and comprehended. It can be used to investigate parental characteristics and practices in families rearing children with and without disabilities. Our study highlights the importance for the mental health specialists to evaluate parental experience and develop early prevention and treatment programs to reduce negative parental practices and enforce parents of children of all ages in their role.

276

### **Executive functioning as a predictor of changes in emotion regulation among preadolescent children – latent change score model**

Marija Džida<sup>1</sup>, Andreja Brajša-Žganec<sup>1</sup>, Marina Kotrla Topić<sup>1</sup>, Toni Babarović<sup>1</sup>, Ivana Hanzec Marković<sup>2</sup>

<sup>1</sup>Institute of Social Sciences Ivo Pilar, Zagreb, Croatia. <sup>2</sup>Department of Social Sciences and Humanities, University of Slavonski Brod, Slavonski Brod, Croatia

### **Abstract (max 500 words)**

During preadolescence (between the ages of 9 and 12) emotion regulation capacities broaden and allow children greater flexibility in the usage of different emotion regulation strategies. In this period, children's executive functioning abilities are also improving. Furthermore, it was proposed that children's executive functioning abilities support developments in emotion regulation. Better executive functioning may facilitate the usage of different adaptive emotion regulation strategies such as cognitive reappraisal, and protect from overreliance on maladaptive strategies such as expressive suppression. The goal of this study was to assess whether difficulties in executive functioning predict changes in the two emotion regulation strategies during a period of one year.

The study was conducted as part of the project Child well-being in the context of the family (CHILD-WELL) which is financed by the Croatian Science Foundation. In this study, we used data reported by children and mothers (1141 pairs). Children ( $M_{age}=11.03$ ,  $SD=1.15$ ) reported their usage of cognitive reappraisal and expressive suppression in two-time points over a period of one year. Mothers rated children's executive functioning difficulties at time one. Executive functioning difficulties were conceptualized as the total index of difficulties in behavior, cognitive, and emotion regulation. Change in expressive suppression and cognitive reappraisal over time was modeled with the latent change score model.

Children who had elevated difficulties in executive functioning reported higher suppression usage at both time points, and lower reappraisal usage at time one. Over the period of a one-year significant decrease in reappraisal usage has been observed. This decrease was not predicted by executive functioning difficulties at baseline. However, gender predicted a change in reappraisal. A greater decrease was observed among girls. Overall, there was no mean-level change in suppression for the whole sample, but there was a significant variation in its latent change scores. Change in suppression was related to children's executive functioning difficulties in time one. Children who had more executive functioning difficulties in time one had a lower decrease of suppression usage. Age was also a significant predictor of change in suppression usage. Older children experienced lower decreases and were more likely to show increases in suppression usage.

Overall, children with higher executive functioning difficulties concurrently reported greater usage of maladaptive, and lower usage of adaptive strategies. Over time, greater executive functioning difficulties predicted smaller decreases in suppression usage. This may mean that for children with greater difficulties in executive functioning, it may be harder to inhibit suppression usage over time.

**277**

### **Cognitive stimulation in neurodiversity oriented to educational inclusion. Presentation of unique case.**

Celia Josefina Rodríguez Cervantes<sup>1</sup>, Diana Gabriela López Carpio<sup>2</sup>, Verónica del Carmen Suarez Sánchez<sup>3</sup>, Florinda Magdalena Rodríguez Chapa<sup>4</sup>, María de los Dolores Valadez Sierra<sup>1</sup>



<sup>1</sup>Universidad de Guadalajara, Guadalajara, Jalisco, Mexico. <sup>2</sup>PARLARE, Zapopan, Jalisco, Mexico. <sup>3</sup>UTEG, Guadalajara, Jalisco, Mexico. <sup>4</sup>Formación y Orientación, Zapopan, Jalisco, Mexico

### **Abstract (max 500 words)**

**Objective:** To present the long-term effects of a cognitive stimulation program in a case with neurodiversity.

**Methodology:** This is a longitudinal study of a single case. Type AB non-reversion design. The follow-up has been carried out for 8 years.

**Results:** The qualitative and quantitative effects on the evolution of the case of neurodiversity are presented, through the implementation of cognitive stimulation, the process of educational inclusion and the current development.

**Conclusions:** The implementation of a cognitive stimulation program, with a multidisciplinary team and guidance in a school environment favors educational inclusion.

**278**

### **Intergenerational transmission of negative parenting through aggression: Breaking the cycle with effortful control and partner support**

Dzhansel Karakash, Sanne Geeraerts, Susan Branje

Utrecht University, Utrecht, Netherlands

### **Abstract (max 500 words)**

**Objective:** Parents may display similar harsh or negative parenting behavior toward their children as they experienced from their own parents in childhood. However, not all parents inevitably emulate the parenting they experienced as children when they become parents. Even though previous research suggests certain factors to moderate this intergenerational transmission of negative parenting, they mostly relied on cross-sectional designs, retrospective data, and single-informant measures. This three-generation longitudinal study aims to investigate the possible mediator and moderator roles of individual and relational factors to understand the mechanisms of intergenerational transmission of negative parenting and the ways to weaken this transmission across generations. **Method:** This study will use three-generation longitudinal and multi-informant data drawn from the Research on Adolescent Development and Relationships project in the Netherlands. The sample will include approximately 220 target participants (G2), who are followed from their early adolescence to their young adulthood (at which time they have their own children (G3)), and their parents (G1, followed during G2's adolescence). The participants completed several questionnaires at G2 age 12-16, around age 16, and at G3 age 2. G1-G2 parent-child negative interaction and G2 aggressive behavior will be assessed using both self- and parent-reports. Harsh discipline, effortful control, and partner support will be assessed by G2 self-

reports, and G3 aggressive behavior by G2 parent-report. Expected results: G1's negative interaction toward G2 in G2 early adolescence is expected to be longitudinally associated with G2's harsh parenting toward G3 in G2 young adulthood. Based on the mediation analysis, we expect that higher G1 negative interaction in early adolescence would predict higher G2 aggressive behavior in middle adolescence, which in turn would foster G2's harsh parenting toward their children, G3, in young adulthood. Besides, G2's harsh parenting and G3's aggressive behavior is expected to be concurrently associated in G2 young adulthood, at G3 age 2. Based on moderation analyses, higher effortful control and partner support are expected to be protective adulthood factors that weaken the intergenerational transmission of negative parenting from G1 to G2. Conclusion: The results of this study will be an important step in the literature to identify modifiable intrapersonal and interpersonal characteristics, such as aggressive behavior, effortful control, and partner support, that may dampen the transmission of negative parenting across generations and will potentially increase the practical utility of the research findings in interventions.

**280**

## **Family communication as protective factor of executive functioning of ADHD students**

Katarzyna Sitnik-Warchulska<sup>1</sup>, Wiktoria Walenista<sup>1</sup>, Bernadetta Izydorczyk<sup>1</sup>, Iana Markevych<sup>1</sup>, Marcin Szwed<sup>1</sup>, Małgorzata Lipowska<sup>1,2</sup>

<sup>1</sup>Jagiellonian University, Kraków, Poland. <sup>2</sup>University of Gdańsk, Gdańsk, Poland

### **Abstract (max 500 words)**

**Objective:** This study aimed to specify whether family communication and satisfaction are predictors of a child's executive functions and whether attention deficit hyperactivity disorder (ADHD) severity lies in the pathway between these variables.

**Method:** Two hundred Polish children with ADHD, aged 10–13, were tested using Conners 3, the PU1 Battery of Cognitive Tests and Stanford-Binet Intelligence Scale, Fifth Edition (SB5). Parents filled out the FACES IV-SOR questionnaire. Structural equation modeling (SEM) was used to test the hypotheses.

**Results:** The quality of family communication and satisfaction did not predict executive functioning in children with ADHD, and ADHD severity did not play a mediating role neither in boys or in girls. Intelligent quotient was the only predictor of executive functioning in the group of boys.

**Conclusion:** These results contrast with those of previous studies that have shown the existence of similar associations in other cultural contexts.

284

## The relationship between Italian children and parents' sleep quality and their well-being during the Covid-19 pandemic

Benedetta Ragni, Daniela Paoletti, Simona De Stasio

Department of Human Studies, LUMSA University, Rome, Italy

### Abstract (max 500 words)

Objective: The Covid-19 pandemic profoundly changes the daily habits and routines of billions of people worldwide. Specifically, for parents, new stressors and concerns related to quarantine have been added to the typical developmental challenges that they usually face with their children, worsening their levels of stress, anxiety, depression and insomnia symptoms. According to the literature, the increase in children's emotional and behavioral disturbances during the lockdown period has not been found to be directly associated with Covid-19-related risks but rather mediated by parental distress and a more general dysfunctional family functioning. In addition to this, studies conducted during the first general lockdown (2020) have shown a negative impact of the Covid-19 pandemic on the sleep-wake patterns of children aged 3 to 6 years. In line with these results and the theoretical framework of the Transactional Model adapted to sleep, it could be possible that changes in children's sleep quality during the Covid-19 pandemic resulted associated with different factors related to their distal and proximal developmental contexts. To the best of our knowledge, no studies have explored Italian children's and parents' sleep quality and its relationship with risk and protective factors during the second wave of Covid-19, when the Italian government imposed new restrictions. This study has two aims: (1) verify changes in children and parental sleep before the Covid-19 first lockdown (March-May 2020) and after it (March 2021); (2) examine the relationships between children's negative emotionality, partner involvement in children's care, parental anxiety and fear of Covid-19, and sleep of children and parents. Methodology: 264 parents of children aged 1-6 years completed: Brief Infant Sleep Questionnaire-R, Insomnia Severity Index, Rothbart's temperament questionnaires, Who Does What, Fear of Covid-19, The Generalized Anxiety Disorder Scale, in March-November 2021. Paired t-test was performed to detect possible changes in children's and parents' sleep. Path analysis tested associations between studied variables (Mplus v8.3). Results: Pediatric insomnia symptoms decreased after the first lockdown, while poor sleep-related behaviors at bedtime increased ( $p=.000$ ). Parental anxiety and fear of Covid-19 were associated with parental insomnia ( $R^2 = .27, p=.000$ ) and poor sleep-related behaviors at bedtime ( $R^2 = .12, p=.002$ ). Children's negative emotionality was related to pediatric and parental insomnia ( $R^2 = .13, p=.001$ ), while partner involvement in children's care to lower levels of poor sleep-related behaviors at bedtime ( $b=-.190, p=.001$ ). Conclusion: Results can usefully inform parents, healthcare providers and the general public about the risk and protective factors related to children and parental sleep in times of crisis.

285

## A longitudinal investigation of self-development of toddlers in institutions

Zeynep Ertekin<sup>1</sup>, Sibel Kazak Berument<sup>2</sup>

<sup>1</sup>Ankara Medipol University, Ankara, Turkey. <sup>2</sup>Middle East Technical University, Ankara, Turkey

### Abstract (max 500 words)

The study compares the self-development of toddlers reared in institutions with those of family-raised infants. Besides, individual differences were examined with the moderating role of temperament.

14 -23 months old, 75 toddlers were recruited to the study (institutions=39, family group=36). They have followed three times points at four-monthly intervals. Information about the self was gathered from both mothers/caregivers with a Self-Concept Questionnaire (SCQ) and with three self-tasks (mirror task, mat pick-up task, and photo task), which were administered to toddlers. Two sub-scales of SCQ were used in the analysis: self-description and evaluation and self-recognition. Three temperamental characteristics (perceptual sensitivity, soothability, and falling reactivity/rate of recovery from distress) were measured by the Infants Behavior Questionnaire (IBQ).

Hierarchical Linear Modelling (HLM) was run to see the growth rates in self-development. Time was centered on the first time point. For both the self-description and evaluation score and self-recognition score, there was a significant group difference at time one ( $b = 3.52, p < .001$ );  $b = 2.69, p < .001$ ), respectively. Growth rates in groups significantly differentiated in time ( $b = 1.46, p < .01$ ); ( $b = -.35, p < .05$ ), respectively (see Figure 1). Moreover, there was a significant three-way interaction between perceptual sensitivity\*time\*and group ( $b = -.41, p < .05$ ). Slope analysis revealed that all groups showed significant growth in time. However, toddlers who were in institutions and had high perceptual sensitivity had the lowest scores at time one, but they caught up with the toddlers with high perceptual sensitivity in the family group (see Figure 2).

Moreover, a preliminary analysis was run for the self-tasks. Toddlers in the family group had higher scores than toddlers in institutions for both mirror task  $\chi^2(1) = 33.13, p < .001$ , mat pick-up task  $\chi^2(2) = 9.91, p < .01$ , and photo task  $\chi^2(1) = 12.01, p < .01$ ) at time one. The longitudinal results of the self-tasks will be presented at the conference.

287

## Psychological Consequences of Residential Mobility in Emerging Adulthood: The Role of Parental Sensitivity

CANSU YILMAZ<sup>1</sup>, GAMZE ER VARGUN<sup>1</sup>, Michaela Gummerum<sup>2</sup>

<sup>1</sup>Anadolu University, Eskisehir, Turkey. <sup>2</sup>The University of Warwick, Coventry, United Kingdom

### Abstract (max 500 words)

**Objective of the study:** Prior work has shown that individual history of residential mobility is associated with a variety of behavioral outcomes throughout the lifespan. However, little is known about the

mechanisms underlying these associations in emerging adulthood. The purpose of this study is to test a multiple moderated mediation model, where adjustment mediates the relationship between residential mobility and psychological well-being, with parental responsiveness moderating the relationship between residential mobility and adjustment. We hypothesized that residential mobility would predict higher psychological well-being through more prosocial and less aggressive behavior only if their parents were sensitive enough in their childhood.

**Methodology:** A sample of 439 emerging adults ( $M_{age} = 21.42$ ,  $SD_{age} = 2.20$ ) were invited to participate in an online survey study. Participants reported the number of their past moves and rated their parents' sensitivity in their childhood, their current prosocial and aggressive tendencies, and psychological well-being. Separate sensitivity scores for mother and father; separate scores for sub-dimensions of prosocial tendencies (public, emotional, hidden, dire, altruistic, compliant); a composite score for aggressive behavior and psychological well-being was computed.

**Results obtained:** We tested our moderated mediation model using the PROCESS Macro for SPSS (Hayes, 2013) Model 7. Results showed that residential mobility predicted higher psychological well-being through increased emotional prosocial behavior (e.g. helping people who need emotional support) when mothers were more sensitive/caring during participants' childhood. Father sensitivity didn't play a mediating role in the observed relationship. Although aggressive behavior was negatively associated with father sensitivity and psychological well-being, there was no relationship between aggressive behavior and residential mobility.

**Conclusion:** Study findings provided support for the positive role of parental sensitivity on frequent movers' well-being. These findings highlight the importance of parental sensitivity, especially mother sensitivity, for even a stressful life experience such as frequent moves to have positive psychological outcomes.

293

## Paternal involvement and prosocial behavior in infants and preschool-age children: The role of child age and sex

Georgios A. Marinakis, Maria Markodimitraki

University of Crete, Rethymno, Greece

### Abstract (max 500 words)

In recent decades, paternal involvement seems to play an essential role in the child's development. In the contemporary literature, there seems to be inconsistent evidence about the correlation between both father and child characteristics with paternal involvement and children's prosocial behavior. However, little is known about the role of children's characteristics in correlation with children's prosocial behavior and paternal involvement in infancy and early childhood period. In the present study, we aimed to investigate the importance of children's characteristics, such as age and sex, on paternal involvement and infants' and preschool-age children's prosocial behavior. More specifically, we

performed correlation analysis to identify the potential effect of paternal involvement on children's prosocial behavior by children's age and sex. One hundred thirty-nine fathers of 24–42-month-old children from Greece were assessed using three paternal self-report questionnaires on children's characteristics, paternal involvement, and the children's prosocial behavior. The results showed no differences in paternal involvement and children's prosocial behavior between the groups of children's age (24-29, 30-35, 36-42-month-old). In addition, no sex differences in children (boy, girl) were found in paternal involvement and children's prosocial behavior. Nevertheless, statistically significant results were found in girls in the correlation of paternal involvement with children's prosocial behavior. Our findings emphasize the potential importance of children's characteristics in the way that the fathers engaged with their children during infancy and the early childhood period, and in the later fostering of their children's prosocial behavior.

**297**

### **How communication skills in youth with intellectual developmental disabilities are supported: An overview of the professional training and practices in Europe**

Christelle Declercq<sup>1</sup>, Samia Benallah<sup>2</sup>, Annick Comblain<sup>3</sup>, Sarah Ferrara<sup>1</sup>, Pamela Gobin<sup>1</sup>, Katri Hänninen<sup>4</sup>, Florence Legendre<sup>5</sup>, Lluís Marroyo<sup>6</sup>, Sergi Martínez<sup>7</sup>

<sup>1</sup>Université de Reims Champagne-Ardenne, Laboratoire C2S, Reims, France. <sup>2</sup>Université de Reims Champagne-Ardenne, Laboratoire REGARDIS, Reims, France. <sup>3</sup>Université de Liège, Liège, Belgium. <sup>4</sup>KVPS, Tampere, Finland. <sup>5</sup>Université de Reims Champagne-Ardenne, CEREP, Reims, France. <sup>6</sup>Campus Arnau d'Escala, Girona, Spain. <sup>7</sup>Support Girona, Girona, Spain

#### **Abstract (max 500 words)**

Intellectual developmental disorder (IDD) is a neurodevelopmental disorder that includes a disability in intellectual functioning and adaptive functioning. Most persons with IDD experience communication difficulties and, the more they struggle with communication difficulties, the more they experience difficulties in self-determination, social inclusion, and interpersonal relationships. Communication difficulties lead to a risk of exclusion since communication skills are crucial to learning, working, developing relationships, and engaging in different social contexts. Thus, it is essential to support communication to promote the individuals' social and professional inclusion, and trained professionals are crucial in this support. Yet, the appropriate strategies to support communication are rarely implemented. Specifically, support dedicated to adolescents and young adults is still scarce. In addition, most people consider that supporting the communication needs of people with IDD is the role of specialized professionals such as speech and language therapists. While it is true that their role is central, this is insufficient to ensure continued progress in communicative skills. American Speech-Language-Hearing Association (ASHA) emphasized that supporting communication in people with communication needs requires that everybody in their environment expects that they can and will communicate and thus all persons should engage to cooperate in communication. In addition, promoting communication in people with communication needs should be integrated into the daily communication environments, and it requires the knowledge and skills of parents and professionals from a variety of disciplines.

The current submission presents preliminary data from a survey conducted within the ERASMUS+ COM-IN Project with the aim, before creating training materials, to gather information concerning the communication needs of youth with IDD and the way communication skills are supported by the professionals working with them. The questionnaire included questions concerning professionals' knowledge and training on communication skills, the way these skills are addressed in their organization, their practices concerning communication skills, how they work with youth families, and questions concerning employment and working conditions. The questionnaire was implemented on the online survey tool, Limesurvey, and it was sent to professionals working with youth with IDD in Belgium, Greece, France, Finland, and Spain. To this day, more than 400 professionals have responded to the survey (open at this time). We expect to obtain information about the professional profiles involved in communication skills support and what their current training and professional practices are. In this sense, even the practices of those professionals who declared not to be involved in communication support are collected through questions such as "do you spontaneously adopt strategies to facilitate communication with young people with IDD?". The results should indicate how support organisations' strategies and working conditions are related to the specific training professionals receive and practices they develop.

**299**

## **Empathy in Middle Childhood: Relation to Attachment, Parents' Empathy, and Child's Emotion Regulation**

Eva Pires, Marília Fernandes, Manuela Veríssimo

ISPA - Instituto Universitário de Ciências Psicológicas, Sociais e da Vida, Lisbon, Portugal

### **Abstract (max 500 words)**

Attachment theory describes how interacting with caring and supportive caregiver(s) impacts later social relationships. Based on their interactions' history with the caregiver(s) children create and consolidate a positive mental representation of the self (confident in their ability to handle others' needs) and of others (as dependable and well-intentioned) making it easier to see others as deserving of empathy, while effectively regulating their own emotions and behavior. The main objective of the study is to examine the role of attachment (to both mother and father) in the development of children's affective empathy (emotional response consistent with others' emotional state) and cognitive empathy (understanding the reasons for others' emotions). Children's emotional regulation and parents' empathy will also be considered, and possible interactions will be explored. Participants were 214 children (50.5% girls) between 8 and 12 years old ( $M= 9.28$ ;  $SD= 1.09$ ) and their parents (mother 52.3%). Children report their attachment relationship to both parents (Security Scale Questionnaire; Kerns et al, 2015) and their own empathy (Questionnaire to Assess Affective and Cognitive Empathy in Children; Zoll & Enz, 2010). Whereas parents report their child's emotion regulation (Emotion Regulation Checklist; Shields & Cichatti, 1997) and their empathy (Questionnaire of Cognitive and Affective Empathy; Reniers et al, 2011). Results showed that children described themselves as empathic, both affectively and cognitively, with older children saying to be more cognitively empathic than younger ones ( $r=.16$ ,  $p< .05$ ). Child's empathy (cognitive) was associated with child's emotion regulation (lability) ( $r= -.18$ ,  $p< .01$ ).

Attachment (both to mother and father) had a significant and positive association with the child's empathy (correlations range between .25 and .40). No significant relation was found between adult's and child's empathy. Hierarchical regressions analysis identifies that for the child's affective empathy, only the mother-child attachment relationship was a significant predictor ( $\beta = .26$ ,  $p < .01$ ;  $F(4,205) = 8.58$ ,  $p < .001$ ;  $R^2 = .14$ ). For child's cognitive empathy, age and child's emotion regulation were significant predictors ( $\beta = .15$ ,  $p < .05$ ,  $\beta = .17$ ,  $p < .01$ ,  $F(2,207) = 5.77$ ,  $p < .001$ ;  $R^2 = .05$ ). However when we add parent-child attachment, only age and both mother- and father-child attachment were significant predictors ( $\beta = .13$ ,  $p < .05$ ,  $\beta = .18$ ,  $p < .05$  and  $\beta = .23$ ,  $p < .01$  respectively;  $F(4,205) = 10.93$ ,  $p < .001$ ;  $R^2 = .18$ ). Using Johnson-Neyman technique we identify that mother-child attachment relationship had a positive and significant effect on child's empathy only when child's emotion regulation score was higher than 3.17. No interaction effect was found between father-child attachment and a child's emotion regulation on child's empathy. Our results suggest that attachment relationships play an important role in child's empathy development and that mothers and fathers might have complementary roles. Taking attachment theory, results will be discussed in more detail.

### 300

#### **Effects of a life skills program to reduce “confusions associated with transition from high school to university”**

Shin Harada

Okayama University, Okayama City, Japan

#### **Abstract (max 500 words)**

##### **【Objective】**

Many researchers have pointed out that most of the university freshmen feel more or less lost when they realize various differences between their high school and university environments. The university freshmen who have these confusions continuously and strongly are considered to be maladjusted to the university. Harada et al. (2018) named such confusions as “confusions associated with transition from high school to university”, and collected 31 items on specific occasions and situations in which university freshmen in Japan often feel lost. Harada et al. (2020) then conducted factor analysis on the scale of confusions associated with transition from high school to university (SCTHU) and found three factors, "class difficulties", "university life difficulties", and "self-management difficulties", which were further examined for reliability and validity. This study examined the effectiveness of a life skills program for university freshmen in reducing their confusions associated with transition from high school to university.

##### **【Methods】**

First, a program was developed that consisted of eight sessions over two months. These sessions included self-understanding skills, help-seeking skills, communication skills, assertiveness skills, time management skills, stress management, use of ICT equipment, and etc. 62 university freshmen



participated in a life skills program, and completed a questionnaire including the SCTHU at the first and final sessions.

### 【Results】

The results of a paired t-test showed that the post-test (final session) scores were significantly lower than the pre-test (first session) scores with respect to all three subscales of the SCTHU, "class difficulties", "university life difficulties", and "self-management difficulties" (Table1). The effect sizes were also above .6 for all three subscales, indicating that a life skills program was effective in reducing the confusions associated with transition from high school to university.

### 【Conclusions】

These results suggest that a life skills program developed in this study contributed to the reduction of confusions associated with transition from high school to university among the university freshmen. However, there was no control group in this study. Therefore, there remains the problem of not being able to make comparisons with the university freshmen who do not participate in the program. It is also a matter for future work to examine in detail which of the various life skills, in particular, contributed to reducing the confusions associated with transition from high school to university.

## 301

### Effectiveness of an Intervention with Positive Emotions Diary to Improve Well-Being Among Elementary School Children

Yuma Ishiomoto<sup>1</sup>, Yuki Matsumoto<sup>2</sup>, Yu Takizawa<sup>3</sup>

<sup>1</sup>Tottori University, Tottori, Japan. <sup>2</sup>Tokushima Bunri University, Tokushima, Japan. <sup>3</sup>Tsuru University, Tsuru, Japan

#### Abstract (max 500 words)

##### Objective

In the UNICEF Report Card 16 (UNICEF, 2020), which summarizes children's well-being, Japan ranks first in physical health, while very low in mental well-being, 37th out of 38 countries.

School-based SEL has been implemented in many countries to address children's mental well-being problems, and its effectiveness has been confirmed (Durlak et al., 2011). However, Japanese schools have limited time available to implement SEL programs.

One intervention method that does not require a large time commitment has been shown to increase well-being by writing down positive emotions, including gratitude (e.g., Carter et al., 2018). The purpose of this study was to implement an intervention with Japanese children using a diary to record positive

emotions such as gratitude and things they enjoy and look forward to, to examine its effectiveness, and to investigate whether positive attitude towards this approach influence the effectiveness of this practice.

### Methodology

A total of 348 children from two elementary schools, one public school and one school affiliated with a national university, were included in this study. The third and sixth graders at public school and the second through fifth graders at affiliated school were included in this study.

A booklet called WE Diary was distributed to each of the children. The booklet contained 40 pages, each with illustrations that the children could relate to and a space to write the subject they were grateful for, details of their gratitude, their current feelings, and things they enjoyed or looked forward to.

The measures of efficacy were wellbeing, school adjustment, emotional problems, resilience, and perceived social support. The children completed these questionnaires before and after implementation. After implementation, they were also asked if they enjoyed this approach.

Except for a certain grade level, the booklets were collected after implementation and the number of pages written were checked.

### Results

In the analysis of all children, little change was found for all indicators.

Those who completed more than half of the pages were included in the analysis to examine differences in change based on whether they responded that they enjoyed this program or not. This analysis was limited to only grades 2 and 3 of the affiliated school. This is because the other grades had lower collection rates or lower variance in their enjoyment ratings of this program. The results showed that children who rated their experience as enjoyable showed positive changes in their scores in well-being, classroom adjustment, and resilience scores.

### Conclusion

As a result of this program, among those who wrote a certain number of pages, those who felt that they enjoyed this initiative showed positive changes. Previous studies with adults have also shown that the more one feels that the practice of writing a gratitude diary is suited to oneself, the greater the effectiveness of the practice, and we believe that the results of this initiative are in line with the results of such previous studies.

303

## **Influence of problem behaviors on parenting stress in Japanese parents of children with autism, intellectual disorders, and physical disorders: A comparative study**

Takahiro Yamane<sup>1</sup>, Ishimoto Yuma<sup>2</sup>, Hisanao Sakakihara<sup>3</sup>

<sup>1</sup>Kobe University, Kobe, Japan. <sup>2</sup>Tottori University, Tottori, Japan. <sup>3</sup>Kyoto University of Education, Kyoto, Japan

### **Abstract (max 500 words)**

**Background and Objective:** Parents of children with autism spectrum disorder (ASD) and other developmental disorders (DD) reported higher stress than those of typically developing children. It is important to identify the sources of stress to effectively alleviate stress among parents of children with ASD and DD. There is a strong link between child problem behaviors in both externalizing and internalizing dimensions and parenting stress (Antony et al., 2005). In particular, parenting stress is strongly predicted by externalizing problem behaviors (McStay et al., 2014). While child problem behaviors were found to be a major source of parenting stress in parents of children with ASD and DD, the mutual roles of disability types and problem behaviors in accounting for parenting stress were rarely investigated (e.g., Zaidman-Zait et al., 2017). Therefore, the present study aimed to examine whether internalizing and externalizing problem behaviors differ in their association with parental stress across disability types.

**Method:** We recruited parents from child development support and after-school day care services for DD children in a city in Japan. Online questionnaire surveys were conducted with a total of 472 Japanese parents, including 107, 272, and 93 children with intellectual disorders (ID), ASD, and physical disorders (PD), respectively, aged 2–18 years. Questionnaires were used to assess parents' stress (K-6), parents' well-being (WHO-5), and problem behaviors (SDQ).

**Results:** Participants' mean age was 41.41 (SD=5.83), with 60 fathers (12.70%) and 412 mothers (87.30%), including 344 boys (72.90%) and 128 girls (27.10%), with a mean age of 8.16 (SD=.3.76). Controlling the child's gender and age and the parents' gender, multi-group analysis with structural equation modeling showed that an equality-constrained model (parameters equally constrained across groups; CFI=1.00, TLI=1.00, RMSEA=.00, SRMR=.02) had a more acceptable fit than an unconstrained model (with free structural parameter coefficients). These models showed that higher emotional symptoms significantly decreased mental health ( $\beta=-.19-.36$ ,  $p<.001$ ), prosocial behavior ( $\beta=.16-.28$ ,  $p<.01$ ) increased mental health, and in contrast, higher emotional symptoms ( $\beta=.23-.25$ ,  $p<.001$ ) and conduct problems ( $\beta=.12-.14$ ,  $p<.05$ ) increased parents' distress. There was no difference in the influence of problem behavior on parenting stress in disability groups. The parents of children with developmental and physical disabilities found their child's internalizing problem behaviors more stressful, which is inconsistent with prior research.

**Conclusion:** The influence of problem behaviors on parents' stress was not different for different disability groups such as ID, ASD, and PD. These results suggest that externalizing and internalizing

behaviors play different roles in parental stress and mental health regardless of disability types, especially internalizing problem behaviors, which were stronger predictors of parenting stress. The explanation for these results might be related to Japanese parenting context: Japanese parents of children with DD and PD might be received less support for resolving internalizing problem behaviors, and would hold higher developmental expectations for social and communicative skills and thus probably lower thresholds of stress sensitivity, so they may be more alert to internalizing problems.

### 304

#### **The preliminary results of the psychological properties of an executive function assessment for young children**

Shu hsien Tseng

Hsin Yu, Hsieh, Taiwan. Hsin Wei, Kao, Taiwan

##### **Abstract (max 500 words)**

According to the literature, children's executive functions develop most quickly during age three to eight. However, there is few assessment tools currently available for direct measurement of executive functions in mandarin for children under eight. Therefore, this assessment was developed based on the effective tasks suggested by the literature. This study reports the preliminary results of the psychological properties of this executive function assessment for young children in mandarin. The tool includes three stages, including one set of card tasks and two set of computer tasks. The first stage is to test mental flexibility and adopts the form of Dimensional Change Card Sorting, such as color matching, shape matching, and alternate matching. The second stage is to test working memory and includes three subtests of digital span. The final stage is to test young children's inhibitory control and adopts the form of Bear and Dragon Test as well as Day and Night Test. Preliminary data were collected from 240 preschool and kindergarten children from two counties in Taiwan. The analysis showed proper validity and reliability of the tool. Implications of this assessment tool for early childhood study and practice on young children's executive function were further discussed.

### 305

#### **The Effects of Early Dialogic Reading on Preschoolers' Executive Function**

Shan Shan Chou<sup>1</sup>, Shinmin Wang<sup>2</sup>

<sup>1</sup>National Taiwan Normal University, Taipei, Taiwan. <sup>2</sup>National Taiwan Normal University, Taipei, Taiwan

##### **Abstract (max 500 words)**

Dialogic reading (DR) is a specific reading technique that encourages parents to involve the child actively in shared book reading verbally or nonverbally. The benefit of DR has been recently implied in executive function (EF) development in addition to language development. However, little is known about the mechanism underlying the relation between DR and the development of the EF. As the close link between the development of language and EF has been repeatedly reported, the current study intends to test whether the rate of change in children's language acts as a mediator that explains the link between DR and EF. To achieve this aim, 56 parent-infant dyads' verbal and nonverbal interactions during shared book reading when infants were at the age of 18 months were videotaped and analyzed as an index of quality of DR during infancy. Children's expressive vocabulary and language complexity were assessed at 18 and 36 months of age using the MacArthur-Bates Communicative Development Inventory (MCDI), and EF was measured at 4 years of age with the parent-report Taiwanese Traditional Chinese Childhood Executive Functioning Inventory (TC-CHEXI). Results showed that the degree of the quality of DR at 18 months was predictive of the rate of change in children's expressive vocabulary and language complexity from 18 to 36 months of age and EF at 4 years. The rate of change in children's language skills was also predictive of EF at 4 years. Further mediation analysis reveals that the impact of DR quality at 18 months on EF at 48 months was direct as well as indirect via the rate of change in children's language complexity from 18 to 36 months. The findings highlight the values of implementing DR during infancy in facilitating EF as well as language development over the toddler and the preschool period.

**306**

### **Can attachment theory be applied in early childhood education and care environments? Theorising and measuring qualities of child-educator relationships.**

Charlotte Casey<sup>1</sup>, Karen Thorpe<sup>1</sup>, Karen Hazell Raine<sup>2</sup>, Sally Staton<sup>1</sup>

<sup>1</sup>University of Queensland, Brisbane, Australia. <sup>2</sup>Charles Darwin University, Darwin, Australia

#### **Abstract (max 500 words)**

The significant developmental gains that characterise early childhood are shaped by a child's social, emotional and conceptual learning experiences. The relationships a child develops and experiences with those around them are arguably the most significant contributor to these learning experiences. Attachment theory is often used to understand the quality and impacts of adult-child relationships. Attachment describes the deep and enduring bonds which develop between a child and caregiver from repeated physical and emotional care. Applying this framing, relationships that are consistent in sensitivity, responsivity, and emotional support lead to the development of secure attachments. In contrast, inconsistent or withdrawn relationships are hypothesised to result in insecure attachments.

Historically, focus on attachment has largely been on the mother-child relationship, with a significant body of research indicating that secure mother-child attachments are associated with improved socioemotional development and greater cognitive capabilities. However, Early Childhood Education and Care (ECEC) environments are increasingly part of children's early social experiences, with some

children spending considerably more time during waking hours with their ECEC educators than with a parent. The child-educator relationship may therefore play a similarly important role in childhood development.

Research conducted on attachment within the ECEC context to date indicates that a greater proportion of child-educator attachments are insecure than secure. However, this research has primarily relied upon measures of mother-child attachment without modification or consideration of important contextual differences. As a result, it is difficult to ascertain the nature and quality of child-educator attachment relationships. In this study we seek to develop and validate a measure of child-educator attachment which is specific to the ECEC context.

Attachment theory and subsequent research indicates that times of stress, such as separations and reunions, are most useful in accurately measuring attachment quality. As such, we observe parents, educators and children during the naturalistic separation and reunion of drop-off and pick-up times in ECEC services. We use the coding procedure of the Strange Situation Procedure, a measure considered to be the gold standard for measuring attachment, to assess the quality of the child-educator attachment, accounting for the triadic (parent-child-educator) nature of these interactions and relationships. We also conduct observations of children and educators throughout the ECEC day, as well as educator and parent surveys to capture all factors which are theoretically or empirically related to child-educator attachment security.

In this presentation we will describe preliminary findings relating to the use of this coding procedure at drop-off and pick-up times. Specifically, using existing measures of attachment security and measures of educator sensitivity, we assess both the convergent and construct validity of the new measure, as well as its internal consistency. We propose directions for future research and discuss ways in which findings may relate to policy and practice in ECEC.

**307**

## **Still Using the Still-Face Paradigm: New Cross-Cultural Perspectives on Infant Responses and Emotion Regulation**

Carlo Vreden<sup>1</sup>, Elizabeth Renner<sup>2</sup>, Eunice Murokore<sup>3</sup>, EMPORIGIN project team<sup>1</sup>, Zanna Clay<sup>1</sup>

<sup>1</sup>Durham University, Durham, United Kingdom. <sup>2</sup>Northumbria University, Newcastle, United Kingdom.

<sup>3</sup>Kabale University, Kabale, Uganda

### **Abstract (max 500 words)**

Research suggests that development of emotion regulation (ER), i.e., the ability to regulate one's emotions in the face of an emotionally arousing stimulus/situation, is related to the development of other-oriented sensitivity, including emotion contagion and empathy. The still-face paradigm (SFP) is a classic measure of infant ER, whereby infant responses are measured while they interact with an adult partner, typically the mother, who then stops interacting for a set period, followed by a reunion episode. Thus far, the classic still-face effect – decreased positive affect and gaze towards the mother

and increased negative affect during the stressor phase – has been reliably demonstrated in infants raised in Western Industrialised societies (denoted as WEIRD). By contrast, we have limited knowledge about how infant responses within the SFP vary in other socio-cultural settings, and how ER might relate to other-oriented emotional responses in such settings. In this study, we addressed these issues by examining infant responses to the classic SFP in two non-Western settings: a rural and an urban setting in Uganda where caregiving and socialisation practises are expected to vary. We also included a comparator urban group in the UK. Using a longitudinal design to assess developmental changes in ER, a total of N = 156 infants participated across the three populations, at 3 and 10 months old. To also assess whether infant responses in the SFP predicted emotional arousal towards others' distress, the infants at 10-months also participated in a second experiment, where they listened to playbacks of peer crying. Their emotional arousal to peer distress was non-invasively measured using a combination of behavioural measures and infra-red thermography, a novel technique to assess changes in facial skin temperature, a marker of arousal.

Results demonstrated that infants in both our urban UK and Ugandan populations displayed the classic still-face effect of increased negative affect during the still-face phase. By comparison, this was not the case in our rural Ugandan population. Across all three sites, however, positive affect and gaze decreased significantly from the play to the still-face phase. UK infants showed significantly higher levels in gaze across all phases as compared to both Ugandan sites. Longitudinally, we found relative ER stability: still-face negative affect at 3 months predicted negative affect at 10 months, regardless of setting. When comparing SFP responses with those to peer distress, we found that – across all three socio-cultural groups – affect dysregulation in the SFP predicted negative behavioural responses towards peer distress, although it did not predict infant thermal responses. Overall, our results support the validity of the SFP for assessing emotion development in infancy but highlight apparent relevant cross-cultural variation. Further research is needed to understand the extent of cultural variation and possible underlying causes, such as variation in parenting practises, expressivity, and rearing environments. Evidence of longitudinal stability in the SF response and apparent continuities between responses in the SFP and towards peer distress also demonstrates the important role that managing inner arousal plays in shaping infant socio-emotional development.

**308**

## **Factors Influences on Heterogeneity of Cognitive Development Trajectories Across the First 2 Years**

Shan Shan Chou, Shinmin Wang

National Taiwan Normal University, Taipei, Taiwan

### **Abstract (max 500 words)**

The current study aims to explore the influence of personal and family environment at 6 months on children's heterogeneity of cognitive development trajectories from 6 to 24 months of age. Using 2685 nationally representative samples collected by Kids in Taiwan Study—3-month-old cohort, the authors tested a latent growth model and a growth mixture model featuring personal and home environment at

6 months as predictors of growth in cognition through 24 months of age to identify the superior and disadvantaged heterogeneous groups and their related influencing factors. Results showed that the linear model has the best fit for the observed data. The analysis identified that there are four heterogeneous groups: the advantaged group, the average group, the catch-up group, and the disadvantaged group. Further analysis indicated that variety in experience, learning materials, parental responsiveness, quality of literacy environment & verbal interaction, and shared book reading is the early family environment factors that can distinguish heterogeneous groups. In different heterogeneous groups, these seven family environmental factors have different influences, the average group is superior to the disadvantaged group in terms of parental responsiveness, learning materials, and quality of literacy environment & verbal interaction, and is superior to the catch-up group in terms of parental responsiveness, learning materials. The classification difference between the advantaged group and the average group is not only the parental responsiveness but also the variety in experience and shared book reading. The main difference between the catch-up group and the disadvantaged group is the quality of literacy environment & verbal interaction. The current study used nationally representative samples to investigate the differences in individual and family environment factors among different heterogeneous ethnic groups with superior and inferior cognitive development, which can be used as an empirical theoretical basis for providing family parenting prevention and intervention programs.

**312**

## **INDICATED PREVENTION FOR BULLYING AND VICTIMIZATION AT SCHOOL: A SYSTEMATIC REVIEW OF THE LITERATURE.**

Benedetta Taddei, Lisa De Luca, Annalaura Nocentini

Department of Education, Languages, Interculture, Literatures and Psychology (FORLILPSI). University of Florence, Florence, Italy

### **Abstract (max 500 words)**

School bullying is a social and public health problem, and a crucial target for preventive interventions (Gaffney et al., 2021). To date, the idea of support coming from multiple levels has been promoted in the school context (Menesini et al., 2021). However, most of the current knowledge focuses on the impact of universal prevention programs (Bradshaw, 2015), while few studies integrate the selective and indicated components (Diaz-Caneja et al., 2021).

This review aims to explore state of the art on indicated interventions and policies to address cases of bullying and victimization in schools, by examining the protocols and the effectiveness of interventions through a systematic review of the literature. The PRISMA guidelines for systematic reviews and meta-analyses (Moher et al., 2014) were followed to conduct a structured review.

The studies were identified following an Internet-based search of the literature using four electronic databases: SCOPUS, PsycINFO, PubMed, and Web of Science. The search includes every paper published until the second week of January 2023. The keywords belonged to three different clusters: the first cluster regards the phenomenon of bullying (i.e., keywords: 'bull\*', 'peer harass\*', 'peer-aggress', 'peer-



violen\*', 'victim\*'); the second cluster regards the targeted intervention (e.g., keywords: 'indicated intervent\*', 'indicated prevent\*', 'indicated action\*', 'counsel\*', 'reactive approach\*', 'training\*', 'indicated program\*'); the third regards the school context (i.e., keywords: 'school\*'). The search was conducted by combining Abstract, Title, and Keywords in Scopus, PsycINFO, Pubmed and Web of Science databases. For the PubMed database, the title and abstract were searched and, for the PsycINFO database, only the abstract was analyzed. At this stage, 4,916 articles in Scopus, 6,451 articles in PsycINFO, 8,869 articles in PubMed, and 6,223 articles in Web of Science were identified. There was an overlap of 16,701 articles. Duplicated articles were excluded from subsequent searches. After reading the titles, keywords and abstracts, the results from the systematic searches were screened according to the following inclusion criteria: type of contribution (e.g., scientific articles), languages (e.g., English and Italian), type of study (i.e., qualitative, and quantitative), target (e.g., Grade 1st to 12th), and topic (e.g., indicated prevention or management of bullying and victimization cases). Finally, the retained search results were passed to a further full-text screening (N=215). The full-text screening was done in parallel by two coders independently. A total of 194 articles were further excluded according to exclusion criteria.

Finally, the 21 articles assessed for eligibility (i.e., indicated protocols, actions or strategies as well as policies to address cases of bullying and victimization in schools included after multiple waves of screening) are analyzed in terms of (a) structural characteristics (e.g., session frequency and duration, different conductors; working components; individual or group level); (b) theoretical backgrounds; (c) strategies used (e.g., types of techniques); (d) sample characteristics (e.g., school grade: mean age), (e) aims (e.g., improved general or specific life skills); (f) effectiveness. The findings are discussed with the aim to define and testing the effectiveness of an indicated prevention programs for bullying and victimization in Italian schools.

## 314

### Right to Belong (R-to-B): Tackling Loneliness and Ostracism during Childhood and Youth

Niina Junntila<sup>1,2,3</sup>, Linnea Karlsson<sup>4,5,6</sup>, Noona Kiuru<sup>7</sup>, Mikko-Jussi Laakso<sup>8</sup>, Marja-Kristiina Lerkkanen<sup>9</sup>, Katariina Salmela-Aro<sup>10</sup>, Matti Sarvimäki<sup>11</sup>, Miia Tuominen<sup>12</sup>, Petri Virtanen<sup>13,14,15</sup>

<sup>1</sup>University of Turku, Department of Educational Sciences, Turku, Finland. <sup>2</sup>University of Jyväskylä, Department of Educational Sciences, Jyväskylä, Finland. <sup>3</sup>Finnish National Agency for Education, Helsinki, Finland. <sup>4</sup>University of Turku and Turku University Hospital, Centre for Population Health Research, Turku, Finland. <sup>5</sup>University of Turku, Department of Clinical Medicine, Turku Brain and Mind Center, FinnBrain Birth Cohort Study, Turku, Finland. <sup>6</sup>Turku University Hospital, Department of Paediatrics and Adolescent Medicine, Turku, Finland. <sup>7</sup>University of Jyväskylä, Department of Psychology, Jyväskylä, Finland. <sup>8</sup>University of Turku, Turku Research Institute for Learning Analytics, Turku, Finland. <sup>9</sup>University of Jyväskylä, Department of Teacher Education, Jyväskylä, Finland. <sup>10</sup>University of Helsinki, Department of Educational Sciences, Helsinki, Finland. <sup>11</sup>Aalto University School of Business, Department of Economics, Helsinki, Finland. <sup>12</sup>University of Turku, Faculty of Medicine, Turku, Finland. <sup>13</sup>ITLA, Children's

Foundation, Helsinki, Finland. <sup>14</sup>University of Vaasa, School of Management, Vaasa, Finland. <sup>15</sup>University of Canberra, Canberra, Australia

### **Abstract (max 500 words)**

**Objective:** In Finland, 10–20% of children and youth suffer from constant loneliness and experiences of ostracism or social outsiderhood, which can have detrimental effects on their mental and physical well-being, increasing the risk of marginalisation and radicalisation in society. The main aim of Right to Belong (R-to-B) consortium ([www.righttobelong.fi](http://www.righttobelong.fi)) is to find individual level and context-related (families, peer groups, social media, and schools) solutions to child and youth loneliness and ostracism.

**Method:** R-to-B is funded by the Strategic Research Council (SRC) (#352648) and is part of the YOUNG program (<https://www.aka.fi/en/strategic-research/strategic-research/strategic-research-in-a-nutshell/programmes-and-projects/young/>) which was launched in October 2022. The consortium parties represent expertise in educational and developmental psychology, sociology, child psychiatry and medicine, neuroscience, economics, and learning analytics. The R-to-B has intensive collaboration with international experts and national stakeholders, including ministries, police administration, NGOs and municipalities. As research methods, the project leverages ongoing large-scale national and international longitudinal data sets, surveys and register data, biomarker and brain imaging data, action research, and randomized controlled trial (RCT)-based interventions to study the complex phenomena of loneliness and social outsiderhood.

**Expected Results and Conclusions:** R-to-B expects to produce novel scientific knowledge on the individual, family and societal level of mechanisms underlying and following the experiences of loneliness and ostracism in children and adolescents. Further, we expect to be able to identify longitudinal trajectories of these phenotypes and phenomena and characteristics that are related to the variance in the pathways. We will create suggestions for actions and practical solutions to enhance children's and adolescents' psycho-social well-being, agency, and safety. The proposed poster will describe the project rationale, methods, expected output, preliminary results, and dissemination strategy in detail.

**315**

### **Measuring Effortful control in middle childhood through the Temperament in Middle Childhood Questionnaire: Factorial structure and convergent validity of the self-report form**

Tatiana Marci, Gianmarco Altoè, Ughetta Moscardino

Department of Developmental Psychology and Socialization, University of Padova, Padova, Italy

### **Abstract (max 500 words)**

Effortful control (EC) is a temperament-based characteristic involving self-regulation of emotional reactivity and behavior. Despite its importance for adaptive functioning beyond early childhood, the only available measure assessing this construct in middle childhood is the EC scale included in the Temperament in Middle Childhood Questionnaire (TMCQ; Simons & Rothbarth, 2004). The scale consists of 33 items reflecting five facets (i.e., Attention Focusing, Inhibitory Control, Low-intensity Pleasure, Perceptual Sensitivity, and an additional experimental scale, namely Activation Control) that are structured in one higher-order factor. However, evidence concerning the factorial structure and hierarchical nature of the construct is extremely scant, especially for its self-report form.

The current study aimed to evaluate the construct validity of the self-report form of the EC scale by testing its factorial structure and convergent validity in a sample of Italian school-age children.

**Method.** Participants were 441 native-born Italian children (53.7% girls) aged between 7.9-10 years (Mage = 9.00, SD = 0.56) who were attending public primary schools in Northern Italy. Children completed the EC scale of the TMCQ together with a self-worth questionnaire. The main teacher reported on children's internalizing, externalizing, and prosocial behaviors at school.

A series of Confirmatory Factor Analyses (CFA) was performed to explore and compare different factorial structures. Based on the selected model, external validity was examined using a structural equation modeling (SEM) approach to evaluate the latent correlation of EC with global self-worth, internalizing, externalizing, and prosocial behaviors (convergent validity) and the unique contribution of each EC facet in predicting the theoretically related external measure.

**Results.** The CFA results supported a four-factor solution ( $\chi^2 / df = 1.82$ , CFI = .923, TLI = .914, RMSEA = .043 [.037 – .049]), which excluded the Activation Control items and comprised 26 items grouped into the four main dimensions. SEMs confirmed convergent validity of the questionnaire and identified Inhibitory Control and Attention Focusing as the core facets of EC.

**Conclusions.** Although more evidence for the second-order factor structure of EC is warranted, the scale measuring this construct in the MCTQ is a promising tool to assess temperamentally-based self-regulation during middle childhood at the first-factor level. Thus, from an applied perspective, the use of four separate scores is recommended. Further research is needed to shed light on the structure of EC during middle childhood.

## 330

### **The transition from prosocial understanding to prosocial action in infancy and the impact of socio-cultural learning environments.**

Georgia Tuohy<sup>1</sup>, Carlo Vreden<sup>1</sup>, Elizabeth Renner<sup>2</sup>, Eunice Murokore<sup>3</sup>, Moritz Köster<sup>4</sup>, EMPORIGIN Project team<sup>1</sup>, Zanna Clay<sup>1</sup>

<sup>1</sup>Durham University, Durham, United Kingdom. <sup>2</sup>Northumbria University, Newcastle, United Kingdom.

<sup>3</sup>Kabale University, Kabale, Uganda. <sup>4</sup>Universität Regensburg, Regensburg, Germany

**Abstract (max 500 words)**

Infants reliably help in the second year of life. However, despite the prevalence of this prosocial behaviour cross culturally, there is little knowledge of the mechanisms that allow infant's helping behaviour to emerge, and the role of socio-cultural factors in shaping this. The present study addresses this by examining the emergence of helping behaviour amongst a diverse sample of infants in rural and urban Uganda, as well the UK, with a focus on the factors that might catalyse prosocial understanding into prosocial action.

From around 10 months of age, infants exhibit an intrinsic understanding of others' needs. However, this apparent prosocial understanding only predicts future helping behaviour when motor and social interaction skills are considered. This suggests that the ontogeny of helping behaviour relies on a complex interplay of developmental processes.

Uganda provides an interesting backdrop from which to study the emergence of prosocial behaviour in infancy. Compared to infants in Western settings, there is evidence that the learning environments of infants in proto-typical Ugandan setting may allow for the earlier onset of motor skills. Furthermore, socio-cultural trends of distributed caregiving may also provide infants with more opportunities to improve their socio/cognitive abilities. Thus, the emergence of prosocial behaviour in infants in Uganda may differ in its trajectory from that of a typically-sampled Western settings. Nevertheless, with the rapid influence of westernisation and urbanisation across Africa, it is also important to consider how within-country variation in learning environments might also shape how prosocial development emerges.

The present study addressed this by longitudinally sampling a large cohort of infants in rural and urban Uganda (approx. N = 250) along with a comparison group in the UK (N= 50). At 10 months, infants engaged in an eye tracking study to establish infants need understanding. Infants' gaze was monitored in response to seeing an animated character in need of help, unable to achieve their goal, versus a second character that was not in need. After introducing a third agent who could offer help to either character, it was predicted that if infants understand other's needs, they should look longer (in surprise) towards scenes where the character, who does not need help receives help.

At 16 months, the same infants participated in a classic out-of-reach helping task validated for use in cross-cultural settings, as well as tasks to establish their motor and social interaction skills.

Overall, we expect that the ability to understand another's needs at 10 months and evidence of prosocial helping at 16 months will show overall consistency across sample populations, reflective of a stable developmental trajectory. By contrast, the mechanisms through which helping behaviour manifests are expected to vary because of potential variation in learning environments experienced by infants in different socio-cultural settings. These results will be discussed in regard to the proposal that while humans have a biologically rooted prosocial tendency that is present in the first year of life, the socialisation of prosocial behaviour may differ across socio-cultural learning environments.

331

## Adolescents don't take too much risk, they fail to adjust: a developmental and differential study of risk-taking under ambiguity.

Céline Moncel, Bruno Dauvier, Théo GUILLER, Anais OSMONT

Aix-Marseille University, Aix-en-Provence, France

### Abstract (max 500 words)

#### Objective of the study

Adolescents have been shown to be more likely to engage in risky behaviours than children and adults (Ernst., 2014). Previous studies showed that adolescents could make advantageous choices in risky decision making situations (i.e. when the information about risk probability and outcomes is explicit) (Falk & Wilkening, 1998; Van Leijenhorst, Westenberg, & Crone, 2008). However, adolescents fail to adjust risk-taking in ambiguous situations (i.e. when they have to learn outcomes and risk probability from feedbacks) (Aïte et al., 2012; Osmont et al., 2017). These are crucial results as many risk behaviours in everyday life correspond to ambiguous decision-making situations. Enhanced risk-taking engagement observed during adolescence might then result from adolescents' difficulty to adjust their behaviour based on previous feedbacks. However, previous studies have focused on a comparison between middle adolescents (i.e., 14-16 years old) and young adults. To better understand developmental and inter-individual differences in risk-taking and feedback learning, the main objectives of the present study are: 1) clarify the risk-taking adjustment in an ambiguous risk-taking task from early adolescence to adulthood; 2) investigate the links between personality traits, age and risk-taking.

#### Methodology

In the present study, 610 participants aged 11-25 years ( $M = 14.86$ ,  $SD = 3.04$ ) completed a new computerized decision-making task adapted from the Columbia Card Task (Figner et al., 2009). This adaptation was designed to measure risk-taking in ambiguous situations with different levels of risk (high risk, medium risk and low risk) materialized by different games (Harry Potter, Avengers and Star Wars). Participants have to accumulate as many points as possible by turning over cards in the three types of games. They can save the accumulated points at any moment; however, if they turn over a losing card first, all accumulated points are lost. Participants also completed a questionnaire about daily risk-taking engagement and a questionnaire assessing their personality traits (BFI, Plaisant et al., 2011).

#### Results obtained or expected

Using Generalized linear mixed models, the first results confirm that the youngest adolescents have feedback learning disabilities. For the high-risk condition, the older the participants are, the more there is a gradual decrease in the number of cards returned during the trials. Conversely, for the low-risk condition, the older the participants are, the more cards are turned over during the trials. Thus, at the end of the task, younger adolescents turn over more cards than older ones in the risky games and fewer cards in the advantageous games. Further analysis will be conducted in the coming weeks to further explore developmental effect and the link between risk taking adjustment and personality traits.

## Conclusion

The present study confirms the failure of adolescents to adjust risk-taking in ambiguous situations, with a new risk-taking task and a broader age range. The results suggest a specific impairment in feedback-based learning but not an overall excess of risk-taking during adolescence. Furthermore, the present study will also provide a better understanding of inter-individual differences in risk-taking by taking into account personality.

333

## Poles Apart? Effects of group membership on the consumption and transmission of polarized information among youth in a divided society

Bethany Corbett<sup>1</sup>, Emma Flynn<sup>1</sup>, Lara Wood<sup>2</sup>, Kathleen Corriveau<sup>3</sup>, Mariah Kornbluh<sup>4</sup>, Christin Schulz<sup>5</sup>, Jennifer Watling-Neal<sup>6</sup>, Jing Xu<sup>7</sup>, Jocelyn Dautel<sup>1</sup>

<sup>1</sup>Queen's University Belfast, Belfast, United Kingdom. <sup>2</sup>Abertay University, Abertay, United Kingdom.

<sup>3</sup>Boston University, Boston, USA. <sup>4</sup>University of Oregon, Oregon, USA. <sup>5</sup>University of Amsterdam, Amsterdam, Netherlands. <sup>6</sup>Michigan State University, Michigan, USA. <sup>7</sup>University of Washington, Washington, USA

### Abstract (max 500 words)

Following conflict, youth are socialized with divergent political and historical narratives, by group membership (e.g. what to commemorate from the past, how society ought to move forward). Exposure to such divergent 'truths' creates and maintains ideological polarization which may perpetuate intergroup conflict (Bar-Tal, Diamond & Nasie, 2017). In a pre-registered study, we examine consumption and transmission of polarized information among youth in historically divided Northern Ireland, employing a linear diffusion chain paradigm (Figure 1), an experimental form of the children's game of telephone.

Participants (current  $n = 260$ ) were Catholic (50.9%) and Protestant (49.1%) adolescents aged 12-18 years ( $M = 14.29$  years,  $SD = 2.11$ , 62.3% female). Participants were placed within linear chains; either homogeneous (entirely Catholic or Protestant) or heterogeneous (alternating Catholic and Protestant) in group membership. They read three messages from a prior participant about polarized topics, before recalling that information for the subsequent participant, which was repeated across four generations. The messages were relevant to conflict-related group identities (the partition of Ireland/Irish Language Act) or not (social media). We coded information fidelity across the chain (how much information was recalled), whether information recall was biased towards group affirming statements, the nature of any information mutation, and support of information. Openness to belief revision was also examined.

Checks confirmed that young people's social environment (ethno-religious background) influenced their support of conflict-relevant narratives in the hypothesized direction; Protestants were more supportive of partition of Ireland than Catholics ( $t(40) = 3.11$ ,  $p = .003$ ,  $d = .96$ ), less supportive of an Irish Language

Act( $t(42) = -2.35, p = .017, d = -.71$ ), and the two did not differ in the control condition (social media;  $t(40) = .07, p = .94, d = .02$ ). In each condition, there was a significant reduction in amount of information recalled, relative to the original (partition:  $t(52) = 16.68, p < .001, d = 2.29$ ; language act:  $t(52) = 12.92, p < .001, d = 1.77$ ; social media:  $t(52) = 15.72, p < .001, d = 2.18$ ). The amount of information recalled between generations did not differ significantly,  $p_s > .05$ , indicating a single retelling was sufficient to significantly alter the information being transmitted. In all conditions, age was positively related to amount of information recalled ( $p_s < .001$ ), potentially reflecting increased exposure to, and engagement with, polarized topics. Differences as a function of ethno-religious background were found with respect to belief revision; the historically victimized group were less receptive to their conflict related beliefs changing,  $t(42) = 2.47, p = .018, d = .75$ , despite not differing from the other group in the initial strength of their conflict related beliefs,  $t(42) = .66, p = .53, d = .19$ .

Young people are not merely passive consumers of information (Harris, Koenig, Corriveau & Jaswal, 2018), they can be agents of positive change. By highlighting influences of their social environment, we hope to empower youth to engage in epistemic vigilance, creating more knowledgeable and peaceful societies.

**334**

## **A comparative study of maternal stress, coping strategies, and perceived support in children with autism spectrum disorder and hearing impairment**

Sanja Šimleša<sup>1</sup>, Matea Zovko<sup>2</sup>, Marina Olujić Tomazin<sup>1</sup>

<sup>1</sup>Department of Speech and Language Pathology, Faculty of Education and Rehabilitation Sciences University of Zagreb, Zagreb, Croatia. <sup>2</sup>Faculty of Electrical Engineering and Computing, University of Zagreb, Zagreb, Croatia

### **Abstract (max 500 words)**

Parenting a child with communication and/or language disabilities is stressful because it can seriously affect the relationship between parent and child. In particular, building and maintaining the relationship with mothers, who are often the child's primary caregivers, can be compromised. Due to the lack of adequate and systematic support from health services in Croatia and numerous difficulties associated with autism spectrum disorder (ASD) and prelingually deaf/hard of hearing (D/HH) children with hearing parents, these two communication disorders represent perhaps the greatest challenge to the mother-child relationship. Previous studies indicate that 30-40% of parents of children with ASD experience increased levels of stress, and more stress overall than parents of children with D/HH. The parental stress level may vary depending on several variables such as the severity of impairment, psychological characteristics of the parents, or sociodemographic factors.

The aim of this study was to determine and compare the level of stress experienced by mothers of children with ASD and prelingually D/HH children (with hearing parents), and its relationship to parental coping strategies, sociodemographic characteristics, perception of social and professional support, and the severity of the child's symptoms.

The study included a total of 110 mothers of preschool children: 80 mothers of children with ASD and 30 mothers of children with D/HH. The short form of the Parenting Stress Index – short form (PSI-4-SF) was used to measure stress levels, while coping strategies were measured with the Coping Orientation to Problems Experienced Inventory (Brief - COPE). Additionally, data on sociodemographic characteristics, severity of the child's symptoms, and perceived social and professional support were collected via questionnaires constructed for the purpose of this study.

Preliminary results confirm higher levels of parental stress in the ASD group than in the D/HH group. Research has shown that 22% of mothers of children with ASD experience high levels of parenting stress, compared with 17% of mothers of D/HH children. In the ASD subgroup, dysfunctional parent-child interaction and emotion-focused coping contribute significantly to higher levels of parenting stress. As in previous research, mothers of children with ASD are most likely to use problem-focused coping strategies when stressed. Regarding predictors of stress, social support, child characteristics, and avoidance coping emerged as significant predictors of parental stress. Neither sociodemographic factor, intervention, nor problem-focused or emotional coping had an impact on parental stress levels. Similarly, in the D/HH subgroup, parental stress was also highly related to the use of problem-focused coping strategies and moderately to avoiding-stressful-situation strategies. Lack of perceived social support from friends, family, or partners is moderately to strongly associated with higher levels of parental stress.

**339**

## **Examination the Construct Validity of the Family Resilience Scale for Families of Children with Developmental Disabilities**

Eri Suzukida, Takahiro Yamane

Kobe University, Kobe, Japan

### **Abstract (max 500 words)**

#### 1) Objective of the study

Family resilience is the ability of a family as a functional system to endure and recover from adversity (Walsh, 2016). Families with children and persons with developmental disabilities are more likely to experience difficulties within the family, such as high psychological stress and mental health problems among parents due to their children's behavioral problems and their need for support in education and care (e.g., Poter & Loveland, 2019; Matsuoka et al., 2015). Family resilience reduce parental stress (Suzuki et al., 2018). There are scales to measure family resilience. However, the scales that measure family resilience of families with children and persons with developmental disabilities do not reflect their characteristics and are inconsistent with Walsh's family resilience theory. Therefore, this study was aimed to develop the Family Resilience Scale for Families of Individuals with Developmental Disabilities (FRS-FIDD) and examine that construct validity.

#### 2) Methodology



We administrated online survey to 187 parents (23 fathers and 164 mothers) of individuals with developmental disabilities. Parents' mean age was 43.98 (SD=7.07). The mean age of the children and persons with developmental disabilities was 10.97 (2—47 years old; SD=5.89). Participants were asked to complete the family resilience scale (FRS; Ohyama & Nozue, 2013), bidimensional resilience scale (BRS; Hirano, 2010), family adaptability and cohesion evaluation scales III (FACES III; Tateyama, 2006), and FRS-FIDD. We develop the FRS-FIDD based on the semi-structured interviews with parents of children and persons with developmental disabilities. Moreover, the FRS-FIDD also included some items from the FRS (Ohyama & Nozue, 2013) and benefit finding scale in developmental disorder parenting (Yamane, 2014).

### 3) Result

Construct validity of the FRS-FIDD was examined using Pearson's correlation coefficients. Pearson's correlation coefficients were calculated between the FRS-FIDD and FRS, BRI, and FACES III to test the hypothesis that FRS-FIDD has a high to moderate positive correlation with FRS, a low positive correlation with BRS, and a moderate positive correlation with FACES III. The results supported the hypothesis. High to moderate significant positive correlations ( $r = .46 \sim .87$ ) were found between the FRS-FIDD and FRS; however, it had low significant positive correlations ( $r = .31 \sim .38$ ) with socioeconomic resources in the FRS. Additionally, the FRS-FIDD had a low to moderate significant positive correlation ( $r = .35 \sim .42$ ) with BRS and a high to moderate significant positive correlation ( $r = .58 \sim .84$ ) with FACESIII. These results provide some support for the construct validity of the FRS-FIDD.

### 4)Conclusion

The present study indicates that the construct validity of the FRS-FIDD the author developed is adequate. Future studies should include a survey of Japanese families with children and persons with developmental disabilities using this scale and examine the reliability and validity of this scale, and its usefulness. In the future, we hope to translate this scale for use outside of Japan.

## 340

### **The relationship between the risk of smartphone addiction, technoferece in parent-child interactions, and problem behaviours in children**

Marina Merkaš<sup>1</sup>, Ana Žulec<sup>1</sup>, Matea Bodrožić Selak<sup>1</sup>, Vanesa Varga<sup>1</sup>, Marina Kotrla Topić<sup>2</sup>, Katarina Perić Pavišić<sup>3</sup>

<sup>1</sup>Catholic University of Croatia, Zagreb, Croatia. <sup>2</sup>Institute of Social Sciences Ivo Pilar, Osijek, Croatia.

<sup>3</sup>Institute of Social Sciences Ivo Pilar, Zagreb, Croatia

#### **Abstract (max 500 words)**

Smartphones are the most used digital devices among children, youth, and adults (Ofcom, 2022). Research suggests that smartphone use can cause addiction, just as alcohol or gambling can, with

findings that between 8 and 20% of children are at risk of smartphone addiction (Kwon et al., 2013). The constant presence and use of smartphones can also lead to interruptions of interactions, as well as some behavioural and emotional problems (Harris et al., 2020). These interruptions are referred to as “technology interference” or “technoference” in the literature (McDaniel & Coyne, 2016). The aim of this study was to examine the role of technoference in the relationship between the risk of smartphone addiction and problem behaviours in children. The data comes from a three-wave-longitudinal study of the project “Digital technology in the family: patterns of behaviour and effects on child development”. Children (N = 255, 59,8% girls) completed the Smartphone Addiction Scale - a Short Version for Adolescents (Kwon et al., 2013) in the first wave, subscales for Internalizing and Externalizing Problems and Hyperactivity from the Social Skills Improvement System (Gresham & Elliott, 2008) in the third wave, and a newly constructed scale for measuring technoference in parent-child interactions due to children’s smartphone use in the second wave. The results showed good psychometric properties for the newly developed scale for measuring technoference in parent-child interactions. The mediation analysis showed that technoference in parent-child interactions due to children’s smartphone use mediates the relationship between the risk of smartphone addiction in children and their externalizing problems and hyperactivity. Technoference was not a significant mediator in the relationship between the risk of smartphone addiction and internalizing problems. A higher risk of smartphone addiction in children is associated with more frequent interruptions in their interactions with parents due to their smartphone use, which is then associated with higher levels of externalizing problems and hyperactivity in children. The results are discussed considering the media displacement hypothesis.

**346**

### **Relationship between generalized problematic internet use, the quality of a parent-child relationship, and conflict over smartphone use in Croatian adolescents**

Katarina Perić Pavišić<sup>1</sup>, Marina Merkaš<sup>2</sup>, Ana Žulec<sup>2</sup>, Matea Bodrožić Selak<sup>2</sup>, Vanesa Varga<sup>2</sup>, Marina Kotrla Topić<sup>1</sup>

<sup>1</sup>Institute of Social Sciences Ivo Pilar, Zagreb, Croatia. <sup>2</sup>Department of Psychology, Catholic University of Croatia, Zagreb, Croatia

#### **Abstract (max 500 words)**

Problematic use of the internet has become an increasingly common problem among adolescents, with various consequences for their development in the social, emotional, cognitive, and behavioral domains. The literature (e.g., Özaslan et al., 2022) suggests that a positive quality of the parent-child relationship is a protective factor against problematic internet use. This study examined the associations between generalized problematic internet use (GPIU), parent-child relationship quality, and child-parent conflict over smartphone use among adolescents in Croatia.

The sample includes 280 children (58.8% girls) aged 10-14 years with an average age of 12.23 years (SD = 1.21) attending higher primary school grades in Croatia. The data come from the first wave of a

longitudinal study in the project "Digital technology in the family: patterns of behavior and effects on child development". The adolescents completed the Generalized Problematic Internet Use Scale 2 (GPIUS2; Caplan, 2010), the Parent-Adolescent Relationship Scale (Hair et al., 2005), and the Conflict over the Smartphone Use Scale constructed for the purpose of the study.

The findings show that the GPIU was positively related to conflict over smartphone use between adolescents and parents and negatively related to identification with a parent and perceived support from a parent. That is, children with higher GPIU scores had more conflict with parents over smartphone use, identified less with parents, and perceived less support from parents. More conflict over smartphone use between parents and adolescents was related to less identification with parents and less perceived support from parents.

These findings point to the importance of the quality of the parent-child relationship for children's problematic internet use. Although family factors are not the only ones and it is important to include other factors such as peer relationships and individual characteristics of the child in different prevention and intervention strategies, it is important to educate and encourage parents to strengthen the quality of their relationships with their children.

## 347

### Cuteness recognition and expression in young children.

Mayo YAMADA<sup>1</sup>, Narumi ISHIWATA<sup>2</sup>, Atsushi ASAKAWA<sup>3</sup>

<sup>1</sup>Fukuyama City University, Hiroshima, Japan. <sup>2</sup>Yuda nursery school, Hiroshima, Japan. <sup>3</sup>Ehime University, Ehime, Japan

#### Abstract (max 500 words)

Children are frequently surrounded by illustrations and objects that are commonly considered "cute," such as picture books and plush toys. Research has shown that children tend to prefer colors that are deemed cute (Yamada, 2010) and create drawings that depict cuteness (Tanaka, 2011). Much of the literature in psychology on cuteness is based on the concept of the "baby schema," proposed by Lorenz (1943). For instance, studies have demonstrated that even 3- to 6-year-old children, like adults, perceive infants as cute (Borgi, Cogliati-Dezza, Brelsford, Meints, & Cirulli, 2014).

However, it has been acknowledged that while infantile features are related to cuteness, they are not a necessary condition for cuteness and that cuteness not associated with infantile features also exists (Nittono, 2013). As such, it is possible that children possess unique understandings and expressions of cuteness. To clarify the development of infants' recognition of cuteness, this study examines the judgement and preference of cuteness for objects with baby schema, as well as the expression of cuteness through drawing, in 5- and 6-year-old children. Furthermore, the relationship between judgement of cuteness for objects with baby schema and the expression of cuteness through drawing will be examined.

14 five-year-old children (6 boys and 8 girls) and 26 six-year-old children (15 boys and 12 girls) were investigated individually. In the card task, children were presented with a pair of adult and infant cards and asked, "Which card do you like better?" "Which card is cute?" "Which card do you want?" etc. In the drawing task, children were first asked to draw a rabbit and then a cute rabbit.

A two-factor analysis of variance of age (5/6-year-old)  $\times$  gender (male/female) with the frequency of selecting infant cards for cute as the dependent variable showed that only the main effect of age was significant ( $F(1,36)=8.82, p<.05$ ), indicating that 5-year-old children evaluated infants as cuteness more than 6-year-old children. In terms of the expression of cuteness in the drawings, a variety of expressions were found, including baby schema (size, roundness, etc.), symbolic (heart shape, etc.), facial, body, and color expressions. However, there was no association between the judgements of cuteness and baby-schematic expressions.

The results of the present study suggest that both 5- and 6-year-old children evaluate objects with baby schema as cute, and that the recognition of cuteness becomes more complex from the age of 6 years. Additionally, the children's drawings suggest that cuteness is understood in various ways based on their understanding of cultural symbols and real-life experiences.

## 350

### **An Ideographic Analysis of Daily Coercive Parent-child Interaction Patterns in Families with Children with Emerging Disruptive Behavior**

Merlin Nieterau<sup>1</sup>, G.J. Melendez-Torres<sup>2</sup>, Geertjan Overbeek<sup>1</sup>, Daniel Shaw<sup>3</sup>, Patty Leijten<sup>1</sup>

<sup>1</sup>University of Amsterdam, Amsterdam, Netherlands. <sup>2</sup>University of Exeter, Exeter, United Kingdom.

<sup>3</sup>University of Pittsburgh, Pittsburgh, USA

#### **Abstract (max 500 words)**

**Objective:** Coercive parent-child interaction cycles increase disruptive behavior in children over time. In these cycles, parents and children unwillingly shape each other through observational learning (by modeling misbehavior) and operant learning (by reinforcing misbehavior). It is unclear whether, at the early stages of the development of coercive interaction cycles, patterns of observational and operant learning already tend to co-occur or also operate in relative isolation from each other. We aimed to shed light on this by (1) identifying parent-child coercive interaction profiles based on disruptive child behavior and parental responses of harsh discipline and giving in to children's demands and (2) fluctuations and stability over time.

**Methodology:** Parents of 108 children (3–8 years old; 50% girls) provided daily reports for 14 consecutive days on the level of disruptive child behavior and parental responses (i.e., harsh control practices and giving in to their child's demands) to difficult parenting situations due to disruptive child behavior. We will use multilevel latent profile analysis (MLPA) to model within-family interaction patterns (day level as Level 1) nested in between-family differences (family level as Level 2). This study was pre-registered (AsPredicted #120259).

Expected Results: At the day level, we expect to identify at least a “combined” profile (i.e., families scoring high on harsh control practices, giving in to the child’s demands, and child disruptive behavior) in which parents may both model and reinforce children’s disruptive behavior. At the family level, we expect significant between-family differences in profile class distribution, with some families fitting the same profile on most days (“stable families”) and other families fitting different profiles on different days (“variable families”).

Conclusion: A more comprehensive picture of daily individual family-level parent-child interaction patterns advances our understanding of the contribution of observational and operant learning in coercive parent-child interactions and may help professionals target the right mechanisms for curtailing the development of early disruptive child behavior in parenting interventions.

**354**

### **Workspace support and emotional intelligence impact on early childhood education and care teachers’ burnout: Focused on workspace climate with multiple-group analysis.**

Tetsuji KAMIYA<sup>1</sup>, Makoto YAMAMOTO<sup>2</sup>, Yuichi TODA<sup>3</sup>

<sup>1</sup>Tohoku University, Sendai, Japan. <sup>2</sup>Seiwa Gakuen College, Sendai, Japan. <sup>3</sup>Osaka Kyoiku University, Kashiwara, Japan

#### **Abstract (max 500 words)**

The work of early childhood education and care (ECEC) teachers is one of the most stressful professions involving numerous tasks, such as class preparation and classroom management, and interactions with multiple groups of people including children, colleagues, and parents (Kim & Buric, 2019). And it is known that unmanaged occupational stress can lead to the burnout of teachers and high turnover rate. This study aims to determine whether we can observe differences in the impact of workplace support and emotional intelligence on burnout, focusing on whether the workplace climate is cooperative or not. Furthermore, we attempted to address the reproducibility problem in psychology and show stable results through two rounds of data collection and the application of a single model to both samples. Data 1 included 282 ECEC teachers collected in 201x, and data 2 included 408 ECEC teachers collected 7 years after the first iteration by questionnaire method on group or individual surveys. Both data shows that the participants were almost women (97.4% on data1 and 96.1% on data2) and their age was ranging 20s to 50s approximately equal, including a few 60s, each excepting missing value. Workplace support consisted of emotional support, work support, and reflection support (Nakahara, 2010). Emotional intelligence has 4 subscales (Wong & Law, 2002): self-emotion appraisal, others’ emotion appraisal, regulation of emotion, and uses of emotion. Burnout was measured using Maslach’s Burnout Inventory, which has 3 subscales: emotional exhaustion, depersonalization, and personal accomplishment. Cooperative workplace climate was measured by 3 items from the Organizational Climate Scale (Nishiyama et al., 2009) and was divided into high and low groups based on mean values. The model of workplace support and emotional intelligence influencing burnout was divided into 2

groups according to high and low cooperative workplace climate, and a multiple-group analysis for structural equation modelling was conducted on data 1 and 2 respectively. The two sets of data showed that 1) the impact of emotional support on reducing burnout was greater in the low cooperative workplace climate group, 2) the impact of uses of emotion on increasing personal accomplishment was higher under the high cooperative workplace climate and, 3) regulation of emotion reduces emotional exhaustion in the low cooperative workplace. In a low cooperative work climate, on the one hand, emotional support through individual involvement and their emotional regulation seems to prevent burnout. On the other hand, in a highly cooperative workplace, ECEC teachers were more likely to utilize their own emotions to increase their sense of personal accomplishment in their workplace.

## 356

### **Pro-environmental intentions: a study that analyzing the role of individual and contextual factors.**

Federica Papa<sup>1</sup>, Francesca Cuzzocrea<sup>1</sup>, Francesca Liga<sup>2</sup>, Caterina Laganà<sup>1</sup>, Marco Cannavò<sup>1</sup>

<sup>1</sup>Magna Graecia University of Catanzaro, Catanzaro, Italy. <sup>2</sup>University of Messina, Messina, Italy

#### **Abstract (max 500 words)**

**Objective:** To reduce the impact of human actions on the environment, it is crucial to promote sustainable life attitudes of individuals, and it is essential to analyze the individual and contextual factors that can promote them (Ling & Xu, 2020). Some studies (Lavergne et al, 2010; Barszcz et al, 2022) have investigated the role of government styles and life goals in promoting motivation toward the environment. The aim of this study is to combine the previous information in order to understand the relationship between individual and contextual factors that can promote individuals pro-environmental intentions.

**Method:** 380 Italian university students, aged between 19 and 25 years (age: M= 21.18; SD=1.54), of whom 16% male and 84% female, participated in this study. They completed the Government Style Questionnaire, Aspiration Index, Pro-environmental Behaviors Scale, Motivation Towards the Environment Scale.

**Results:** Structural Equation Modelling (SEM) with latent variables was used. Results showed adequate fit for the data:  $\chi^2(209) = 455.86$ ,  $p < .01$ ,  $Y-B\chi^2(209) = 418.88$ ,  $p < .01$ ,  $R-CFI = .93$ ,  $SRMR = .05$ ,  $R-RMSEA (90\% CI) = .05 (.05, .06)$ . SEM confirmed a positive relationship between autonomous motivation and intrinsic life goals. Controlled motivation showed a positive association with controlling governing style and extrinsic life goals, negative with intrinsic life goals. Pro-environment behaviors associated with autonomous motivation positively and with extrinsic life goals negatively. In addition, an indirect association emerged between intrinsic life goals and pro-environment behaviors through autonomous motivation [ $b = .40$ ,  $p < .01$ , 95% CI (.21, .73),  $\beta = .25$ ].

**Conclusion:** This study confirmed findings found in the literature (Lavergne et al, 2010; Barszcz et al, 2022), highlighting the role of life goals over the role of governing style. Indeed, it would appear that

individuals who have intrinsic aspirations (affiliation, personal growth, community feeling), compared to individuals who perceive government as supportive, have self-determined pro-environment behaviors. In addition, it appears the perception of government as controlling seems to be associated with controlled motivation toward environment, but not with pro-environmental behaviors. The results are in line with the study of Lavergne et al. (2010), who pointed out that government seems to be an uninfluential contextual factor and that there are probably other, perhaps more relevant factors associated with pro-environmental intentions, such as life aspirations. In conclusion, these results could show how individual factors, as opposed to contextual factors, have an important impact on pro-environmental actions.

**358**

### **Postpartum mental health: the importance of quality care provision**

Giulia Ciuffo<sup>1</sup>, Martina Smorti<sup>2</sup>, Marta Landoni<sup>1</sup>, Chiara Ionio<sup>1</sup>

<sup>1</sup>CRIdee, Dipartimento di Psicologia, Facoltà di Psicologia, Università Cattolica del Sacro Cuore, Milan, Italy. <sup>2</sup>Dipartimento di Patologia Chirurgica, Medica, Molecolare e dell'Area Critica, Università di Pisa, Pisa, Italy

#### **Abstract (max 500 words)**

**Objective:** to investigate the influence of childbirth-related satisfaction on the development of postpartum PTSD in Italian women 6-12 weeks postpartum.

**Methodology:** This research was conducted as part of the International Survey of Childbirth-Related Trauma (INTERSECT) ([www.intersectstudy.org](http://www.intersectstudy.org)) funded by the Fondation Miriam de Senarclens and City, University of London. 34 Italian women 6-12 weeks postpartum (mean age: 33.41±5.769) were recruited in Italian hospitals and clinics.

Participants were first asked to provide demographic and obstetric information. 75% of the participants were primiparous. Most of them (82.4%) had a vaginal birth, 8.8% had an elective cesarean, 5.9% had an emergency cesarean section and 2.9% had an assisted vaginal birth. 44.1% of women reported they had complications during childbirth, while 20.6% of them stated that their baby had complications. In addition, 91.2% of the women were supported by their partner during birth and 26.5% reported that they received a lot of support. Participants then completed the BSS-R questionnaire to assess their perceptions of birth and determine their satisfaction with the birth experience, and the City Birth Trauma Scale to assess birth-related PTSD.

**Results:** Preliminary correlational analyses showed that infant's complications during birth were negatively correlated with quality of care (BSS-R) ( $r=-.408$ ;  $p<0.05$ ), whereas they were positively correlated with re-experiencing symptoms ( $r=.406$ ;  $p<0.05$ ), negative cognition ( $r=.369$ ;  $p<0.05$ ) and total PTSD ( $r=.368$ ;  $p<0.05$ ). In addition, quality of BSS-R care correlated negatively with re-experiencing symptoms ( $r=-.612$ ;  $p<0.01$ ), avoidance symptoms ( $r=-.490$ ;  $p<0.01$ ), negative cognition ( $r=-.347$ ;  $p<0.05$ ) and total PTSD ( $r=-.491$ ;  $p<0.01$ ).

Conclusion: Despite limitations (small sample size, brevity of the assessment) these preliminary results underscore the importance of the quality of care for new mothers' well-being and for potential posttraumatic condition. These findings point out the importance of focusing on women-centered, individualised care. Future research is needed to examine the long-term effects on mothers, and their relationship with their children.

368

## Boosters and Barriers Experienced in the Implementation of Youth Initiated Mentoring as a Prevention Strategy for Juvenile Delinquents

Angelique Boering<sup>1</sup>, Annabeth Groenman<sup>1</sup>, Levi Van Dam<sup>1,2,3</sup>, Geertjan Overbeek<sup>1</sup>

<sup>1</sup>University of Amsterdam, Amsterdam, Netherlands. <sup>2</sup>Dutch YIM Foundation, Amersfoort, Netherlands.

<sup>3</sup>Levvel Academic Centre for Child and Adolescent Psychiatry, Amsterdam, Netherlands

### Abstract (max 500 words)

**Objective:** Youth Initiated Mentoring (YIM) is a novel and innovative informal mentoring approach, which has been implemented as a prevention strategy for juvenile delinquency. In YIM, youths are supported by professionals to self-select a non-parental adult mentor from within their own social network (e.g., aunt, uncle, neighbor, friend of parent(s)). Aside from being a trustee and spokesperson for the youth, the YIM is closely involved in decision-making with professionals. The experiences of professionals in implementing YIM remain to be studied. Because successful implementation contributes to the effectiveness of an approach and not much is known about the extent to which and how YIM is implemented in preventive youth care, we will explore the boosters and barriers (i.e., determinants) experienced by professionals in implementing YIM in the context of Halt. In the Netherlands, Halt has the nationwide task to deliver tailored Halt-interventions to over 15.000 juvenile offenders (12-18 years) a year. Their main aim is to prevent reoffending and to increase youths' future opportunities. To strengthen informal social support, Halt professionals trained in YIM (15%), can implement YIM as an addition to the relatively short-term Halt-intervention of a 100 days.

**Methodology:** In the current study, we will primarily conduct focus group interviews with YIM-trained Halt professionals. Focus groups will take place during regularly scheduled YIM supervision meetings at Halt. Two distinct types of focus groups will be conducted, a large focus group ( $N = 23$ ) and three smaller focus groups ( $N = 7$  to  $8$ ). For both types of focus groups, we developed structured discussion formats with questions regarding boosters and barriers in four domains (Finch et al., 2014; Damschroder et al., 2022; Fleuren et al., 2012): innovation domain (i.e., YIM), youth case domain (i.e., characteristics of youths, parents, YIMs), individual domain (i.e., YIM-trained Halt professionals) and inner setting domain (i.e., Halt). For example, "What aspects do you find easy (or difficult) in the implementation of YIM?" *Think-pair-share* techniques will be applied to encourage active participation (Lyman, 1981). All focus groups will be recorded (audio) and transcribed for analyses. To identify patterns in the data, we will perform *multi-step thematic* analyses (Braun & Clarke, 2006). If necessary (i.e., large variations in discussed domains exist between focus groups), we will conduct individual interviews.



**Expected results:** We expect to identify determinants -in the abovementioned domains- that impact implementation outcomes. During ECDP 2023 we will present these results.

**Conclusion:** The findings of this study provide insight in determinants that might facilitate or prevent implementation of YIM as experienced by professionals. These insights give the ability to consider implementation strategies to further strengthen the 'boosters' and to negate possible 'barriers' of implementation and can be considered and adopted by others who aim to implement YIM in a prevention context, or another intervention embedded within an organisation.

**381**

## **Contextual information differentially effects children's reading strategy usage depending on the reading proficiency level**

Fenke Kachisi<sup>1,2</sup>, Jelena Zarić<sup>1,2</sup>, Telse Nagler<sup>1,2</sup>

<sup>1</sup>DIPF | Leibniz Institute für Research and Information in Education, Frankfurt, Berlin, Germany. <sup>2</sup>IdEA Center for Individual Development and Adaptive Education, Frankfurt, Germany

### **Abstract (max 500 words)**

Objective: Several reading strategies have been identified as relevant for word reading (Lindberg et al., 2011). When using letter and syllable reading (phonological strategies) words are recoded through identification of individual letters (or letter combinations). When using partial and whole word retrieval (lexical strategies) parts of words or entire words are retrieved directly from the mental lexicon. Strategy usage is inter- and intraindividually flexible (Siegler, 2005). It has been shown that children with more severe reading difficulties tend to use less elaborate strategies compared to children with milder reading difficulties (Kachisi et al., 2020).

There are many findings on context effects in reading, which show that context helps the reader to read words faster and with fewer errors (Ardoin et al., 2013; Ricketts et al., 2016). Especially struggling readers (younger children, children with reading difficulties) seem to benefit from context information compared to typically reading children (Nicholson, 1991).

The main aim of this study was to investigate whether contextual information helps children use more effective reading strategies and whether potential differences depend on the reading proficiency of the child.

Methodology: 24 words were presented to  $N = 123$  second grade children (69 females, age:  $M = 8.13$  years,  $SD = .35$ ). Half of the words were presented with context information, the other half without in a randomized order. The children were asked to read each word aloud as soon as it was presented. Videotaping allowed the determination of children's reading strategy usage for each item.

Results: The data was analyzed using SPSS 29.0. Children were clustered according to their reading proficiency at word-, sentence- and text-level, resulting in two significantly different proficiency groups

(see additional material). The 2x2-MANOVA with factors “reading proficiency” and “context” revealed a main effect of context ( $F_{(4,118)} = 10,636, p < .001$ ) as well as reading proficiency ( $F_{(4,118)} = 28,562, p < .001$ ). Children use more elaborate strategies when reading words in context and children with higher reading proficiency use more elaborate strategies than children with lower reading proficiency.

Especially interesting is the revealed interaction effect, showing that context effects depend on the reading proficiency level ( $F_{(4,118)} = 2,422, p = .026$ ). Only children with lower reading proficiency show a context effect for partial retrieval and letter reading, i.e., they use more partial retrieval with than without context and vice versa for letter reading. Children with higher reading proficiency show no differences in their partial retrieval and letter reading usage with or without context. However, the mean values of the individual group comparisons indicate a result pattern in the opposite direction: with context more proficient readers use less partial retrieval and use more whole-word retrieval instead.

Discussion: These results are in line with findings that contextual information leads readers to adopt a more top-down strategy (Bowey, 1984; Stanovich, 1984), making reading more effective. The embedding of word material into context may provide valuable potential for reading intervention. Context information could explicitly be used to help struggling readers increase their amount of retrieval strategy usage.

### 383

#### **A Qualitative approach on changes of young children’s social-emotional development in kindergarten in South Korea during the COVID-19 pandemic.**

Seung-ha Lee, [Hae-min Lee](#)

Chung-Ang University, Seoul, Korea, Republic of

#### **Abstract (max 500 words)**

The COVID-19 pandemic has brought many changes in the education field. In South Korean kindergartens, staggered attendance, distance learning as well as various disinfection instructions (e.g., mask-wearing) were implemented to control density in a classroom. The educational environmental changes in the kindergartens restricted social interactions between young children, which may have influenced young children's social-emotional development. However, there are very few studies to investigate young children’s developmental impact, which may have been caused by various prevention policies related to the COVID-19 pandemic. This study aimed to investigate the changes of young children’s social experience in kindergarten and their difficulties in social-emotional development during the COVID-19 pandemic through teachers’ voices.

Ten teachers in kindergartens, located in Seoul and Gyung-gi province in South Korea were individually interviewed from December 20, 2022, to early January 2023. Participants were asked whether there were changes in children’s social behavior or social-emotional skills and whether they had some difficulties in social aspects. Nvivo software was used to analyze the data.

The results were categorized into four themes: “deprivation of opportunity”, “biased social stimuli”, “confusion and maladjustment”, and “delay or recovery of social-emotional development”. Children were unlikely to have peer relationships in which they experienced cooperation, conflicts, and solving relational problems. Most children were exposed only to the relationship with parents and unilateral social stimuli (e.g., watching YouTube) during the COVID-19. Children had difficulties in getting along with their peers and adapting to the classroom in the kindergarten, in which they should be aware of the rules, and follow them. Finally, the children registered in the kindergarten during the COVID-19 period seemed to have lower social-emotional skills compared to those at the same age before the pandemic. As the pandemic regulations were eased, children were likely to recover from the social developmental delays, but some did not. The extent of the recovery differed by their individual circumstances (e.g., a length of quarantine) or characteristics (e.g., social-cognitive competence); some children needed more time for recovery and required intensive teachers' intervention.

This study emphasizes the necessity of peer interactions and relationships in early childhood and suggests the way of intervention to help the social-emotional development of children experiencing the pandemic period.

**384**

### **Turkish children’s developing emotion attributions to procedural justice outcomes in merit-need conflict**

Melike Acar, Ozce Sivis

MEF University, Istanbul, Turkey

#### **Abstract (max 500 words)**

Emotions are an essential component of social and moral cognition (Dahl et al., 2011; Lazarus, 1999; Nussbaum, 2003). Research in developmental psychology documented that children’s emotion attribution and moral development are intertwined in physical harm (Arsenio et al., 2006; Arsenio & Kramer, 1992) and peer exclusion contexts (Malti et al., 2017). However, what type of emotions are evoked by resource inequalities and how children coordinate these emotions in their judgments of procedural justice is an under investigated research question. The present study examined children’s emotion attributions to procedural justice outcomes and their emotional complexity when the candidates were equal in merit but different in need. A sample size of 88 participants between the ages of 7 and 11 (41 girls and 47 boys) from high, middle, and low SES families were individually interviewed. Our findings demonstrated that children attributed more negative emotions toward the protagonist when the resource-poor protagonist lost resources. With increasing age, children could attribute more two-sided emotions to resource-poor candidates. Children from a low SES background used more emotional complexity, that is, two-sided emotions for the loser. Furthermore, there was an association between emotional complexity and using welfare-related justification such that if children attribute one feeling, they are less motivated to use welfare. Findings will be discussed with previous developmental research indicating that children are becoming more sensitive to inequalities over middle childhood (Dys et al., 2019; Elenbaas, 2019a; Elenbaas, 2019b).

390

### Exploring the online learning community for early childhood teachers and early childhood special education teachers: the process and outcomes of a tired platform

Shu hsien Tseng<sup>1</sup>, Kae Liu<sup>2</sup>, Yen Wei Chen<sup>1</sup>

<sup>1</sup>Chung Yuan Christian Univ., Chung Li, Taiwan. <sup>2</sup>National Taitung Univ., Taitung, Taiwan

#### Abstract (max 500 words)

This research explores the process and outcomes of using an online learning community for early childhood teachers and early childhood special education teachers. As the concept of inclusion getting prevalent, more than ninety percent young children with special needs have been placed in regular classrooms in Taiwan. Collaboration and learning community between early childhood teachers and early childhood special education teachers is an effective way to enhance the effectiveness of preschool inclusion. The researchers designed and established a tired platform for online learning community with knowledge management elements. Teachers first attended a six-session face to face workshop to develop the team community sense as well as to build consensus about intervention practices of the tiered model of inclusion. Then, they were guided to register in the web platform. They could view, submit and share strategies on the platform. Teachers' self-reported teaching effectiveness, locus of control, attitudes, and knowledge of technology were measured quantitatively before and after the workshop and the platform registration. Besides, their participation and strategies developed during the study were collected and analyzed qualitatively. Teachers who joined the interactive online learning community experience transformation of their professional knowledge. More findings about pre-post results analyzed would be presented. According to the research findings, suggestions for future study and practices are discussed.

391

### Verbal violence and psychological well-being of young athletes

Zrinka Greblo Jurakić<sup>1</sup>, Višnja Ljubičić<sup>2</sup>, Lidija Bojić-Ćaćić<sup>3</sup>

<sup>1</sup>Faculty of Croatian Studies, University of Zagreb, Zagreb, Croatia. <sup>2</sup>Croatian Ombudswoman for Gender Equality, Zagreb, Croatia. <sup>3</sup>Croatian Handball Federation, Zagreb, Croatia

#### Abstract (max 500 words)

**Objective of the study:** The main aim of the study was to determine the frequency of verbal violence in youth sport and to examine how exposure to coaches' and peers' verbally violent behaviors is related to depression, anxiety, and stress levels among young athletes. In addition, we analyzed which

characteristics of motivational climate are associated with higher frequency of coaches' and peers' displays of verbal violence.

**Methodology:** The study sample consisted of 522 young handball players (289 boys and 233 girls). The age of the participants ranged from 14 to 17 years ( $M = 14.75$ ;  $SD = 0.96$ ). At the time of the study, participants had an average of 6 years of training experience ( $M = 6.30$ ;  $SD = 2.12$ ). The research was conducted following the guidelines of the Code of Ethics for Research with Children (Ajduković & Kolesarić, 2003). The participants completed the Depression Anxiety Stress Scales (DASS-21; Lovibond & Lovibond, 1995), Rosenberg Self-Esteem Scale (Rosenberg, 1965), and Perceived Motivational Climate in Sport Questionnaire (PMCSQ-2; Newton et al., 2000). In addition, participants answered how often they experience different forms of verbal violence from their coaches and peers (i.e., yelling, swearing, belittling, insulting, and threatening).

**Results:** The results show high prevalence of verbal violence in youth sports. Namely 88,8% of boys and 97,3% of girls who participated in the study were at least once faced with some form of coaches' verbal violence. In addition, 87,1% of male and 87,4% of female athletes were target of peer verbal violence in sport setting. Perception of coaches' and peers' verbal violence was positively correlated with levels of depression, anxiety, and stress experienced by young athletes. All correlations were statistically significant ( $p < .001$ ) and ranged from .28 to .40 and from .32 to .41 among boys and girls, respectively. Among boys, coaches' and peers' violent behaviours accounted for 13,5% of depression, 9,3% of anxiety, and 16,2% of stress symptoms. Among girls, coaches' and peers' violent behaviors accounted for 18,2% of depression and anxiety, and 17,1% of stress symptoms. Ego involving motivational climate was significant positive predictor of coaches' and peers' violent behaviors. Perceived motivational climate explained 35,3% of variance of coaches' and 16,6% of variance of peers' verbal violence.

**Conclusion:** The findings indicate a widespread occurrence of verbal violence in adolescent sports activities. Contrary to the believe that athletes are used to violent communication, so it doesn't affect them negatively, the results revealed that perception of verbal violence from coaches and peers significantly contributed to the depression, anxiety, and stress levels of young athletes. As expected, ego-oriented motivational climate which prioritizes winning and competitiveness between athletes (Ruiz et al., 2019) is characterized by higher levels of violence. The results indicate the need of undertaking measures to reduce coaches' and peers' violence in youth sport, which includes education about characteristics and consequences of ego-oriented team motivational climate.

**394**

## **A Bayesian approach to explore the role of gender in primary schoolers' basic numerical skills**

Ana Escudero-Montero, M<sup>a</sup> Oliva Lago-Marcos, Cristina Dopico-Crespo, Irene Solbes-Canales

Universidad Complutense de Madrid, Madrid, Spain

**Abstract (max 500 words)**

The role of gender in mathematical performance has been a prolific topic of research over decades. Nevertheless, empirical findings lead to conflicting conclusions. To clarify the understanding of this phenomenon, some researchers have recently advocated for the need to explore the influence of gender on the development of core numerical skills, since they constitute the foundation for higher-level mathematical abilities. Even though a wide range of numerical measures has been employed in previous research, they consisted of traditional tasks based on school-curricula. Gender differences in children's performance on non-routine tasks that require thinking in unfamiliar ways have been scarcely explored so far.

This study aimed to examine gender differences in young children's basic numerical skills by using a developmentally appropriate assessment with both school-based and non-routine tasks. In addition, a Bayesian analytic approach was adopted to evaluate the support in favor of the alternative (gender differences) and null (gender similarities) hypothesis.

One hundred and thirty-six primary and second graders (68 girls) (*Age* = 7 years and 4 months, *SD* = 7.1 months) were individually assessed during two sessions. In the first one, participants were administered the standardized Test of Early Mathematical Ability (TEMA-3). In the second, participants were shown a computerized non-routine counting detection task where they had to judge the correctness of different counting procedures. It did not overlap with TEMA-3 because children have seldom seen counting strategies like the presented in the detection task. Its relevant trials were pseudoerrors, unusual but correct counts that broke conventional counting rules but respected the logic of counting (for example, counting a row of elements from left to right). Based on previous research, participants were randomly assigned to either "with cardinal" or "without cardinal" condition (the cardinal value of the set was explicitly stated after the count in the former, but not in the latter).

Bayesian analysis indicated evidence for the presence of gender differences in TEMA-3 age-reference standard score and in the disaggregated score of number facts category. However, the support in favor of gender differences in the other seven disaggregated TEMA-3 scores (i.e., numbering, number comparisons, informal calculation, informal concepts, numeral literacy, formal calculation, and formal concepts) was only anecdotal, as it also was in the two conditions of the non-routine counting detection task. Conversely, the analysis provided moderate evidence for the null hypothesis (existence of gender similarities) in children's performance on most of the TEMA-3 measures and on the non-routine detection task, regardless of participants' age. In conclusion, the findings of the current study about children's performance on basic numerical school-based and non-routine tasks are in line with the gender similarities perspective.

**398**

### **Associations between maternal distress and the development of child social competence – the buffering role of out-of-home childcare attendance and social support**

Katja Tervahartiala<sup>1,2</sup>, Eeva-Leena Kataja<sup>1</sup>, Niina Junttila<sup>1,2,3</sup>, Linnea Karlsson<sup>1,4</sup>, Saara Nolvi<sup>1</sup>, Hasse Karlsson<sup>1,4</sup>, Riikka Korja<sup>1</sup>

<sup>1</sup>University of Turku, Turku, Finland. <sup>2</sup>University of Jyväskylä, Jyväskylä, Finland. <sup>3</sup>Finnish National Agency for Education, Helsinki, Finland. <sup>4</sup>Turku University Hospital, Turku, Finland

## **Abstract (max 500 words)**

### Objective of the study

The development of social competence is largely based on learning and interaction with the growth environment. A socially competent child is able to regulate emotions and capable to maintain positive relations with others. Low social competence, in turn, has been associated with behavior problems and difficulties in peer relations. Previous research suggests that maternal stress may influence parenting behavior, and thus, has impact on child socio-emotional development. The aim of this study is to examine maternal long-term distress and its associations with child social competence at the child age of 5. We further examine whether social support for parents, and the age at which child started in out-of-home childcare moderate the associations between maternal distress and child social competence.

### Methodology

A total of 545 children who participated neuropsychological study visits were drawn from the ongoing FinnBrain Birth Cohort Study. Child social competence was evaluated using the maternal report of Multisource Assessment of Children's Social Competence (MASCs) at the child age of 5. Longitudinal latent profile analysis (LLPA) was performed to identify latent groups of maternal distress. Maternal reports of parenting stress (SPSQ), depressive symptoms (EPDS), anxiety symptoms (SCL-90) and marital satisfaction (RDAS) was determined from the cohort questionnaires at the child age of 6 months, 12 months, 2, 4 and 5 years.

### Expected results

Based on earlier research, we expect that maternal long-term stress, and in particularly parenting stress, associates with child lower prosocial behavior, i.e., higher impulsivity and higher disruptive behavior. We further assume that social support for parents and child's out-of-home childcare attendance will moderate the associations between maternal symptoms and child behavior. The final results will be presented in the congress.

### Conclusion

The development of social competence is one of the major developmental tasks in childhood. The social and emotional competence develop in close and dynamic interaction with the growth environment. Family environment is most important social and emotional context for young children. However, out-of-home, non-parental childcare setting also plays an important role as the children develop. Social competence is associated with multiple areas in child development. Low social competence may associate with behavior problems, lower academic achievements, and problems in peer relations. Therefore, it is important to examine developmental pathways for child social and emotional competence and its associations with later well-being and health.

407

## Observer-rated Environmental Sensitivity in 3-month old infants: association with infants' temperament and emotion recognition and arousal during a peekaboo procedure

Alessandra Sperati<sup>1</sup>, Maria Spinelli<sup>1</sup>, Mirco Fasolo<sup>1</sup>, Maria Grazia Logrieco<sup>1</sup>, Melba Emilia Persico<sup>1</sup>, Michael Pluess<sup>2</sup>, Francesca Lionetti<sup>1</sup>

<sup>1</sup>University G. d'Annunzio, Chieti-Pescara, Chieti, Italy. <sup>2</sup>Queen Mary University of London, London, United Kingdom

### Abstract (max 500 words)

#### Objective of the study

For investigating Environmental Sensitivity (ES) in children a range of reliable measures, including self and parent-reports, and observational ratings, have been developed (Pluess et al., 2018; Lionetti et al., 2019; Sperati et al., 2022). Yet, there are no direct measures of ES during infancy. Traditionally, difficult temperament has been reported as a marker of an increased sensitivity to stimuli with a differential susceptibility effect, for better and for worse, but this trait is negatively biased by a focus on negative emotions. In the current contribution we present a new candidate observational measure for the assessment of ES in infancy. The measure includes a series of lab-based episodes to elicit infants' reactivity to positive, negative and sensory stimuli. We aim to explore the association (1) among different types of sensitivity, (2) between ES and traditionally assessed temperament traits, and (3) infants' emotion recognition and arousal during an emotion recognition task.

#### Methodology

Currently available data are based on a sample of 35 infants of 3 months of age (40%F). When infants were 3 months of age, mothers (mean age = 35 yrs, SD = 5 yrs) completed the Infant Behaviour Questionnaire (IBQ-R) (Gartstein & Rothbart, 2003). Then infants were invited to the Lab and sensitivity was assessed eliciting reactivity in response to positive, negative, and sensory stimuli. Afterwards, a peekaboo task consisting of a series of facial expression changes across seven consecutive trials (Montague et al., 2001) was adopted to code for emotion recognition and arousal. Bivariate associations were computed for aim 1 and 2, and multi-level modelling for repeated measures was adopted for aim 3.

#### Results

Infants' reactivity in the sample was normally distributed. Bivariate associations showed that infants' reactivity to positive, negative and sensory stimuli coded with the new ES measure were associated each other to some extent, ranging from  $r = .31$  to  $r = .45$ . Positive associations were found between observed reactivity and traditional ES markers, as temperamental fear ( $r = .23$ ) and orienting ( $r = .15$ ). During the peekaboo procedure, infants scoring high in ES showed an increasingly higher looking time than less-sensitive ones during the first smiling and the fearful faces but a decrease of looking was found after the



negative face exposition. Conversely, the highly sensitive infants' arousal response increased after the fearful face, potentially suggesting a deeper processing and awareness of facial details as an early marker of emotion recognition.

## Conclusion

To conclude, infants' reactivity does not fully overlap with traditional temperamental markers, suggesting the new observational procedure capturing well infants' differences in reactivity and other aspects related to ES. ES correlates with stronger infants' responses to an emotion recognition task and the moderate correlation among infants' reactivity to positive, negative, and sensory stimuli potentially suggest the existence of sensitivity types. As the data collection is in progress, by the time of the conference, data will be available on a larger sample size.

409

## The Short Version of the Process-Oriented Emotion Regulation Measure for Children and Adolescents (POEM-CA): Psychometric Properties and Associations With Psychosocial Adjustment

Lena Maas, Arnold Lohaus, Jana-Elisa Rueth

Bielefeld University, Bielefeld, Germany

### Abstract (max 500 words)

The development of appropriate emotion regulation (ER) strategies is considered important for children's and adolescents' mental health. ER has consistently been found to be associated with psychosocial adjustment (e.g., internalizing and externalizing problems), which emphasizes that a reliable and valid assessment of ER strategies used in this age group is important to detect difficulties at an early stage. The Process-Oriented Emotion Regulation Measure for Children and Adolescents (POEM-CA; R uth & Lohaus, 2023) is based on the Process Model of ER (Gross, 1998). It assesses functional (e.g., reappraisal, problem solving) and dysfunctional ER (e.g., suppression, rumination) on two secondary scales. Furthermore, the strategies are measured based on their temporal position within the emotion-generating process, resulting in five primary scales (situation selection, situation modification, attentional deployment, cognitive change, response modulation) for each superordinate dimension. The long version of the POEM-CA comprises 58 items and is suitable for children and adolescents attending years 5 through 10 at secondary school. With the aim of providing a short version of the POEM-CA that can be used with younger children, for screening purposes, or when time is limited, 32 items were selected based on the psychometric properties as well as comprehensibility of the items. The short version refrains from a differentiated assessment of the ER process and focuses instead on the secondary scales (functional and dysfunctional ER). The objective of the present study was to evaluate the POEM-CA short version with regard to its psychometric properties (i.e., factor structure, internal consistencies, item discrimination and item difficulty scores) as well as its criterion-related validity (i.e., associations with internalizing and externalizing problems). Self-reports were collected from  $N = 472$

German children and adolescents (50 % female) aged 9 to 18 years ( $M = 12.32$ ,  $SD = 1.60$ ). Participants filled in the short version of the POEM-CA as well as the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997). Confirmatory Factor Analyses showed acceptable fit indices for both scales of the POEM-CA (functional ER:  $\chi^2 = 159.17$ ,  $df = 101$ , CFI = .96, RMSEA = .04; dysfunctional ER:  $\chi^2 = 166.58$ ,  $df = 96$ , CFI = .95, RMSEA = .04). Item discrimination and item difficulty scores were acceptable or good, as were the internal consistencies (functional ER:  $\alpha = .84$ , dysfunctional ER:  $\alpha = .82$ ). To examine the criterion-related validity, a path analytic model with functional and dysfunctional ER as predictors of internalizing and externalizing symptoms (while controlling for age and gender) was computed. As expected, more dysfunctional ER was associated with more internalizing and externalizing problems. However, functional ER was negatively associated with externalizing, but not internalizing problems. The findings suggest that the short version of the POEM-CA is a reliable tool for assessing ER in childhood and adolescence economically, and can therefore be useful in the context of prevention and intervention programs. As the availability of different language versions of questionnaires is vital for future research on ER, a translation of the POEM-CA into English as well as the corresponding evaluation are in progress.

**414**

### **Associations between executive functions and language skills in deaf and hard-of-hearing versus typical hearing preschoolers**

Klara Hermes, Sabine Weinert

University of Bamberg, Bamberg, Germany

#### **Abstract (max 500 words)**

Early executive functions (EF) lay the foundation for higher cognitive functioning and academic success. Recently, deaf and hard-of-hearing (DHH) children have received increased attention in the field of EF research. Growing up mainly with typical hearing (TH) parents (Mitchell & Karchmer, 2004), these children have less access to language and communication than TH children. In contrast to children with specific language impairments, language delays in DHH children can be attributed to reduced access to communication rather than to cognitive causes. Studying the development of EF in DHH children therefore allows conclusions to be drawn about the importance of language and communication in the development of EF in general. EF consist of different components such as working memory, response inhibition and shifting, which develop strongly during the preschool period (Garon et al., 2008). Studies have shown lower EF skills in DHH preschoolers (Jamsek et al., 2021, Ribner et al., 2022) and school-aged children (Botting et al., 2017), indicating the importance of language and communication for EF development. Early access to language – either oral or visual – is associated with higher EF in DHH children (Goodwin et al., 2022; Ribner et al., 2022). Moreover, associations between EF and language skills seem to be more pronounced in DHH than in TH children (Jamsek et al., 2021). However, as previous studies included broad age ranges in which drastic changes in EF are expected, the emergence of these differences is unclear. It remains unclear whether lower EF skills due to reduced access to language and communication are present from an early age, or whether reduced access to language and communication mainly affects later developing, higher aspects of EF. Previous studies on DHH children

mostly assessed EF using only parental questionnaires (e.g. Goodwin et al., 2022) or a single experimental task (e.g. Jamsek et al., 2021), which limits the explanatory power and generalisability of the results. This study therefore assesses different aspects of EF in 3-year-old DHH and TH children. The main research questions are: Do DHH preschoolers have lower EF skills compared to age-matched TH peers, controlling for nonverbal intelligence? Are differences in EF associated with differences in receptive and expressive language skills? A total of 50 children will participate in the study ( $n_{\text{DHH}} = 25$ ;  $n_{\text{TH}} = 25$ ). The DHH children have bilateral permanent hearing loss with no additional disabilities and have TH parents. Direct assessment of EF skills includes tasks on response inhibition (adapted version of the Day-Night task; delay of gratification), attention shifting (Dimensional Change Card Sort) and working memory (visual memory span task). Both receptive and expressive oral language skills are assessed. In addition, information on the children's diagnosis and functional hearing is collected by parental report. Nonverbal intelligence (SON-R subtest) is controlled for in the analysis. Data collection is currently conducted. By presenting initial cross-sectional findings from an ongoing longitudinal study, conclusions can be drawn about the relationship between different aspects of language and the development of early EF.

**417**

### **Cyberbullying and socio-behavioural correlates in pre-adolescence: A survey in middle schools**

Gianluca Mariano Colella, Rocco Carmine Servidio, Anna Lisa Palermiti, Maria Giuseppina Bartolo, Angela Costabile

University of Calabria, Cosenza, Italy

#### **Abstract (max 500 words)**

**Objective:** Over the past few years, studies have reported the features that make pre-adolescence a unique life stage. Physical, cognitive, and emotional transformations in this period influence pre-adolescents' social interactions both in offline and online settings, in view of the spread of the Internet and ICTs among young people. As a result, various behaviours in this age group can positively or negatively influence daily life. Among these behaviours, cyberbullying is a critical social problem, especially in the school environment, that preadolescents face in several European countries, jeopardizing socio-emotional functioning. The contribution presents the results of a survey conducted in middle schools in the province of Cosenza (Calabria, Italy), investigating levels of cyberbullying and related factors among pre-adolescent students. The objectives of the study are: (i) to investigate levels and habits related to social media use; (ii) to assess levels of cyberbullying/cybervictimization; (iii) to test correlations between levels of moral disengagement and perspective-taking with levels of cyberbullying/cybervictimization.

**Methodology:** Three hundred students aged 11 to 14 years will be recruited from middle schools, after obtaining informed consent from participants' parents and after receiving permission from the respective school principals. An online self-report questionnaire will be administered during class periods under the supervision of the research team. Measures included demographic questions, the

Bergen Social Media Addiction Scale (BSMAS), the sub-dimension of perspective-taking from the Interpersonal Reactivity Index (IRI), and the European Cyberbullying Intervention Questionnaire Project (ECIP-Q).

Expected results: In line with the scientific literature, expected results will show associations between measured psychological dimensions and levels of cyberbullying; specifically, recent findings show the influence of perspective-taking and moral disengagement levels on cyberbullying/cybervictimization levels. Results obtained from descriptive and inferential statistical analyses will be discussed during the presentation.

Conclusion: The study presents useful results to increase scientific knowledge on pre-adolescence and on the associations between cyberbullying and specific cognitive and behavioural psychological variables. The results of the study will be used to develop a specific Serious Game (SG) for the prevention of cyberbullying, included in an evidence-based educational intervention.

**418**

### **A computer-based intervention to support early literacy skills in preschoolers with cochlear implants and in peers with normal hearing**

Michela Santangelo<sup>1</sup>, Letizia Guerzoni<sup>2</sup>, Domenico Cuda<sup>2</sup>, Marinella Majorano<sup>1</sup>

<sup>1</sup>University of Verona, Verona, Italy. <sup>2</sup>"Guglielmo da Saliceto" Hospital, Piacenza, Italy

#### **Abstract (max 500 words)**

Phonological awareness has a direct impact on children's reading skills in the preschool years. Many researchers have emphasized the importance of assessing phonological and metaphonological skills before children enter primary school. On the one hand, recent studies addressing the enhancement of early literacy agree on the effectiveness of metaphonological training programs, especially for at-risk children. On the other hand, research on clinical populations has also suggested the use of the syllabic method to promote literacy, as syllables are easier to detect and manipulate than phonemes at preschool age, and not all preschool children acquire metaphonological competences due to language vulnerabilities. In particular, children with cochlear implants (CIs) develop weaker phonological systems than children with normal hearing (NH), despite the improvements in language skills that their devices provide. The present study examines in Italian preschoolers with different language profiles the effectiveness of a 12-week computer-based program built up with stimuli based on the syllabic method and aimed at promoting early literacy. Thirteen NH children (mean age=66 months,  $SD=3.08$ ) and nine children with CIs (mean age=61.1 months,  $SD=6.9$ ) participated in the study. To get an overview of the language profile of the participants before the intervention, we measured grammatical comprehension (*Grammatical Comprehension Test for Children*; TCGB), grammatical repetition (*Grammatical Repetition Test*; TRGB), and receptive vocabulary (*Peabody Picture Vocabulary Test*; PPVT). To test the effectiveness of the computer-based program on the participants' early literacy skills, we measured syllable and vowel recognition and syllable and word reading before and after the intervention with *ad hoc* tests. Comparisons between scores on early literacy before and after the intervention were run separately for

each group with non-parametric tests for paired samples. Results show a significant improvement for both groups in all early literacy measures. Furthermore, results show that after the intervention NH children display significantly higher scores compared to children with CIs limited to syllable reading. These preliminary findings suggest that a computer-based program based on the syllabic method could support the early literacy of preschool children, even if children with CIs maintain some fragilities in phonological development.

**419**

### **Physiological, behavioral, and subjective experience responses to emotional clips in 8–15-year-olds**

Kseniia Konopkina, Hilla Hirvaskoski, Oleg Spakov, Nelli Heikkinen, Marianne Välikkilä, Jari K. Hietanen, Heini Saarimäki

Tampere University, Tampere, Finland

#### **Abstract (max 500 words)**

Categorical emotion theories assume that emotions differ in terms of subjective experience, physiology, and behavior. Although there is evidence for distinct behavioral and physiological response patterns associated with different emotions in adults, the development of those patterns during maturation remains elusive. Naturalistic stimuli, such as movies and stories have been successfully used to elicit emotions under laboratory conditions. Eye movements, heart rate, and self-reports of experienced emotions are routinely used as indicators of emotional experience in adults, although less is known about the stability of these measures across childhood. Therefore, we addressed this gap by investigating the behavioral, physiological, and experiential responses associated with different emotion categories in 8–15-year-old children.

In laboratory experiment participants 8–15-year-old children (N=76) and adults (M = 22.1±2.6, N=19) watched 42 short video clips depicting emotionally salient situations. The clips targeted six emotion categories (three positive: joy, tenderness, amusement; three negative: anger, sadness, fear). After each clip, participants rated the feelings triggered by the video using a slider to indicate the intensity of their emotions in the six target emotion categories (Figure 1). During video viewing, participants' eye movements and heart rate were recorded. From these data, we extracted out-of-screen percentage (time points during which the participant looked out of the screen or blinked), and inter-beat interval (IBI) and heart rate variability (HRV), respectively. For the analysis, children were subdivided into four age groups.

Behavioral, physiological, and experiential changes associated with various emotions were investigated using mixed effects ANOVA. The results showed that the children's intensity ratings were consistent with the targeted emotion categories. The intensity scores of joy, amusement, and sadness for corresponding clips were high and consistent across age, whereas tenderness and fear scores for target clips were lower (main effect of category:  $p < .001$ ,  $\eta^2 = 0.69$ ; Figure 2A) and age-dependent (interaction effect:  $p < .001$ ,  $\eta^2 = 0.1$ ), where the intensity of experienced fear decreased with age. Heart rate

responses (IBI and HRV) were modulated by age (IBI:  $p < .001$ ,  $\eta^2 = 0.16$ ; HRV:  $p < .001$ ,  $\eta^2 = 0.24$ ; Figure 2B-C). IBI values showed a linear-like decreasing trend, whereas HRV maturation showed a curvy trend, with a plateau phase between ages 8 and 12 and a decrease into adulthood. In addition, we discovered a significant main effect of emotion category ( $p < .001$ ,  $\eta^2 = 0.1$ ) and interaction effect between age and target emotion on HRV ( $p < .01$ ,  $\eta^2 = 0.09$ ), indicating that the effect of age on HRV was different between the emotion categories. Emotion category was significantly associated with changes in out-of-screen percentage ( $p < .01$ ,  $\eta^2 = 0.58$ ; Figure 2D). Fear and tenderness were associated with the highest percentage of out-of-screen time. This effect was milder in older adolescents and adults ( $p < .001$ ,  $\eta^2 = 0.1$ ).

To sum up, the results of the present study show evidence of discrete physiological response patterns associated with different emotions during maturation. We found heart rate and gaze patterns in children population vary depending on experienced emotions. Overall, it enhances our understanding of the physiological dynamics during emotional maturation.

**420**

### **Attachment to parents, peers and sense of agency: Are there differences for boys and girls?**

Filipa Nunes<sup>1,2</sup>, Paula Mena Matos<sup>1,2</sup>, Tiago Ferreira<sup>1,2</sup>, Ingrid Schoon<sup>3</sup>, Beatriz Castro Rodrigues<sup>1</sup>, Catarina Pinheiro Mota<sup>4,2</sup>

<sup>1</sup>Faculty of Psychology and Science Education, University of Porto, Porto, Portugal. <sup>2</sup>Center for Psychology, University of Porto, Porto, Portugal. <sup>3</sup>University College London, Institute of Education, London, United Kingdom. <sup>4</sup>University of Trás-os-Montes and Alto Douro – UTAD, Vila Real, Portugal

#### **Abstract (max 500 words)**

During adolescence, important developmental reorganizations regarding attachment take place. Although parents continue to serve as secure bases encouraging adolescent's autonomy and differentiation, adolescents turn to their peers and begin to rehearse new developmental competences, relying less on their parents for emotional support. The intertwining of these relationships on adolescent's development has long captured the attention of researchers; however, only a few studies addressed sense of personal agency. The individual perception to be an actor of own life course constitutes a great challenge of adolescence and its acquisition has been associated with better socioemotional adjustment. Changes in employment opportunities and the economic climate in Western societies emphasize the relevance of sense of personal agency currently because adolescents tend to face great uncertainty in relation to the future. According to literature, the relationships with "significant others", as well as the adolescent's sex are important correlates to shape the "horizon of possibilities" of young people. Although the relevance of this relational and individual variables is recognized to sense of agency, to the best of our knowledge no study has yet attempted to analyze the intertwining of relationships to parents and peers using a gender lens. Address this research question will be valuable to literature on sense of agency, insofar, when studying close relationships, it is crucial to consider sex differences. In other words, the socialization processes are not necessarily equal for boys

and girls, i.e., different sex exhibit different behavioral patterns in their relationships, and this may moderate links between relationships with parents and peers on sense of personal agency. Through a multigroup analysis, the current study aims to analyze the links of attachment to mother, father, peers and cumulative psychosocial risk on adolescents' sense of personal agency, exploring if these links vary according to adolescent's sex. The sample is comprised of 1216 Portuguese adolescents (55.9% girls) aged between 14 to 19 years. We will use structural equations modeling to investigate unique contributions of parental and peer relationships to boys' and girls' sense of personal agency. Findings will be discussed based on attachment theory and taking into account the specifics of the stage of individuals' development.

**423**

### **Risk Factors for Child Abuse and Neglect: Parenting Stress and Parental Self-Efficacy**

Sema Nur Toker<sup>1</sup>, Çare Sertelin Mercan<sup>2</sup>

<sup>1</sup>Ankara University, Ankara, Turkey. <sup>2</sup>Istanbul University- Cerrahpaşa, İstanbul, Turkey

#### **Abstract (max 500 words)**

Child abuse and neglect have been important problems from the past to the present. One of the theories put forward to understand abuse and neglect and perhaps the most explanatory model is the ecological model. Bronfenbrenner (1979) proposed an ecological perspective on human development and Belsky (1980) adapted this model to child abuse. The characteristics of the parents, located in the microsystem and in the area closest to the child, are considered one of the most important risk factors (Belsky, 1980). The dynamics of child abuse can only be understood by examining these features (Polat, 2001). Many studies have been carried out to determine the risk factors related to the parents. It is thought that parents with high levels of parenting stress are more likely to engage in neglect and abusive behavior (Azar and Wolfe, 2006; Cle´ment and Chamberland, 2009; Crouch and Behl, 2010; Miragoli et. al., 2018). And also studies indicate that parental self-efficacy may be a risk factor for child abuse and neglect either directly (Mash, Johnston, and Kovitz, 1983), or indirectly (Mammen, Kolko, Pilkonis, 2002; Peterson, Tremblay, Ewigman, and Saldana 2003). Although mothers are at the center of most of the child abuse and neglect research, the position of fathers in raising children in the changing and developing world should not be ignored. It is seen that mothers and fathers show similar behaviors in terms of abuse and neglect (Muller and Diamond, 1999; Nobes and Smith, 2000; Sunday et. al, 2008). In this context, this study aims to explain the relationships between physical and emotional abuse and neglect experiences of secondary school students, and the parenting stress and parental self-efficacy of their parents.

#### **Methodology:**

This is a correlational study. The data collection process has been completed. Data were collected from 750 individuals, including 250 secondary school students, 250 mothers, and 250 fathers. The data collecting tools are the Demographic Information Form, Perceived Parental Self-Efficacy Scale, Parenting

Stress Scale, and Domestic Abuse Scale- Form B. Multiple regression will be used to test the hypothesized relationship between the variables. ANOVA and Independent Sample T-test analysis will be used to compare to groups.

#### Expected Results:

In this study, it is expected that both mothers' and fathers' parental stress and parental self-efficacy predict children's domestic abuse and neglect experiences. Also, it is expected that students' domestic abuse and neglect experiences will differ according to their parents' childhood abuse experiences, psychiatric treatment histories, and marital status.

#### Conclusion:

Defining parental risk factors is crucial for explaining and preventing child abuse and neglect. Since it is a problem almost everywhere in the world, research on child abuse and neglect from every culture is very valuable. The findings will be discussed in line with the existing literature.

**431**

### **Associations between maternal-infant interactive characteristics at 1-month post-partum and cognitive outcomes at pre-school age in a rural area of The Gambia**

Bosiljka Milosavljevic<sup>1,2</sup>, Maria M. Crespo-Llado<sup>3,2</sup>, Ebrima Mbye<sup>4</sup>, Ebou Touray<sup>4</sup>, Tijan Fadera<sup>4</sup>, Mariama Saidykhan<sup>4</sup>, Samantha McCann<sup>5</sup>, Giulia Ghillia<sup>5,2</sup>, Marta Perapoch Amadó<sup>6,7</sup>

<sup>1</sup>Department of Psychology, University of Cambridge, Cambridge, United Kingdom. <sup>2</sup>Centre for Brain and Cognitive Development, Birkbeck, University of London, London, United Kingdom. <sup>3</sup>Department of Women and Children's Health, University of Liverpool, Liverpool, United Kingdom. <sup>4</sup>MRC Unit The Gambia at the London School of Hygiene and Tropical Medicine, Keneba, Gambia. <sup>5</sup>Department of Women and Children's Health, King's College London, London, United Kingdom. <sup>6</sup>Department of Psychology, University of East London, London, United Kingdom. <sup>7</sup>Department of Physics and Biomedical Engineering, University College London, London, United Kingdom

#### **Abstract (max 500 words)**

##### **Objective:**

Early interactions with caregivers have important and lasting impacts on infant cognitive development. Contingent and positive responses to infant communicative gestures can reinforce behaviours necessary for the development of motor, verbal, and attentional skills. Furthermore, cognitively stimulating caregiving practices are posited to support healthy cognitive development among infants exposed to environmental adversity. However, much of the research to date has been done in high-income settings, in the global north, limiting the generalisability of these findings. The present study uses data from the



Brain Imaging for Global Health (BRIGHT) project, a prospective longitudinal study of infant neurodevelopment, from the third trimester of pregnancy to preschool age, in a rural area of The Gambia, West Africa (N=204). The aim was to assess the impact of maternal contingent responsiveness at 1-month post-partum on the development of child cognitive skills and executive functions (EFs) at preschool age (3-5 years) in this context.

### **Methodology:**

Maternal-infant interactive style was assessed during a lab visit at one-month post-partum (N=169) using a free-play assessment, designed to be as natural as possible. These were later coded using the Global Rating Scales, to assess infant active communication and maternal contingent responsiveness (total possible scores range 1-5, with higher scores indicating more communicative behaviours/higher contingent responsiveness). Child cognitive outcomes were assessed when the children were aged 3–5-years (N=171), using a general assessment of cognitive development (Mullen Scales of Early Learning [MSEL]) and tablet-based EF tasks measuring cognitive flexibility (CF), inhibitory control (IC) and working memory (WM). Participant age was controlled for in analyses due to the rapid development of cognitive skills during the preschool age period.

### **Results:**

Infant active communication, maternal contingent responsiveness and cognitive outcome scores are summarised in Table 1. There were significant longitudinal associations between maternal/infant behaviours at 1-month and cognitive outcomes at 3-5-years. Infant active communication was significantly associated with MSEL scores ( $b=3.35$ ,  $SE=1.61$ ,  $p=.04$ ) at 3-5-years (Figure 1). Maternal contingent responsiveness at 1-month was significantly associated with child WM ( $b=.22$ ,  $SE=.09$ ,  $p=.01$ ) and IC ( $b=.06$ ,  $SE=.02$ ,  $p=.002$ ) scores at 3-5-years.

### **Conclusions:**

Infant communicative behaviours at 1-month predicted general cognitive skills at pre-school age, while maternal responsiveness was associated with EF skills (WM, IC) but not overall cognitive ability. These distinct patterns are possibly due to the skills required in the different cognitive assessments; early communicative skills may be more relevant for the development of general cognitive ability, which relies on language skills as much as attention and motor function. On the other hand, maternal responsiveness and guidance during early interactions may help support the development of attentional and regulatory skills that are relevant for later EFs. Future work will further explore the mechanisms underlying these associations using neuroimaging and attentional measures, in this cohort. Furthermore, next steps will involve examining how caregiving practices are involved in mitigating environmental risk (such as undernutrition) that is prevalent in this community.

**434**

## **Physiological outcomes of suppressing positive and negative emotions in pre-schoolers**

Theresia Wöbke<sup>1</sup>, Cathérine Gunzenhauser<sup>2,3</sup>, Henrik Saalbach<sup>1,3</sup>, Berit Streubel<sup>1,3</sup>

<sup>1</sup>Department of Education, Leipzig, Germany. <sup>2</sup>Institute for Psychology, Ludwigsburg, Germany. <sup>3</sup>Leipzig Research Center for Early Child Development (LFE), Leipzig, Germany

### Abstract (max 500 words)

Objective of the study: There are various studies in adults indicating emotional suppression during frustrating situations is to be associated with negative physiological and psychological effects. However, little is known about similar scenarios in children. Moreover, current research in undergraduates revealed that suppressing positive emotions differs from suppressing negative emotions, giving new insights regarding positive effects that emerge when suppressing positive in contrast to negative emotions (Li, Zhu, Leng & Luo, 2020).

In the present study, we investigated the relation between mimic and physiological outcomes when suppressing negative and positive emotions in pre-school children during a frustration-inducing computer game. We further examined the relation between children's emotion regulation knowledge and their mimic and physiological outcomes during emotion suppression.

Methodology: Four- to-six-year-old pre-schoolers ( $N = 39$ ;  $M_{age} = 5;5$ , 36% girls) participated in the *Balloons Game*, a frustration-inducing computer game (Bar-Haim et al., 2011). The children's task was to pop as many balloons of a certain colour as possible in order to win. Children completed two rounds of the game with 8 trials each. In the first round, the children played without additional instructions, in the second round they were asked not to let on whether they were winning or losing. In some trials, the computer mouse was manipulated so that no balloons could be popped, causing the children to lose the game. While playing the *Balloons Game* children were videotaped and the *FaceReader* software was used to analyse changes in facial expressions. Additionally, children wore a chest strap (Polar HR 9) to record their heart rate. The generated heart data provided information about changes in heart rate variability (HRV) while suppressing both positive and negative emotions. Knowledge of emotion regulation strategies was collected via the subscale *knowing and regulating emotion* of the *IDS-2* (Grob & Hagmann-von Arx, 2018). In this task, we asked the children for six emotion-related scenarios what the said child could do, to not feel that particular emotion anymore. The mentioned strategies were classified according to adaptivity.

Results obtained: Overall, children were more successful in suppressing the facial expression of positive than negative emotions. Surprisingly, HRV increased during both positive and negative emotion suppression, indicating decreased sympathetic nervous system activity. No significant relation was found between knowledge of emotion regulation strategies and both facial suppression and HRV changes while playing the *Balloons Game*.

Conclusion: Our findings show that facial suppression of positive and negative emotions increases HRV in pre-schoolers. Surprisingly, our results indicate that knowledge of emotion regulation strategies is not related with neither change in facial expressivity nor change in HRV during emotion suppression in frustrating situations. Future research needs to examine the causal relation of the HRV increase and suppression of both positive and negative emotions to find the factors that cause this interplay's differences.

439

## Using non-linear mixed models to understand sensitive periods of adversity in mental health trajectories

Kathryn Bates<sup>1</sup>, Rogier Kievit<sup>2</sup>, Delia Fuhrmann<sup>3</sup>

<sup>1</sup>King's College London, London, United Kingdom. <sup>2</sup>Donders Institute, Nijmegen, Netherlands. <sup>3</sup>King's College London, London, Netherlands

### Abstract (max 500 words)

Non-linear mixed models are a powerful tool to capture trajectories of brain development. With the advent of longitudinal, large-scale datasets, the use of non-linear modeling approaches is gaining traction given evidence to suggest cortical development during adolescence is dynamic in nature rather than strictly linear. The advantage of non-linear mixed models is that they can be used to yield readily interpretable parameters, such as the age of steepest development in a given variable. This can then be extracted to predict outcomes.

An important research question to which non-linear mixed models are particularly suitable is: How and when do adversities impact mental health trajectories most? We know that the occurrence of adversities (potentially harmful experiences, such as mental abuse and the death of a loved one) is non-linear throughout development and that the type and timing of adversity can influence outcomes. For example, the early years (birth to 3 years) have been identified as a sensitive period for the impact of adversity on later health outcomes. Adolescence presents a potential second sensitive period of brain development after early childhood, and adolescents experience a unique set of adversities during this period (such as peer bullying, romantic abuse, and school issues). Over 75% of mental health conditions are diagnosed before 25 years of age, however, research is yet to investigate how the occurrence of adversity during adolescence impacts mental health.

In this study, we leveraged non-linear mixed models to examine trajectories of mental health in the Avon Longitudinal Study of Parents and Children (ALSPAC: N~15,000) and to establish how adversities unique to adolescents predict mental health trajectories. We expect evidence for a sensitive period of social adversity during adolescence (data analysis is ongoing, expected completion May 2023). This study will highlight the types and timing of adversity, which can be applied to develop prevention efforts to support young people's mental health.

453

## Examining the psychometric properties of the Bicultural Identity Integration Scale (BIIS-2) in the context of immigrant adolescents with diverse cultural backgrounds living in Germany

Paula Duwe, Peter Titzmann

Leibniz University Hannover, Department of Psychology, Hannover, Germany

### **Abstract (max 500 words)**

#### Objective:

In multicultural societies, adolescents face additional developmental tasks as they strive to integrate multiple ethnicities into their identity. To gain a deeper understanding of this process, valid assessments are indispensable. The Bicultural Identity Integration (BII – an individuals' affective and cognitive experience of negotiating their two cultural identities) framework and associated measures like the Bicultural Identity Integration Scale 2 (BIIS-2; Huynh et. al., 2018), that assess BII with two factors (Harmony and Blendedness), offers such an approach. However, the BIIS-2 was developed with minority samples in North-America and empirical evidence regarding psychometric properties in European countries with different ethnic minority groups is scarce. In fact, results of recent studies indicated limited support of the proposed two-factor structure in some populations. Additionally, prior work has focused mainly on adults and it is uncertain whether the proposed BIIS-2 measurement is applicable for adolescents. The use of the BII construct might be particularly interesting for adolescents, who are in a critical phase for the development of a unified sense of the self that integrates multiple (cultural) identities and has important implications for psychological functioning and integration into larger society. However, it is first necessary to develop and validate adequate measurements for examining BII in children and adolescents. The current study aimed to investigate the psychometric properties of the BIIS-2 in a German context.

#### Methodology:

The study comprised a sample of 589 ethnic minority students with migration history in their family (mean age= 13.3, SD= 1.3; 45,5% female) from the project "Teacher-Parent Interaction: With School Participation to the Success of Youth with and without migration background". Participants completed demographic measurements, the BIIS-2 and measures of acculturation and psychosocial development for a validation test. Confirmatory and Exploratory Factor Analysis were conducted to examine the postulated two-factor structure of the BIIS-2 and bivariate correlations assessed associations with predicted outcomes.

#### Results:

Results of the two-factor CFA indicated poor fit to the data (CFI= 0.535, RMSEA= 0.117, SRMR= 0.111). In response, we conducted EFA, which revealed a four-factor solution. One factor (Factor 4) was not considered further, because it comprised only two items with unsatisfactory reliability scores. The two expected factors (Harmony, Blendedness) plus the third factor (Conflict) had eigenvalues greater than 1.00 and accounted for 39.05% of the cumulative variance explained. This three-factor structure was supported across different groups (i.e., country of origin), yielded satisfactory reliabilities (Cronbach Alpha >.616) and correlated (.107 < r <.296) with theoretically related measures, such as acculturation orientations. Specific associations of Harmony and Conflict with related constructs (depression, self-esteem) underscored the unique variance covered by these two factors and emphasized the need to assess them as distinct scales rather than a single factor.

Conclusion:

Contrary to the proposed BIIS-2 (Huynh et. al., 2018), this study provides evidence for more than two factors in the BIIS-2 instrument in the context of adolescents with migration history in Germany. Findings show that BII may be differently structured depending on context and ethnicity or immigrant and minority background.

**454**

### **Father's involvement and children's social competence in a Peruvian sample: The role of the child's sex**

Magaly Noblega<sup>1</sup>, Ligia Monteiro<sup>2</sup>, Carolina Santos<sup>2</sup>, Eva Diniz<sup>3</sup>, Marisut Guimet<sup>1</sup>, Andrea Ugarte<sup>1</sup>, Francesco Marinelli<sup>1</sup>

<sup>1</sup>Pontifical Catholic University of Peru, Lima, Peru. <sup>2</sup>Instituto Universitário de Lisboa (ISCTE-IUL), CIS-Iscte, Lisboa, Portugal. <sup>3</sup>Instituto Universitário de Ciências Psicológicas Sociais e da Vida, WJRC, Lisboa, Portugal

#### **Abstract (max 500 words)**

There is a small number of studies analyzing fathering at Latin-American socio-cultural context (Cabrera et al., 2018; Diniz et al., 2021). This is surprising since literature has shown that fathers do matter for child development and well-being, with and beyond the mother, and can be a protective factor against adversity (e.g., Cabrera et al., 2018; Lamb & Lewis, 2010; Volling & Cabrera, 2019).

For these reasons, the present work aims to contribute to bridge this gap by studying, in a Peruvian sample, how father's involvement, relative to the mother's, is associated with children's social adjustment (social competence, social withdrawal, and aggression) during the pre-school years. Age and sex as controlled in the analyses.

Two hundred and three Peruvian families, with pre-school age children, attending daycare participated in the study. A brief questionnaire was completed aiming to characterize sociodemographic information regarding parents (e.g., age, education, marital and working status), and the child (e.g., age, sex). Fathers' involvement was assessed using the Peruvian version of the Parental Involvement: Care and Socialization Activities questionnaire (Monteiro et al., 2008). For this study, only three dimensions involving engagement with the child were used: direct care related to caretaking tasks that involve direct contact and interaction with the child; teaching/discipline related to teaching skills and rules for the child, and play referring to child-parent play activities. Agreement between parents' reports, measured by intra-class correlation, was high across all domains (.66 to .82), therefore, an aggregate measure was computed by averaging fathers' and mothers' reports. The Cronbach alphas reached acceptable values: direct care (.74), teaching/discipline (.82), and play (.69).

Children's pre-school teachers reported on the Social Competence and Behavior Evaluation Scale - Short version (La Freniere & Dumas, 1996). The questionnaire has three subscales: (1) anger-aggression focuses on evaluating oppositional, aggressive, angry, and selfish behaviors (2) anxiety-withdrawal measures behaviors of dependence, anxiety, depression, and isolation or withdrawal; and (3) social competence assesses the positive qualities of the child's adaptation. The Cronbach's alphas were: anger-aggression (.90); anxiety-withdrawal (.71, items 6 and 21 were removed); social competence (.89).

Multiple ordinary least squares regression models (see Table 1) were performed for the dimensions of children's social adjustment, with the following variables as predictors: child's age, child's sex, father's, and mother's education (in years), father's involvement, and interaction effects between the father's involvement and the child's sex. Furthermore, the interaction terms found to be significant were analyzed through the exploration of the simple slopes of the regression (Aiken & West, 1991).

Only for social competence an interaction between father's involvement in direct care and child's sex was found (for boys). Child's age and sex (girls), as well as father involvement in direct care were significant main predictors for social competence (see graphic 1). For aggression, only child's age was a significant predictor.

These results will be discussed highlighting the importance of father's involvement for child's development in a Latin-American context.

**462**

## **I solved it all right! Children's overconfidence in their spatial abilities and the role of gestures in performance**

Dicle Capan<sup>1</sup>, Reyhan Furman<sup>2</sup>, Tilbe Göksun<sup>1</sup>, Markus Paulus<sup>3</sup>, Terry Eskenazi<sup>1</sup>

<sup>1</sup>Koc University, Istanbul, Turkey. <sup>2</sup>University of Central Lancashire, Preston, United Kingdom. <sup>3</sup>Ludwig Maximilian University of Munich, Munich, Germany

### **Abstract (max 500 words)**

The current study examines whether spatial problem-solving performance increases through the encouraged use of iconic gestures in children and whether this potential increase in performance is reflected in children's confidence. Iconic gestures representing actions, objects, and metaphors significantly enhance cognitive processes in children and adults by being a compensatory tool that activates spatial-motoric information in mind (e.g., Goldin-Meadow et al., 2015; Alibali, 2005). On the other hand, metacognitive abilities are responsible for monitoring and controlling cognitive processes goal-directedly (e.g., Proust, 2010). Therefore, the ways that lead to high metacognitive efficiency, referring to being able to detect when right and wrong, are under constant scientific exploration. Up-to-date findings suggest that efficiency in monitoring cognition becomes better with formal education, with children being overconfident in their abilities in early childhood (e.g., Destan et al., 2017; Marulis et al., 2019). What is not clear is to explain whether children's overconfidence in previously documented cognitive domains (i.e., memory, decision-making) is also evident in spatial areas or whether children

are better at monitoring their spatial performance. Previous studies suggest that confidence judgments are made by evaluating fluency or availability cues (Koriat, 1991). Since children have difficulties in evaluating these cues, we expected to observe overconfidence in spatial abilities by children. There is also no previous attempt to elucidate the links between gestures and metacognition during children's spatial task performance. We tested 4 to 6-year-old children's spatial problem-solving abilities in either control or gesture conditions. In both conditions, children performed the Children's Mental Transformation Task (Levine et al., 2018). They solved 16 problems and judged their confidence after each trial using a 3-point pictorial scale ranging from unconfident to confident. In the gesture condition, we encouraged children to use their hands in solving the problems, whereas, in the control condition, they were not given any strategies to perform the task. We controlled for the children's baseline rates of gesture and working memory abilities. Our final sample will include 90 children but our preliminary results with 43 children (23 from the gesture group, 24 boys) show that performance increases with age, and encouraging gesture use in children positively affects performance within and between groups, supporting previous findings. We see better regulation of confidence judgments with increasing age, but still, children are overconfident in their spatial abilities in all age groups. Relatedly, we see gestures' effects on confidence only in 6-year-old children, with 6-year-old children feeling significantly more confident if they are in the gesture group. To the best of our knowledge, this study is the first to investigate the relationships between gestures and metacognition in children and point out that their interactions become significant near the end of early childhood.

**466**

### **Free-play mother/child interactions show multimodal joint attention in young children with multisensory impairment (MSI)**

María Núñez Bernardos<sup>1</sup>, Irene Guevara de Haro<sup>1</sup>, María Encarnación Sarriá Sánchez<sup>2</sup>

<sup>1</sup>Universidad Autónoma de Madrid, Madrid, Spain. <sup>2</sup>Universidad Nacional de Educación a Distancia, Madrid, Spain

#### **Abstract (max 500 words)**

Children with visual or auditory sensory impairments present delays in the development of joint attention (JA) and the socio-cognitive skills that follow. It can be assumed that the combined impairment of these two modalities must have a severe effect on the communicative development of children with multisensory impairment (MSI) or deafblindness. Little is known, however, about how children with MSI get to communicate with others in JA. Few investigations analyze the early communication of children with MSI. This research gap has been related both to the difficulty of assessing the MSI population and to its heterogeneity. We argue that it can also be related to the traditional understanding of JA as visual or auditory skills that children develop in distal interactions. This limits the study of JA in children with MSI.

We aim to describe how children with MSI coordinate their attention with their parents to communicate about the world through different sensory strategies. Free-play interactions with objects of 9 mother-child dyads were video-recorded for a duration of at least 10 minutes. Children in this sample (aged 3;1

– 6;4 years; months) had diverse aetiologies, and different levels of sensory impairment and associated disability, as characterizes this population. JA sequences were identified by following a coding system that combines JA interactive definitory elements and temporal criteria. More specifically, sequences had to include at least one attentional bid, one engaged response, and one verification behavior while fulfilling two time constraints: a minimum overall duration of 3 seconds and a maximum delay of 5 seconds between the elements of the sequence. We also coded children’s specific JA skills and their sensory modalities, adapting the typical “visual behaviors” (e.g., gaze shifting) to those structurally and functionally similar produced through other sensory modalities (e.g., tactile attention shifting).

Despite the samples’ heterogeneity, common threads can be found in the JA interactions of children with MSI. All dyads establish JA sequences. Half of these JA sequences are concatenated, creating complex interactive episodes. The mothers perform more attentional bids (79% of total) but children only share attention after 48% of these bids. By contrast, children perform bids less frequently yet 85% of them lead to JA sequences. Mother-child interactions are mostly multimodal (66%) and all dyads share references through multiple sensory modalities. Mothers and children adapt their behaviors to the sensory modalities that are available for the interlocutor.

Communicative skills that characterize JA in typical development were identified. All children followed their mother’s attention-directing behaviors and shifted the focus of their (visual, auditory, and tactile) attention. They also produced different gestures with declarative and imperative functions, imitated their mother’s actions, and showed positive affect during shared use of objects. Six children produced conventional symbols and four of them had acquired language.

Results indicate that JA is present in the communicative interactions of children with MSI and that these are mainly multimodal. JA is not only a visual-auditory set of skills but a specific type of interaction that can be expressed multimodally through all sensory modalities.

**467**

## **Interventions on Mentalization and Interactional Competence in Early Childhood Education Context**

Jenny Marttila<sup>1</sup>, Ruben Fukkink<sup>2</sup>, Maarit Silvén<sup>1</sup>

<sup>1</sup>University of Turku, Turku, Finland. <sup>2</sup>University of Amsterdam, Amsterdam, Netherlands

### **Abstract (max 500 words)**

Studies show that adults’ competence to reflect on mental states (i.e. mentalization) positively predicts quality of adult-child interactions and child development. To date, however, evidence on professionals working in the early childhood education (ECE) context is limited. Two related intervention studies applied Video Enhanced Reflective Practice (VERP) to assess and promote Finnish ECE professionals’ attuned interaction (i.e. shared attention during reciprocal and intentional communication) and guidance (i.e. facilitation of children’s learning by offering high-quality support when needed). The main



question of Study 1 and 2 is: Does the VERP intervention improve pre-service and in-service professionals' reflections on mental states and interactional skills?

A qualified VERP trainer used video-recordings of the trainees' interactions with children to stimulate reflections on actions and mental states during three group-based shared review discussions. A coding scheme was developed to assess the target (child, self, colleague), type (cognition, perception, emotion, motivation), and richness of mental state utterances produced during the discussions. Self-reports on attuned interaction and guidance were collected before and after the training.

In Study 1, two groups of ECE professionals (N=6) with varying qualifications and work experience participated in the VERP training. The professionals equally discussed children's and adults' mental states during the group discussions. They talked more frequently about motivational states and used more often enriched talk when referring to themselves and their colleagues, and they talked more frequently about cognitive states and used less enriched talk, when referring to the children. The more attuned the professionals perceived their interaction with the children before training, the more frequently they referred to their own and colleagues' mental states. The professionals' talk about mental states and perceptions of interaction skills did not improve after the VERP training.

Study 2 was conducted on second-year undergraduates studying in a bachelor's degree program in early childhood teacher education. The data was collected during an online study module on children's language and literacy development and high-quality teacher-child interactions. The study module included evidence-based lectures, tutorials in group meetings, and independent work on practical assignments. Of the 110 ECE student teachers enrolled in the study module 21 volunteered to participate in the VERP training (N=7 groups). The trainer talked more about children's cognitive states at the third compared to the first discussion. Similarly, the students talked more about children's (enriched and non-enriched) cognitive states as well as their own cognitive states at the third compared to the first discussion. In addition, the students perceived their attuned interaction (but not guidance) skills higher after than before the VERP training.

Our studies used an innovative assessment of mental states and provided guidelines for group-based video-stimulated training for ECE professionals at different stages of their career. Particularly undergraduates seem to benefit from VERP training when combined with high-quality, evidence-based content and teaching methods. However, emotional talk was infrequent, which is in line with previous studies. A strong focus on emotional and cognitive states may strengthen pre- and in-service ECE professional development in future interventions.

**480**

## **From outcome to process: a developmental shift in judgments of rational reasoning**

Hanna Schleihauf<sup>1,2</sup>, Zhen Zhang<sup>3</sup>, Alissa Gomez<sup>4</sup>, Jan Engelmann<sup>4</sup>

<sup>1</sup>Utrecht University, Utrecht, Netherlands. <sup>2</sup>German Primate Center, Göttingen, Germany. <sup>3</sup>Chinese Academy of Science, Beijing, China. <sup>4</sup>University of California, Berkeley, Berkeley, USA

**Abstract (max 500 words)**

Whether someone is rational cannot simply be determined by whether they hold true or false beliefs (outcome), but by how they arrived at these beliefs (procedure). In this pre-registered study, we asked to what extent 4-5-, 6-7-, 8-9-year-old children, and adults from China and the US consider epistemic procedure and outcome in evaluating the rationality of an agent. Participants (N = 192) were introduced to two characters who tried to find their pet by using either a rational (e.g. looking for the pet's traces) or an irrational (e.g. using a spinning wheel) procedure that led them to either the right or the wrong conclusion. The participants were exposed to three conditions: In the outcome condition, we tested whether children have a preference for an individual who holds a true over a false belief. In the process condition, we investigated whether participants have a preference for an individual who uses a rational over an irrational procedure. Finally, in the process-vs.-outcome condition, we pitted outcome against procedure and tested whether participants prefer agents who use rational procedures but arrive at the wrong belief or agents who use irrational procedures but arrive at a true belief. 4-5-year-old and 6-7-year-old children from the US followed an outcome-oriented evaluation of rationality, while 8-9-year-olds and adults are focused on the rationality of the process. Chinese children demonstrated a preference for procedure-based evaluations already at age 6 and 7. Thus, culture might influence the development of rationality judgements.

485

**Maternal and Paternal Executive Function and Parenting Predictors of Executive Function in Preschool Children**

Vanessa Nathan, Louise Keown, Deborah Widdowson

The University of Auckland, Auckland, New Zealand

**Abstract (max 500 words)**

Drawing on the intergenerational transmission model of self-regulation, this study investigated parenting behaviour as a possible mechanism linking parent and child EF during early childhood. The aims of the study were to: 1) investigate the concurrent and longitudinal relationships between parent EF (mothers and fathers), and mothers' and fathers' parenting, and child EF, and 2) investigate the extent that maternal and paternal parenting mediated the link between parent EF and child EF. Only a few studies that have investigated the relationships between parental EF, parenting, and child EF during early childhood have included both mothers and fathers and examined these relationships longitudinally.

Participants included 70 mothers, fathers, and their 4-year-old children. At Time 1(T1), child verbal ability (BPVS; Dunn & Dunn, 2009), performance-based EF [composite of inhibitory control (IC) and cognitive flexibility (CF)] assessments were conducted with mothers, fathers, and children using the NIH Toolbox® Flanker Inhibitory Control and Attention Test and the Dimensional Change Card Sort (DCCS) tasks. Mothers and fathers rated their own EF using the Adult Executive Functioning Inventory (Adexi; Thorell et al., 2017) and their child's EF using the Childhood Executive Functioning Inventory (Chexi;

Thorell & Nyberg, 2008). Mothers' supportive presence, intrusiveness, and quality of assistance (QA) were coded from 10-min video recordings during mother-child puzzle tasks. Each parent reported their authoritative parenting practices and EF specific activities they engaged in with their children using the Home Executive Function Environment (HEFE) (Korucu et al., 2019), and parent-child closeness and conflict with the Child-Parent Relationship Scale (CPRS; Pianta, 1992). At Time 2 (T2), 9 months later, children's performance EF and parent-rated child EF (Chexi) were assessed again.

Results of hierarchical linear regressions revealed that after controlling for T1 child age and verbal ability, father authoritative parenting uniquely predicted T1 child EF, mother-child and father-child conflict uniquely predicted child EF at T1 and T2, and mother QA uniquely predicted T2 child performance EF. The results provide additional evidence for the importance of mothers' QA (e.g., scaffolding, verbal stimulation) for children's EF development during early childhood, whereas less authoritative paternal parenting and parent-child conflict (mothers and fathers) may hinder EF development. When parent self-reported EF was included in the models, mother-child conflict and father-child conflict uniquely predicted child EF at T1, while only mother-child conflict uniquely predicted T2 child EF, suggesting that parent-child conflict may mediate the association between parent and child EF. The results from bootstrapping analysis indicated that father-child conflict mediated the relation between parent and child EF at T1, while mother-child conflict mediated the link between T1 parent EF and T2 child EF.

The study findings provide support for the intergenerational transmission of EF through mother-child and father-child conflict during early childhood.

**486**

## **The role of the relationship with mother in predicting friendship stability in early adolescence**

Vilma Milašiūnaitė

Mykolas Romeris university, Vilnius, Lithuania

### **Abstract (max 500 words)**

Having a friend becomes especially important during early adolescence, so 90% of teenagers seek to have friends and maintain relationships with them (Hartup & Stevens, 1999). Friendships positively influence adolescent development when they last over a long period of time, but existing evidence suggests that friendships in early adolescence are more dynamic and changing than secure and stable (Nielson et al., 2020). About half of adolescent friendships dissolve (Meter and Card, 2016). When asked to recall a 5-year period, 86% of students in grades 6-8 indicated that they had experienced the breakup of a friendship (Flannery, 2017). Thus, despite the importance of friendship, a large proportion of friendships dissolve. Factors predicting the breakup of friendships in early adolescence is under researched area, but there are some evidence that peer victimization (Ellis and Zabatany, 2007), delinquent behavior (Hafen et al., 2011) and characteristics of relations with parents, e.g. negative relationships, parental psychological control, Dickson et al., 2018) predict friendship dissolution. The aim of the study is to identify factors that predict friendship dissolution.

The data used in the analysis is part of a larger long-term project " NAVIGATE: Navigating Through Secondary School: The Role of Friends and Parents". All students living in middle sized city in Lithuania were asked to participate in the study, thus a community sample was collected. In the beginning of the study, school administration permission was obtained, the consent of the parents of the students and the consent of the participants themselves were obtained. Students were asked to fill out the research questionnaire in the beginning and the end of the school year, during their class time. Students listed up to 5 friends, they also completed a self-report questionnaire consisting of scales on peer victimization (Crick, Grotpete, 1996), loneliness (Parker, Asher, 1993), shyness (Barstead et al., 2017), delinquent behavior (Bendixen & Olweus, 1999), parental ( i.e. mothers') psychological control (Barber et al. 2005), the quality of the relationship with the mother (Furman, Buhrmester, 2009) and the negativity of the relationship with the mother (Furman, Buhrmester, 2009).

The sample consists of 323 teenagers aged 9-14 years (average age 11.2 years). At the beginning of the school year, they all belonged to mutual friend dyads. Only 35% of the sample maintained friendships during one school year. A logistic regression analysis was performed with friendship dissolution as the dependent variable, and age, peer victimization, shyness, loneliness, delinquent behavior, parental psychological control, relationship quality and relationship negativity with ones' mother as predictor variables. A total of 323 cases were analysed, and the full model significantly predicted friendship dissolution (omnibus chi-square = 7.806, df = 2,  $p < 0,05$ ). The model accounted for between 9% and 96.2% of the variance in friendship dissolution, with 96.2% of the broken friendships successfully predicted. Overall, 64.9% of predictions were accurate. Coefficients and the Wald statistic with associated degrees of freedom and probability values for each of the predictor variables shows that only maternal psychological control and negative relationships with mother reliably predicted friendship dissolution.

**489**

## **Victims Out of Sync: How Disparities in Victimization Impact Aggressive behavior Amongst Adolescents**

Gintautas Katulis

Mykolas Romeris university, Vilnius, Lithuania

### **Abstract (max 500 words)**

Victimization in Europe is at its lowest among children and adolescents globally (Biswas et al., 2020). However, this seemingly positive achievement reveals a "healthy context paradox" (Garandau & Salmivalli, 2019). Research shows that victimized adolescents in classrooms with lower victimization levels report higher levels of somatic problems than those in classrooms with higher victimization (Gini et al., 2020). Possible explanations include self-blame, person-group dissimilarity, or personal traits that increase the likelihood of continued victimization (Schachter & Juvonen, 2015; Wright et al., 1986; Kaufman et al., 2018).

We propose a synthesis of existing perspectives. Previous research has linked self-perceived unpopularity to higher levels of behavioral problems (Cohen et al., 1993) and defensive behaviors to increased victimization (Joiner et al., 2001). This can lead to a self-fulfilling prophecy in which children who experience different levels of victimization compared to their peers may resort to coping mechanisms that result in further victimization. Our hypothesis is that children who are dissimilar in the extent of their victimization compared to their classmates will display higher levels of acting out behavior, which may lead to increased victimization.

To test our hypothesis, we employed the Group Actor Partner Interdependence Model (GAPIM) using MPLUS 8.4. Longitudinal peer nomination data from three time points over a school year were used. Students were asked to nominate classmates who were victimized (hit or pushed by others) and displayed acting-out behavior (disrupting class). Sample consisted of 772 students aged 9-14 (Mage = 11.3, SDage = 1.17; 49.83% girls) from 45 classrooms. We studied how the number of personal victimization nominations, the average number of victimization nominations in the classroom, the difference between the individual and classroom victimization levels, and the variation of victimization in the classroom at Time 1 affected acting out at Time 2 and victimization at Time 3.

Preliminary results show satisfactory model fit ( $\chi^2(38)=86.324$ , CFI=.969; RMSEA=.041[.029, .052]). Results suggest that victimization at Time 1 does not predict acting out at Time 2 ( $\beta=-.049$ ;  $p=.106$ ). However, being dissimilar to classmates in terms of victimization levels predicts higher levels of acting out at Time 2 ( $\beta=.164$ ;  $p=.001$ ). Having a higher average of victimization in the classroom at Time 1 predicts lower levels of acting out at Time 2 ( $\beta=-.114$ ;  $p=.000$ ). Additionally, higher levels of acting out at Time 2 predict higher levels of victimization ( $\beta=.141$ ;  $p=.008$ ) and higher dissimilarity to the classroom in victimization ( $\beta=.137$ ;  $p=.007$ ) at Time 3.

The results suggest that being different from classmates in terms of the level of victimization experienced can lead to a stronger reaction, such as acting out, which could in turn increase the likelihood of continued victimization. These findings are in line with the "healthy context paradox" and "person-group dissimilarity" perspectives, indicating that being victimized in an environment where it is prevalent may have a weaker effect compared to environments where it is rare.

**491**

## **Development and application of a program for promoting young children's positive peer relationships based on restorative approaches**

Seung-ha Lee, Hae-min Lee

Chung-Ang University, Seoul, Korea, Republic of

### **Abstract (max 500 words)**

Restorative approaches have been used for increasing children's positive behaviors as well as preventing bullying in schools. However, it has rarely been applied to young children. This study aimed to develop and apply a program for promoting positive peer relationships in early childhood.

For developing the contents of the program, previous restorative programs and social emotional learning programs for children were thoroughly reviewed. To validate of the contents of the program, depi method was conducted for 10 professionals. For application of the program, two classes in one kindergarten at Seoul, South Korea was approached. Forty children aged 5, their teachers and parents participated in the study; one class is an experimental group (N=19), and the other is a comparison group(N=21). The program was applied for seven weeks from May to July in 2022. To evaluate the effectiveness of the program, children's social behavior and restorative judgment were measured by teachers in experimental and comparison groups before and after the application of the program. A classroom observation was conducted only in an experimental group. Children, parents and the teacher in the experimental group were evaluated about the program.

The contents of the program were established as seven core elements(empathy, respect, forgiveness, responsibility, communication, restoration, and relationships) regarded as necessary for young children in restorative education and each element included several educational contents. For the experimental group, formal and informal classroom activities were developed: 12 integrated activities including games, storytelling, arts, and plays and 'circle' procedure were created. 8 Activities for parents to play with their children at home were developed and distributed to each family. For the comparison group, general social plays and games were provided.

The results showed that there were no significant improvements in social behavior and restorative judgments before and after applying the program both in the experimental and comparison group. However qualitative data provided meaningful findings. Through various activities, and circle time, children began to realize the importance of feeling, reading their/others' emotions, and listening to what others say. They gradually expressed their own emotion and understood others' emotions and intention, and the value of forgiving others' behaviors, which seemed to contribute to increasing a sense of community.

Depending on the type of play(activities), children's satisfaction differed. The number of children in one group for circle time, and gender of the children influenced the children's satisfaction of the circle time. The teacher reported improvement of children's emotional expression. Parents reported their increased understanding of children's pain or hurts in mind and usefulness of strategies for making good relationships with them.

This study showed that a social education program based on restorative approaches can be applied for young children. Restorative practices can be a useful way to help children's understanding of their emotions and behavior which may contribute to solving peer conflicts happening in the classroom. This study also suggests effective ways to apply restorative education in early childhood.

**501**

### **Promoting prosocial behaviors in primary school children: Results of the CEPIDEAS Junior Program in Colombia**

Federica Zava<sup>1</sup>, Liliana Uribe Tirado<sup>2</sup>, Marcela Garcia Ruiz<sup>2</sup>, Stefania Sette<sup>3</sup>, Giovanni Maria Vecchio<sup>1</sup>

<sup>1</sup>Roma Tre University, Rome, Italy. <sup>2</sup>Universidad San Buenaventura, Medellin, Colombia. <sup>3</sup>La Sapienza University, Rome, Italy

## **Abstract (max 500 words)**

### 1) Objective of the study

In childhood, prosocial behavior is paramount for the quality of interactions and relationships, being the basis of cooperation, solidarity, and social interdependence (Caprara et al., 2014; Eisenberg et al., 2015). The promotion of socio-emotional skills and responsible behaviors is particularly important in Colombia, where a difficult peace process is underway. From the perspective of SEL (CASEL, 2013), the CEPIDEAS Junior is a school-based intervention aimed at promoting individual and collective prosociality in primary school children, by including concepts related to prosociality in the curricular content. The main aim of this study was to evaluate the program's effects on primary school children's prosocial behavior. Moreover, the moderating role of the predisposition to forgiveness and children's social preference was explored.

### 2) Methodology

Participants were N = 334 children (90% born in Colombia, 10% in Venezuela) (M = 8.25 years, SD = .78, 40.7% girls; control group = 50.1%) from a lower-middle social stratum and their teachers. Using a multi-informant approach, Prosocial Behavior was measured by teachers' and peers' evaluations (Caprara et al., 1993), Forgiveness was self-evaluated (TFS: Berry et al. 2005), and Social Preference was rated by peers (Caprara et al., 1993). ANOVA's repeated measures were used to test differences in prosocial behaviors between the control and the intervention group to evaluate the program's effectiveness and gender differences. Moreover, regression models will be tested to verify the role of the predisposition to forgiveness and children's social preference on children's prosocial behavior.

### 3) Results

Results of ANOVA's repeated measures showed significant differences between the intervention and the control group. Specifically, the prosocial behaviors measured by teachers [F(1,299) 26.72; p<.001; h2 = .08] increased in the intervention group and decreased in the control group. The prosocial behaviors measured by peers [F(1,274) 4.50; p=.03; h2 = .01] remained stable in the intervention and decreased in the control group. Moreover, we expect that the disposition to forgiveness and children's social preference will have a moderating role.

### 4) Conclusion

Preliminary results reported some promising effects of the school-based program confirming the effectiveness of the CEPIDEAS Junior program in fostering prosocial behavior for primary school children in Colombia. Socialization practices that teach children positive ways to overcome conflicts can be particularly relevant in the Colombian social context, where promoting peaceful coexistence is one of the most important aspects of citizenship training (Herbolzheimer, 2016; Luego Kanacri et al., 2020). Moreover, we expect children with a higher predisposition to forgiveness, and more accepted by peers, will be more prosocial at T2. Implications for school intervention are discussed.

509

## Reading motivation differences between reading proficiency levels are dependent on gender for German second graders

Telse Nagler, Jelena Zarić, Fenke Kachisi

DIPF | Leibniz Institute for Research and Information in Education, Frankfurt, Germany

### Abstract (max 500 words)

**Objective:** Girls often show higher reading motivation than boys (Becker & McElvany, 2018). This effect is associated with gender role stereotypes, describing boys to be stronger in mathematics and science, and girls to be better and more interested in reading and writing (Meece, Glienke, & Burg, 2006). Apart from gender, reading motivation seems also related to reading proficiency already in early stages of reading acquisition (Vaknin-Nusbaum et al., 2018). More precisely, poor readers usually show lower reading motivation than typical readers (Morgan et al., 2008), even though reading motivation can increase during the school year through improvements in reading skills (Nevo et al., 2020). The aim of this study was to investigate whether motivational differences occur between reading proficiency levels depending on the gender for German second grade children.

**Methods:** N = 123 second graders (69 females, age: M = 8.13 years, SD = .35) completed a reading motivation questionnaire that assessed three scales (value of reading, literacy out loud, self-concept of reading; German translation of Marinak et al., 2015). In addition, word, sentence and text comprehension were assessed with a standardized German test (ELFE-II, a reading comprehension test for students from Grade 1 to 7, Lenhard et al., 2018).

**Results:** The data was analyzed using SPSS 29.0. Children were clustered according to their reading proficiency at word-, sentence- and text-level, resulting in two significantly different proficiency groups (see additional material). A 2x2-MANOVA with the factors reading proficiency and gender revealed a main effect for reading proficiency ( $F(3,117) = 5,693, p = .001$ ) as well as gender ( $F(3,117) = 5,219, p = .002$ ). Particularly, these results indicate that children with higher reading proficiency scored higher on the reading self-concept scale compared to children with low reading proficiency and girls showed higher value of reading than boys. Especially interesting is the interaction effect, showing reading proficiency effects to be dependent on gender ( $F(3,117) = 2,333, p = .039$ ): Only girls scored higher regarding value of reading and literacy out loud when they belonged to the group of better readers compared to the group of poor readers.

**Conclusion:** The presented effects could be explained by the tendency that girls are generally perceived as better readers through stereotypical attributions (cf. Becker & McElvany, 2018). As a consequence, high achieving girls may be eager to confirm the stereotype. In contrast, poor reading girls may depreciate the value of reading in order to protect their self-worth.



520

## Do different families show different mechanisms of change? Mixture regression analysis of parenting programs using individual participant data

Liina Björg Laas Sigurðardóttir<sup>1</sup>, Patty Leijten<sup>1</sup>, G.J. Melendez-Torres<sup>2</sup>, Sophia Backhaus<sup>3</sup>, Frances Gardner<sup>3</sup>

<sup>1</sup>University of Amsterdam, Amsterdam, Netherlands. <sup>2</sup>University of Exeter, Exeter, United Kingdom.

<sup>3</sup>University of Oxford, Oxford, United Kingdom

### Abstract (max 500 words)

**Objective:** Parenting programs are the main strategy used to prevent and reduce children's disruptive behavior, and yet we are still essentially in the dark about how these programs really work. Furthermore, current mean effect sizes for programs are moderate, and even the most well-established programs do not work for everyone. By clarifying how parenting programs work, it is possible to hone programs to target the mechanism more directly and effectively, and remove those aspects that do not affect crucial processes. One reason for the lack of progress in identifying the pathway by which parenting programs work might be that studies have collapsed across heterogeneous subgroups of families with differing mechanisms of response. Little is currently known about possible individual differences in the underlying mechanism behind parenting programs as the relatively few existing studies show inconsistent results, and are likely to have been underpowered to detect such effects. One way of achieving sufficient statistical power, as well as increased generalizability of findings across contexts and populations, is to pool data from different studies in an individual participant data meta-analysis. Instead of studying a uniform pathway, the present study aims to examine how parenting programs may work through different mechanisms for different families, using individual participant data from multiple parenting program trials to do so.

**Methods:** The study is part of a bigger individual participant data meta-analysis on randomized controlled trials of European parenting programs, for which the identification of trials has previously been completed (PROSPERO #CRD42022262594). Eligible trials were found through systematic literature searches in online databases and trial registries. The latest search update took place in August 2022. After identification of eligible trials, principal investigators were contacted and asked to share their data, fully anonymized. The combined total sample for the present study is expected to consist of approximately N = 2,400 families. Mixture regression analyses will be conducted in Mplus on the pooled dataset of harmonized data in order to identify different mediational pathways for the effects of parenting programs.

**Expected results:** We expect to find subgroups of families for whom the effects of parenting programs on children's disruptive behavior are mediated by different changes in parenting behavior. For example, we might find that for families who show the biggest decrease in children's disruptive behavior, the effect is explained by a decrease in harsh parenting, or that it is explained by an increase in positive parenting instead. Final results will be known in the spring of 2023.

**Conclusion:** Current approaches to studying how parenting programs work have given us limited insight into the mechanism behind these programs. Instead of studying a uniform pathway, the proposed study

aims to examine how parenting programs may lead to reduced disruptive behavior through different mechanisms for different families. By gaining insight into how programs might work for different families, it may be possible to improve effective program implementation and tailoring to individual families.

522

## New light on potential role of HMOs in infant behavior and motor development

Purva Rajhans<sup>1</sup>, Laura Florina-Krattinger<sup>2</sup>, Alexander Kurilshikov<sup>3</sup>, Siobhan Brushett<sup>4</sup>, Floor Pagters<sup>5</sup>, Fan Liu<sup>6</sup>, Sander van Leeuwen<sup>7</sup>, Soesma Jankipersadsing<sup>5</sup>, Jackie Dekens<sup>3</sup>

<sup>1</sup>Nestlé Institute of Health Sciences, Nestlé Research, Société des Produits Nestlé S.A., Lausanne, Switzerland. <sup>2</sup>Clinical Research Unit, Nestlé Research, Société des Produits Nestlé SA, Lausanne, Switzerland. <sup>3</sup>Department of Genetics, University of Groningen and University Medical Center Groningen, Groningen, Netherlands. <sup>4</sup>Departments of Genetics and Department of Health Sciences, University Medical Center Groningen,, Groningen, Netherlands. <sup>5</sup>Departments of Genetics, University Medical Center Groningen, Groningen, Netherlands. <sup>6</sup>Department of Pediatrics, University Medical Center Groningen, Groningen, Netherlands. <sup>7</sup>Department of Laboratory Medicine, Cluster Human Nutrition & Health, Unversity Medical Center Groningen, Groningen, Netherlands

### Abstract (max 500 words)

#### Objective:

Infancy is a critical period for brain maturation which is linked with achievement of behavioral and developmental milestones (motor, cognition, and language). Infants receive their source of nutrients primarily through maternal (human) milk (HM) which provides essential building blocks for developmental outcomes. Among HM nutrients, human milk oligosaccharides (HMOs) form the third most abundant solid component after lipids and lactose. There is growing evidence on the association of individual HMOs with cognitive development. However, most studies have focused on the role of single HMOs and have not investigated the impact of rich diversity of HMOs on infant behavior and motor, cognitive as well as language development. Thus, the aim of the present study was to explore associations of individual as well as HMO combinations with infant behavior and motor, cognitive, language development.

#### Methodology:

The association between HMOs and infant behavior was assessed in 195 infants. Additionally, the association between HMOs and motor development was assessed in a subset of 55 infants. All infants were exclusively breastfed for 2 months post-delivery. HM samples were obtained at 2 weeks, 1 month, and 3 months postpartum and 24 HMOs were quantitatively profiled using UPLC-FLD methodology. Infant behavior was measured using the Infant Behavior Questionnaire-Revised (IBQ-R) at 6, 9 and 12 months of age. Motor, cognitive & language development was measured using Bayley Scales of Infant

and Toddler Development (Bayley-III) at 6 & 12 months of age. A regression model approach was used to explore associations between HMOs and infant behavior as well as motor, cognitive & language development. Maternal net income, socio-economic status/maternal education, infant birth weight, gestational age, and infant gender were included as covariates.

### Results:

Increased concentration of LNDFH-I, 2'FL, 3'FL, LDFT, LNFP II (combination of specific fucosyllactose HMOs) were associated with a reduction in negative affectivity in infants at 9 months ( $p = 0.002$ ).

Additionally, we observed a positive association of individual HMOs with motor development in infants. More specifically, LNH ( $p = 0.003$ ) and DSLNT concentrations ( $p = 0.02$ ) were associated with overall motor skills (gross as well as fine motor) at 6 months of age; and 3'SL concentration were associated only with fine motor skills at 12 months of age ( $p = 0.02$ )

### Conclusion:

Our findings support the beneficial role of breastmilk HMOs in infant behavior and motor development. Higher levels of specific HMOs were linked with lower negative affectivity in infants at 9 months and with higher motor skills in infants at 6 and 12 months of age. Furthermore, the results indicate for the first time the association of an HMO combination of multiple fucosyllactose HMOs, on the reduction in negative affectivity, a developmental domain which is relevant for social behavior in infants.

536

## Identity processes and personal values in a sample of Italian adolescents

Dario Bacchini<sup>1</sup>, Concetta Esposito<sup>1</sup>, Mirella Dragone<sup>2</sup>, Grazia De Angelis<sup>1</sup>, Gaetana Affuso<sup>3</sup>

<sup>1</sup>University of Naples "Federico II", Naples, Italy. <sup>2</sup>University "Giustino Fortunato", Benevento, Italy.

<sup>3</sup>University of Campania "Luigi Vanvitelli", Caserta, Italy

### Abstract (max 500 words)

Objective of the study. Commitment, in-depth exploration, and reconsideration of commitment are considered the core processes involved in identity formation (Crocetti, 2017). Previous studies found that these processes are differentially associated with adolescents' adjustment, with the reconsideration of commitment, which represents the crisis-like aspect of identity formation, being negatively associated with several adaptive dimensions of personality. In the present study, we investigated the associations between identity formation processes and the system of personal values according to the circumplex Schwartz's theory of values (1992). Literature on this topic is still limited.

Methodology. Participants were 857 students (44.6% males; mean age 16.38; SD 1.61) attending the 10th and 13th grade of schools located in the metropolitan area of Naples (Italy). They were asked to complete the Utrecht-Management of Identity Commitments Scale (U-MICS; Crocetti et al., 2008),

consisting of 26 items assessing the identity processes in ideological and interpersonal domains, and the Portrait Values Questionnaire (PVQ, 21 items; Schwartz et al., 2001), assessing four dimensions of individual values: self-transcendence, conservation, self-enhancement and openness to change. Both a variable-oriented approach and a person-centered approach were applied to the three-factor identity model (Sugimura et al., 2019).

Results. Findings from the variable-oriented approach carried out through path analysis showed that values of self-transcendence and openness to change were positively associated with exploration-in-depth and commitment, whereas self-enhancement was associated with reconsideration of commitment. The person-oriented approach (i.e., identity status) revealed that openness to change was higher in individuals in diffusion and achievement status; self-enhancement was higher in the moratorium and searching moratorium status; self-transcendence was higher in achievement and foreclosure status (MANOVA with Sidak post-hoc, all  $ps < .001$ ). No significant differences emerged for conservation values.

Conclusion. Overall, these findings suggest that the complex interplay between personal values and identity formation is a promising field of research to understand how personal beliefs and values are involved in adolescent development.

**537**

## **The interplay between child sensitivity and early childhood quality in the prediction of environmental sensitivity in adulthood**

Yuanyuan Huang, Michael Pluess

queen mary university of london, london, United Kingdom

### **Abstract (max 500 words)**

Background: Environmental Sensitivity refers to the ability to register and process external stimuli (Pluess, 2015). People differ in their sensitivity with some more and some less sensitive. Highly sensitive individuals are generally more strongly influenced by contextual factors. However, one important question is whether all highly sensitive people react to environmental factors in the same way, especially given that up to 30% of the general population are highly sensitive (Lionetti et al., 2018; Pluess et al., 2018).

A growing number of empirical studies have shown that people differ in their degree of environmental sensitivity. What hasn't been taken into consideration yet is whether people differ not only in the degree of sensitivity but also regarding what they are sensitive to. More specifically, some individuals may be especially susceptible to adversity, some to positive experiences, some to both, and some to neither.

Taking the influences of both genes and environments into consideration, Pluess (2015) proposed that the interplay between a genetic predisposition for sensitivity and the quality of the early environment

shape the specific sensitivity of an individual. More specifically, an adverse early environment may lead to a high level of vigilant sensitivity (sensitive to negative factors), whereas an enriching environment to a high level of vantage sensitivity (sensitive to positive factors) in those that are genetically sensitive.

In the current study, we aimed to investigate the interplay between childhood sensitivity (as a marker of a genetic predisposition for sensitivity) and the quality of the childhood environment in the prediction of different dimensions of sensitivity in early adulthood. The hypothesis are shown below:

H1: Individuals that were highly sensitive in childhood are more likely to score higher on overstimulation or emotional reactivity in adulthood if they experienced a high level of childhood inter-parental conflict.

H2: Individuals that were highly sensitive in childhood are more likely to score higher on vantage sensitivity or social sensitivity in adulthood if they had a positive childhood environment.

Participants: 273 undergraduates (78.4% female) aged 18-26 years ( $M = 19.05$ ,  $SD = 1.32$ ) from the UK were included in the current study.

Measures: The revised Highly Sensitive Person scale (HSP-18) was applied to measure environmental sensitivity. The scale has six dimensions including overstimulation, social sensitivity, sensitivity to details, positive sensitivity, depth of processing and emotional reactivity (Pluess., et al, 2023). Childhood environmental sensitivity was measured retrospectively with an 8-item self-report Highly Sensitive Child in Childhood scale developed for this study. A 3-item short version of the Parental bonding instrument (PBI) was created to retrospectively measure participants' bonding with their caregivers. Finally, the children's perception of inter-parental conflict scale was applied to measure frequency of inter-parental conflict (Moura, dos Santos, Rocha, & Matos, 2010).

Analysis: Hypothesized interactions will be tested with hierarchical multiple regression models in R 4.2.2.

Results: All the data has been collected and analyses are currently on-going and will be completed in time for the conference.

**553**

## **The impact of attachment style, emotion regulation and interpersonal competence on problematic social media use**

Ioana Malina Ciobanu, [Mihaela Boza](#)

Alexandru Ioan Cuza University of Iasi, Iasi, Romania

**Abstract (max 500 words)**

Objective of the study is to identify whether attachment styles, difficulties in emotion regulation and interpersonal competence predict problematic social media use.

**Introduction.** The interest for the factors associated with problematic social media use has increased in the past years (Andreassen, 2015). One of the factors identified is the insecure attachment style (Eichenberg et al, 2017), in particular anxious attachment (D'Arienzo, et al, 2019), although Blackwell et al (2017) found that avoidant attachment is also associated with social media addiction. The difficulties in emotion regulation are associated with problematic use of social media networks (Marino et al, 2019). Misir et al (2020) show that online networks help individuals with limited social competences to feel connected and disinhibited, making the online social networks their the preferred mean of communication.

**Methodology.** The 200 participants (153 females) aged 18 to 65 ( $M = 23.65$ ;  $SD = 6.70$ ) were recruited on Facebook and Instagram and they answered four questionnaires online. The Relationship Style Questionnaire-RSQ (Griffin & Bartholomew, 1994), Difficulties in Emotion Regulation Scale-DERS (Gratz & Roemer, 2004), Interpersonal Competence Questionnaire-ICQ (Buhrmester et al, 1988) were used to measure the independent variables (attachment style, emotion regulation and interpersonal competence). The dependent variable, problematic social media use, was measured using The Bergen Facebook Addiction Scale-BFAS (Andreassen et al, 2012).

**Results.** The results show that the secure attachment style and the avoidant attachment style are not correlated with social media addiction, while anxious attachment style is positively correlated with social media addiction. Emotion regulation difficulties correlate with social media addiction, participants with a high level of emotion regulation difficulties will have a high level of social media addiction. The total score of interpersonal competence is not associated with social media addiction, but, two subscales of interpersonal competence, negative assertion and conflict management, are negatively associated with social media addiction, participants with difficulties in assertive communication and conflict management show higher levels of social media addiction. The mood modification subscale of social media addiction is negatively associated with interpersonal competence, participants with more interpersonal competence use social media less for mood regulation. The regression model indicated that anxious attachment style, emotion regulation and interpersonal competence predict social media addiction. The results are in line with previous studies.

**Conclusion.** The results show the importance of personal and socio-emotional factors in social media addiction. The need for external validation and acceptance from others, typical for the anxious attachment, difficulties of emotion regulation and trouble in stabilizing or changing own mood, challenges in connecting or communicating with others or inability to openly and directly convey personal likes and dislikes, limited conflict management skills, all increase the reliance on social media to compensate. The interventions to limit social media addiction should target these aspects of personal development.

**556**

**Asymmetrically self-righteous: the impact of moral identity, omission bias and loss aversion in moral judgment**

Mihaela Boza

Alexandru Ioan Cuza University of Iasi, Iasi, Romania

### **Abstract (max 500 words)**

Self-righteousness is a particular case of 'better than average' effect (Brown, 2012), a self-serving bias, which impacts judgments of moral behavior (Klein & Epley, 2016). People believe they are better than others in moral judgment and behavior, but this effect is more nuanced and asymmetrical depending on the situation. In immoral or loss situations, people believe they are less evil than others (Klein & Epley, 2017), but not necessary more moral (loss aversion in moral judgment). Moreover, people appreciate they would be less likely than others to commit immoral acts, but only slightly less likely than others to omit doing something moral (omission bias). Moral identity regulates moral behavior and judgment and interacts with situational factors in making moral decisions. Having a strong moral identity increases the probability of being self-righteous about morality, as it is an important part of self-image (Jordan et al, 2011). We assume that there is an interaction of omission bias, loss aversion and moral identity on the level of self-righteousness.

**Method.** 150 (122 females) participants aged 18 to 25 ( $M=20.9$ ;  $SD= 1.77$ ) were recruited online for this quasi-experiment. They received 4 dilemmas (2 with negative outcomes, 2 with positive outcomes) adapted from Tanner & Medin (2004), Ritov & Baron (1999) and then they filled the Self-Importance of Moral Identity Scale (Aquino & Reed II, 2002). After each dilemma there were two potential behaviors, one to act (commit) and one not to intervene (omit). Participants had to evaluate each of these behaviors on a Likert scale (ranging from 1= others to 10=self) on how likely they are to adopt the behavior compared to others (self-righteousness measure). Then, for each behavior, followed manipulation check items.

**Results.** ANOVA repeated measures show three main effects for type of dilemma, omission/commission and moral identity level and an interaction effect of type of dilemma x omission/commission. Participants show asymmetric self-righteousness considering that others are more likely to adopt certain behavior in negative framed dilemmas and when an act is being committed. Conversely, participants with higher level of moral identity consider that they are more likely to be the protagonist. The interaction effect show that for negative outcome dilemmas there are no significant differences in self-righteousness, while in positive dilemmas, participants consider they are more likely to not intervene. This show that the omission bias is very powerful, even in situations or decisions where there are no losses. In moral domain loss aversion is less impactful than omission bias.

**Conclusion.** Having a more internalized moral reference, in the form of moral identity, would increase the possibility of acting more morally in general, because it is important for the self. However, in dilemmatic situations, when the level of moral identification is unknown, and some action is required, it should be taken into account that the omission bias is taking precedence over the loss aversion and potential negative outcomes may occur from non committal attitude.

568

## Shared Knowledge and Stereotypes: Their Impact on Children's and Adolescents' Evaluations of and Bystander Reactions to the Exclusion of Immigrants

Ayşe Şule Yüksel<sup>1,2</sup>, Seçil Gönültaş<sup>3</sup>, Sally Palmer<sup>1</sup>, Luke McGuire<sup>1</sup>, Melanie Killen<sup>4</sup>, Adam Rutland<sup>1</sup>

<sup>1</sup>University of Exeter, Exeter, United Kingdom. <sup>2</sup>Ministry of National Education in Türkiye, Ankara, Turkey. <sup>3</sup>Bilkent University, Ankara, Turkey. <sup>4</sup>University of Maryland, Baltimore, USA

### Abstract (max 500 words)

As a result of ongoing migration, schools are becoming increasingly diverse, and school-aged immigrants are at risk of experiencing bias-based bullying and intergroup exclusion (Stevens et al., 2020). Bystanders, peers who witness exclusion, can serve as central actors to offset both the occurrence and effects of social exclusion (Salmivalli et al., 2011). Research shows that adolescents, compared to children, are more likely to evaluate social exclusion as acceptable. Adolescents focus more on group-related concerns (i.e., group functioning), and are less likely to show bystander reactions to intergroup exclusion given their increasing understanding of group dynamics and intergroup factors (Mulvey et al., 2016). Further, previous studies show that adolescents who focus on shared interests (e.g., music, sports) when making peer group inclusion decisions rather than shared ethnicity hold fewer stereotypes about outgroup members (Hitti & Killen, 2015). Yet, less is known about how these factors are related to developmental differences in the evaluations of, and bystander reactions to, intergroup exclusion from childhood into adolescence. This study examined how shared knowledge about certain peer activities as well as stereotypical perceptions about immigrants are related to children's and adolescents' evaluations of and bystander reactions to the intergroup exclusion of immigrant peers.

Data were collected from British children ( $n = 203$ ,  $M_{age}=9.38$ ,  $SD=.87$ , aged between 8-10) and adolescents ( $n = 231$ ,  $M_{age}=13.87$ ,  $SD=.80$ , aged between 12-15). Participants were introduced to a gender-matched group of British friends who participated in a school competition about music popular in Britain. Then they read a hypothetical exclusion scenario about a new student (i.e., Turkish immigrant peer) being left out of their team. We manipulated the shared knowledge held by the excluded immigrant peer (high vs. low - either they knew or didn't know about music popular in Britain, respectively). We measured participants' evaluation of and bystander reactions to the intergroup exclusion of the immigrant peer (e.g., "tell the team you want the new student to join"). We also measured participants' stereotypical perceptions about immigrants on competence (smart) and warmth (nice) dimensions.

Linear regression modeling was used to examine the relations between age group (children and adolescents), shared knowledge, stereotypic perceptions, and evaluations of and reactions to the intergroup exclusion of immigrants. Results showed that participants who were in the high compared to low condition for shared knowledge thought that their group was more likely to support them when they challenged the excluder. Participants also reported a higher likelihood of bystander challenging in the high compared to the low shared knowledge condition. Children reported a higher likelihood of bystander challenging reactions compared to adolescents. Participants who reported less stereotypical



perceptions about immigrants showed more bystander challenging. The present study has critical implications for the development of educational strategies that focus on adolescents' shared knowledge to reduce the exclusion of immigrants and promote inclusive bystander behaviors that challenge prejudice-based exclusion in globalized societies.

**577**

## **The Long-Term Influence of Maternal Sensitivity on Cognitive Abilities**

Jonathan Schmidt<sup>1</sup>, Gisa Aschersleben<sup>1</sup>, Anne Henning<sup>2</sup>

<sup>1</sup>Saarland University, Saarbrücken, Germany. <sup>2</sup>SRH University of Applied Sciences, Gera, Germany

### **Abstract (max 500 words)**

This study investigates the longitudinal impact of maternal sensitivity on cognitive abilities in a German sample. Often thought to be a critical precursor to secure attachment, sensitive parenting provides children with the means to actively engage with the world by offering them a secure base to explore from (Ainsworth, 1973). As such, parental sensitivity through infancy and childhood has been found to have a positive influence on a variety of developmental outcomes. Among those outcomes are cognitive abilities. Previous research has frequently focused on short- to mid-term effects, such as from infancy to early childhood. Long-term investigations hint at persistent effects, but are less common (Fraleley et al., 2013; Raby et al., 2015). The current study is trying to narrow this gap further by examining the effect of maternal sensitivity in childhood on cognitive development in early adolescence. Additionally, we explored the role childhood temperament might play in this association. There is some indication that temperament might function as a moderator on the influence of maternal sensitivity on other outcomes (e.g. Frick et al., 2018), as some studies have found the effects – beneficial or detrimental – of environmental factors to be more pronounced for children with certain temperamental characteristics. This type of interaction is commonly referred to as differential susceptibility (Belsky et al., 2007). Other research has presented results more in-line with a diathesis-stress model, which posits independent, potentially compounding effects of both environmental and constitutionally-based variables (e.g. Licata-Dandel et al., 2021).

The sample consisted of 109 German mother-child dyads at the first time point, during which maternal sensitivity and temperament were assessed when the children were 4 years old. The Emotional Availability Scales (EAS; Biringen, 2008) were used to code 5-minute long free-play sessions for maternal sensitivity, while temperament was measured using the Children Behaviour Questionnaire (CBQ; Rothbart et al., 2001). Cognitive abilities are currently in the process of being assessed as the children are now between 13 and 15 years old and are tested using the Culture Fair Test (CFT; Weiß, 2006) in hybrid online sessions.

We expect children of mothers with higher sensitivity to perform better on the CFT. We further expect temperament to have an influence on this association, but make no specific hypothesis regarding its direction, given the current state of research. Data for 109 participants on the first time points are present, while the assessment of the young adolescents and their mothers is still on-going. This study

could provide valuable insights into how both early environmental circumstances and more constitutionally-based factors can shape development even into adolescence.

581

## To Tolerate or Not to Tolerate: Theory of Mind Facilitates Children's Selective Norm Enforcement

Zhen Wu<sup>1</sup>, Wenxin Wang<sup>2</sup>, Hao Liu<sup>1</sup>

<sup>1</sup>Tsinghua University, Beijing, China. <sup>2</sup>Nankai University, Tianjin, China

### Abstract (max 500 words)

**Objective of the study:** This study investigated how theory of mind influenced 4-5-year-old children's norm enforcement in group contexts. Humans frequently punish norm violations as victims and as bystanders, and such norm enforcement is critical for enabling human cooperation and maintaining social order within the groups. As social norms typically emerge through interactions within groups and often vary across group boundaries, it is intriguing to examine how group contexts influence norm enforcement. The current study examined this issue in preschool children, aiming to offer insights into understanding its social-cognitive mechanisms, especially the role of theory of mind in the development of norm enforcement behaviors.

**Methodology:** We used a second-party Ultimatum game and a third-party punishment game to test children's norm enforcement behavior. Children could reject or accept unfair resource allocations in either an in-group or an out-group context; accepting the allocations resulted in the proposer and the recipient getting the tokens as proposed, whereas rejecting led to nothing.

**Results obtained:** (1) in the second-party game, children rejected the unfair allocations equally often, regardless of false belief theory of mind (FB ToM) ability or group membership; this showed that children were generally aversive to unfairness that harmed themselves. (2) In the third-party game, children without false belief theory of mind (FB ToM) punished unfairness at similarly high rates in both contexts. In contrast, children with FB ToM were more likely to tolerate and accept unfairness in the outgroup context than in the ingroup context.

**Conclusion:** ToM assists children to selectively enforce norms on ingroup members and tolerate certain violations within an outgroup, which has potential benefits for group cohesion and intergroup relations. Building on the early emerging and strong propensity to punish norm violations in general, the development of ToM shapes us to be more sensitive to group contexts and more selective in upholding retributive justice, ensuring that offenders receive a fair degree of punishment.

582

## **Attachment and Psychological Well-being among Young Adults: Examining the Mediator Role of Emotional Dependency in Romantic Relationships**

Buse Yavuz, Duygu Taşfiliz, Burcu İldeniz Tan, Dilek Şirvanlı Özen

Altınbaş University, İstanbul, Turkey

### **Abstract (max 500 words)**

The psychological health of young adults is an important research topic. Life-long development theories and studies state that individuals' fulfilling various developmental tasks throughout their lives contributes to their well-being. It is emphasized that successfully completing these developmental tasks in making a healthy transition to the next period is essential. One crucial developmental task in young adulthood is meeting the need for intimacy and healthy relationships. Although the age of marriage and having children has been delayed compared to previous generations, being in healthy romantic relationships in young adulthood is a determinant of the physical and psychological health of individuals both in the present and in the later periods of their lives. Studies examining the relationship between people's romantic relationship dynamics and dependency behaviors suggest that meeting the need for intimacy in a healthy way plays a protective role against emotional dependency; however, not meeting this need plays a risk factor for emotional dependency. In light of this information, this research aims to examine the mediating role of emotional dependency in the relationship between dimensions of attachment styles and the psychological well-being of young adults. Individuals who are 18-40 years old and currently in a romantic relationship or have had at least one romantic relationship in the past are targeted to participate in the study. The data is collected through online surveys including Emotional Dependency Scale (EDS), Experiences in Close Relationships-Revised (ECR-Revised), and Multidimensional Psychological Well-Being Scale. Data collection is in process. Data is expected to be available by May 2023. Within the scope of the study, it is aimed to reach at least 500 participants. It is expected that participants who obtain higher scores in the anxiety dimension of attachment styles will present higher scores in emotional dependency and; consequently, lower scores in the psychological well-being scale. The expected results of the present study are considered to contribute to our understanding of the roots and consequences of emotional dependency in young adulthood by expanding the literature. The implications of the present study are thought to help psychologists to plan interventions to boost the psychological well-being of young adults by improving their intimate bonds in their close relationships.

587

## **Rhythm and Prosocial Behaviour in Children: The effect of synchronous movement on generosity and perceived similarity**

Judit Sebok<sup>1</sup>, Natasha Kirkham<sup>1</sup>, Daniel Richardson<sup>2</sup>

<sup>1</sup>Birkbeck University of London, London, United Kingdom. <sup>2</sup>University of London, London, United Kingdom

### **Abstract (max 500 words)**

**Objective of the study:** Previous research has shown that synchronous movement between individuals can heighten prosocial feelings in children and adults (e.g. Fehr et al. 2008; Rabinowitch et al., 2015; Rabinowitch et al., 2017a, 2017b; von Zimmerman et al., 2018) However, although the adult research has been done in both live and in virtual/online environments, the developmental research has been done predominantly in live situations. The question remains whether prosocial behaviours can be induced in children using online or virtual partners. This sequence of studies explores the effect of virtually-induced motor synchrony, in a form of finger tapping, on generosity and perceived similarity in 9-to 11-year-old children.

**Methodology:** Sixty-three (33 male, 30 female) children participated in a computer-based experiment. Participants were introduced to a same-aged gender-matched peer shown on the laptop screen; the peer says they will be joining in the game. The children are asked to tap along to a bouncing ball on the computer using a keypress in one of two conditions (social; non-social). In the social condition they can see the same child also tapping along and in the non-social condition they just see the ball. A further third passive viewing condition was run to control for tapping but it did not offer any effects of interest. Generosity was measured using a coin share game, in which children had to decide how to share out coins between themselves and the same virtual peer (Rabinowitch & Meltzoff, 2017). There were three different sharing scenarios within this task, examining levels of generosity (generous vs non-generous; generous vs equal; non-generous vs equal). Perceived Similarity to the peer was measured using Rabinowitch and Knafo-Noam's (2014) similarity inventory.

**Results:** There were no significant main effects (age, gender, condition) on participants' generosity or similarity. There was a significant age by condition interaction on generosity ( $p=.039$ , *Figure1*) and a trend for significance on similarity ( $p=.098$ , *Figure2*). This was driven by 11-year-olds showing more generous behaviour ( $p=.05$ ) and higher rates of perceived similarity ( $p=.03$ ) in the Social condition than in the Non-social condition. There was also a gender by age effect on generosity ( $p=.045$ , *Figure3*); however, this did not interact with our synchrony manipulation of interest. A repeated measures ANOVA was performed to examine the effect of the different scenarios; this revealed a main effect of scenario ( $p < .001$ ), with children less likely to be generous to the peer when the decision was generous versus equal, than in the other two scenarios.

### **Conclusion**

Results showed that an online social synchrony task with a virtual peer increased generosity and perceived similarity in 11-year-olds when compared to a similar task without the social element. In addition, the type of scenario within the sharing task was important. If there was a chance to be equal (versus generous to the peer), the children were more likely to pick that. However, when the choice meant that the peer would get less than they themselves then they were more likely to be generous (regardless of condition).

592

## Assessing mentalizing abilities from toddlerhood to school age: A pilot study with the Italian version of the Theory of Mind Inventory-II (ToMI-II)

Antonia Lonigro<sup>1</sup>, Fiorenzo Laghi<sup>2</sup>

<sup>1</sup>Roma Tre University, Rome, Italy. <sup>2</sup>Sapienza University of Rome, Rome, Italy

### Abstract (max 500 words)

The objective of the current study was to carry out a first evaluation of the psychometric qualities of the Italian version of the Theory of Mind Inventory-II (ToMI-II; Hutchins et al., 2016), a parent report questionnaire designed to evaluate a wide array of social cognitive understandings in children from 2 to 12 years.

A sample of 231 ToMI-II forms was completed by primary caregivers (5% by fathers, 83% by mothers, and 12 % by both). To avoid dependent data structures, only one caregiver in each pair was included in the analyses. Thus, the final sample consisted of 206 caregivers. The mean age of children was 65.81 months (SD = 28.63 months; range = 24-130 months). Children were divided into three age groups (24-47 months, 48-71 months, and above 72 months). A subgroup of 71 mothers also completed the Internal State Language Questionnaire (ISLQ; Bellagamba et al., 2014), a parent report checklist assessing children's expressive mental state vocabulary.

The Cronbach's alpha values for ToMI-II Total Score ( $\alpha = .96$ ) and each subscale ( $\alpha = .79$  for Early Subscale;  $\alpha = .92$  for Basic Subscale;  $\alpha = .94$  for Early Subscale) confirmed the good internal consistency of the questionnaire. The concordance on the ToMI-II between two caregivers of the same child was examined in a subgroup of 19 caregivers by computing Spearman's rank correlation. Results from correlation on Early Subscale, Basic Subscale, Early Subscale, and Total Score were positive and significant,  $r = .53$ ,  $p < .05$ ;  $r = .65$ ,  $p < .001$ ;  $r = .79$ ,  $p < .001$ ;  $r = .74$ ,  $p < .001$ , respectively. When concurrent validity was analyzed, positive and significant associations between the ToMI-II scores and the ISLQ categories were found, with coefficients ranged from .41 to .61. To examine children's development of ToM abilities, a 3 (age groups) X 2 (gender) analysis of variance (ANOVA) was conducted for ToMI-II Total Score and for each subscale separately. A main effect of age group was found for ToMI-II Total Score,  $F(2,204) = 47.332$ ,  $p < .001$ ; Early Subscale,  $F(2,204) = 6.317$ ,  $p < .01$ ; Basic Subscale,  $F(2,204) = 51.705$ ,  $p < .001$ ; and Advanced Subscale,  $F(2,204) = 54.209$ ,  $p < .001$ , confirming growth in mentalizing abilities with age. A main effect of gender was found for ToMI-II Total Score,  $F(1,204) = 5.980$ ,  $p < .05$  and its subscales (Basic Subscale,  $F(1,204) = 5.247$ ,  $p < .05$ ; and Advanced Subscale,  $F(2,204) = 5.526$ ,  $p < .05$ ), excepted for Early Subscale. Results on gender differences confirmed higher ToM abilities among girls compared to boys. An interaction effect of gender and age was found for Basic Subscale,  $F(2,204) = 4.190$ ,  $p < .05$ , suggested an earlier development in girls than boys.

The results show that the ToMI-II has good psychometric qualities, proving to be a promising screening tool to assess mentalizing abilities in Italian children.

599

## Bullying acutely engages the stress and fear circuits in the adolescent brain

Birgitta Paranko<sup>1</sup>, Claire Garandau<sup>2</sup>, Kerttu Seppälä<sup>1</sup>, Jussi Hirvonen<sup>1,3</sup>, Christina Salmivalli<sup>2</sup>, Lauri Nummenmaa<sup>1,2</sup>

<sup>1</sup>Turku PET Centre, University of Turku, Turku, Finland. <sup>2</sup>Department of Psychology, University of Turku, Turku, Finland. <sup>3</sup>Department of Radiology, University of Turku, Turku, Finland

### Abstract (max 500 words)

**Objectives:** The aim of this study was to map neural circuits engaged while experiencing bullying as well as pleasant social interaction with peers in adolescents. Bullying is a prevalent worldwide phenomenon with drastic negative consequences to individuals. Despite advances in understanding the psychological and social consequences of bullying, the acute and sustained effects of bullying on the central nervous system are poorly understood. Here we characterised the functional neural responses to experience of simulated “virtual bullying” and test whether these responses are associated with the subjects’ victimization history.

**Methods:** A total of one hundred adolescents aged 11-14 years (50% males) will be recruited into the on-going study. Here we report preliminary results with 32 subjects. The subjects completed questionnaires related to their psychological wellbeing, friendships, and victimization, and underwent a ten minute functional MRI of the brain while watching 1<sup>st</sup>-person videos with aggressive, neutral, and prosocial behaviour directed at the subject in a school setting. The aggressive and prosocial content of the videos was rated by 260 adult subjects at each time point and these ratings were used in the GLM to predict neural responses to bullying and prosocial behaviour.

**Results:** Exposure to virtual bullying versus prosocial behaviour elicited consistent haemodynamic responses in neural circuits involved in negative affect and stress (amygdala, basal ganglia, thalamus, hippocampus and cingulate cortex), social information processing (insula, superior temporal gyrus) and occipital, primary somatosensory and motor cortex. No significant effects were found for the opposite contrast (prosocial behaviour vs bullying).

**Conclusions:** We show, for the first time, that exposure to bullying elicits large-scale acute activation in brain circuits modulating negative affect and stress. Strong activation in the somatosensory and interoceptive cortices also accords with the well-established somatic consequences of bullying. This knowledge will translate into crucial knowledge for developing novel bullying prevention programs as well as psychosocial interventions targeting the victims of bullying.

602

## Emotional Intelligence and Adolescent Risk Behavior: A Systematic Review.

Maria T. Sánchez-Lopez, Alberto Megias-Robles, Pablo Fernández-Berrocal

University of Malaga, Malaga, Spain

### **Abstract (max 500 words)**

Objective of the study: Risky behavior implies a series of negative consequences in people's lives as it poses a threat to well-being, health and safety. It is essential to search for those variables that can alleviate these effects. Its study becomes especially relevant in the period of the life cycle from pre-adolescence to early adulthood, as this is a period in which this behaviour is highly prevalent. Among others, one variable that has received special attention as a protective variable is emotional intelligence, that is, the ability to perceive, use, understand and regulate emotions. The aim of this study is to conduct a systematic review of the evidence available to date on the relationship between risk behavior and emotional intelligence in this population.

Methodology: The databases used were PsycINFO, Scopus and PubMed. A total of five articles were found, comprising a sample of 1901 participants aged between 13 and 19 years and measuring emotional intelligence through self-report instruments.

Results obtained: Emotional intelligence in adolescents was positively related to risk-prevention behaviours, while it was negatively related to all dimensions of risk behavior. A single study found a negative relationship between risk behavior and one of the emotional intelligence abilities, the interpersonal ability.

Conclusion: Future lines of research should focus on expanding the number of studies relating emotional intelligence and child and youth risk behaviors, as well as the use of objective measures of performance.

**604**

### **The Highly Sensitive Child and the relationship with the natural environment in children. A multi informant pilot study.**

Antonio Dellagiulia<sup>1</sup>, Annalisa Setti<sup>2</sup>, Alessandra Sperati<sup>3</sup>, Mirco Fasolo<sup>3</sup>, Maria Spinelli<sup>3</sup>, Francesca Lionetti<sup>3</sup>

<sup>1</sup>Department of Psychology - Salesian University of Rome, Rome, Italy. <sup>2</sup>School of Applied Psychology – University College Cork, Cork, Ireland. <sup>3</sup>Department of Neurosciences, Imaging and Clinical Sciences, University G. D’Annunzio, Chieti - Pescara, Italy

### **Abstract (max 500 words)**

#### **Introduction and research question**

A positive sense of connection to nature in childhood lead to several positive outcomes in different developmental domain, both physical and psychological (Chawla, 2020). Researches conducted on

children are consistent with those with adult that have found association with subjective well-being and lower level of stress. Children that may be particularly sensitive to the natural environment are highly sensitive ones, as captured by the individual trait of Environmental Sensitivity (Pluess et al., 2015). Due to their deeper processing of details and appreciation of positive environmental stimuli, they are likely to benefit more of the power of nature and to be more connected to the green environments, with positive implications for human wellbeing and for the natural environment too.

To the best of our knowledge, only one study investigated associations between Environmental Sensitivity and the green environment, and this involved university students (Setti, Lionetti, Kagari, Motehrway & Pluess, 2022). The aim of the present pilot study is to investigate associations between ES and the relationship with the natural environment in children. We hypothesize ES to be positively related to a variety of pro-environmental behaviors.

### **Methodology**

A sample of 39 children (56% female, Mage = 6.56; SD = 0.50; range = 6 – 7 years) and their primary caregivers (79% Mother; Mage = 41.72; SD = 4.73; range = 28 – 50 years) completed the following measures. The High Sensitive Child Scale (HSC) to assess Environmental Sensitivity, the Children's Environmental Attitude and Knowledge Scale (CHEAKS) to assess attitudes towards the green environment, namely verbal commitment for the environment, action for the environment and emotion toward it and the Revised Connection to Nature Index (CNI-R) scale.

### **Results**

According to children's report, ES was associated moderately with higher levels of verbal commitment for the environment  $r(37) = .33$ , whereas associations between ES and actual commitment and connection with nature were non relevant. A small association between ES in children and commitment for the environment was found based on parents' reports ( $r(37) = .16$ ). Moreover, according to parents, a higher ES was moderately associated with a higher actual commitment for the environment  $r(37) = .35$ , while the association between ES and connection with nature was small ( $r(37) = .23$ ).

### **Conclusion**

Our results confirm those conducted in adults suggesting positive associations between ES and the relationship with the natural environment. Importantly, these associations were found based on both parents and children's reports. Future studies should investigate potential underpinning mechanisms of these associations, including empathy or the family environment in relation to pro-environment behaviors. As children are currently ongoing a pro-environment intervention at school, by the time of the symposium changes in attitudes and behaviors after the intervention will be available.

**610**

### **Online intervention against bullying and cyberbullying: a systematic review.**

Elena Serritella, Andrea Guazzini, Annalaura Nocentini, Ersilia Menesini



University of Florence, Florence, Italy

### **Abstract (max 500 words)**

Countering bullying, cyberbullying and general violence among peers has assumed high relevance in past decades, both at the national and international school levels.

This evidence gave rise to numerous prevention projects that involved face-to-face educational actions and interventions that proved to be reasonably effective, with a reduced rate of perpetrated bullying and victimisation between 15% and 20% (see Hensums et al., 2022; De Mooij et al., 2020; Gaffney et al., 2019).

The majority of such interventions have been based on face-to-face contexts in the group class, and just recently some projects have exploited Virtual Environments and Information and Communication Technologies (ICTs) as prevention environments and preventive intervention tools for bullying and cyberbullying.

The current study aims to depict and present a systematic review of anti-bullying and cyber-bullying online interventions on adolescents. The review was conducted through three databases (PsycInfo, Scopus and Web of Science), using 4 clusters of keywords (i.e., environment (9 words like “online” and “digital”), intervention (6 words like “prevent\*” and “project\*”), phenomenon (7 words like “bull\*” and “cyberbull\*”), and target (5 words like “adolescen\*” and “teen\*”) in order to detect all possible application of ICTs and online tools that was used in such study area (e.g., web-app, serious game, virtual reality, artificial intelligence).

Using the PRISMA and the Cochrane method, a total of 60.000 articles were collected and, after a pre-screening, 20 articles were included in the review.

The study’s results have highlighted the existing online interventions against bullying, the characteristics of the used virtual tools and their effectiveness. To note how, especially in recent years, the focus of such online interventions has shifted from basic online activities (forums or e-learning systems) to dynamic and interactive ones (like online games) that take advantage of new technologies such as Virtual Reality and Artificial Intelligence.

Considering the importance of the topic and the relatively easy use of new virtual technologies, this field of study could be extended and further analyzed, empowering practitioners, policymakers, and administrators to positively exploit the digital transformation continuously taking place in schools of all levels.

**611**

**Exploring the link between young schoolchildren’s school connectedness and emotional wellbeing during the COVID-19 lockdown**

Peiyi Lin<sup>1</sup>, Chien-Ju Chang<sup>1</sup>, Shu-Hui Hsieh<sup>2</sup>, Miao-Ju Tu<sup>3</sup>

<sup>1</sup>National Taiwan Normal University, Taipei, Taiwan. <sup>2</sup>Academia Sinica, Taipei, Taiwan. <sup>3</sup>Fu Jen Catholic University, New Taipei, Taiwan

## Abstract (max 500 words)

### Objective of the study

Researchers found evidence of the effect of school connectedness on negative emotions during lockdown (Jones et al., 2022; Perkins et al., 2021; Thorsteinsen et al., 2021). Results were consistent across upper-elementary to high school students: those with stronger bonds to school were more positive. While younger schoolchildren were sometimes included in such studies, they were often part of a larger group across different ages—not to mention the fact that most studies obtained their information from parents or primary caregivers. In this submission, we present preliminary findings of ongoing data analyses of a larger study on the life experiences and emotional wellness of first and second graders confined at home during the COVID-19 pandemic. As gender differences were prevalent in COVID-19 related research on social emotions (Ishimoto, 2022; Mendolia, 2022), the study considered gender.

### Methodology

The target population of the study was 3,499 lower graders who participated in a longitudinal study that selected its nationally representative sample using the stratified two-stage probability-proportional-to-size (PPS) sampling method. The researchers obtained ethics approval and sent a web-based questionnaire—adapted from an existing international COVID-19 survey for children—along with informed consent via email and short message service to parents of the cohort children who were eligible. During the 11 days of data collection in August 2021, nearly 27 percent (941 of 3,499) of these children completed the questionnaire. The gender ratio of the respondents was approximately 1:1.

The questionnaire included 24 items that asked the respondents about their daily activities and emotional states. To help young schoolchildren with reading comprehension, audio read-alouds were made available. The researchers conducted exploratory factor analysis to investigate underlying factors and structural equation modeling (SEM) to explore the interrelationships among the factors.

### Results obtained

The factor analysis shows clear loadings into three factors. The researchers named these factors *positive (positive emotions)*, *negative (negative emotions)*, and *miss (the degree to which they missed school, which the researchers associated with school connectedness)*. Based on existing literature, Figure 1 shows the conceptual model of the interrelationships among the factors.

The fit statistics of a multi-group SEM controlling for pre-pandemic satisfaction showed a good fit,  $\chi^2 = 349.66$ ,  $df = 118$ ,  $\chi^2/df = 2.96$ ,  $p < .001$ , RMSEA = .065 (90% CI: .06 - .07), CFI = .90, SRMR = .06 (Hu & Bentler, 1999). Figures 2 and 3 show that the extent to which the lower graders missed school life was positively associated with negative emotions for both genders ( $p < .001$  for both), and negatively associated with positive emotions for girls ( $p = .039$ ,  $p < .05$ ) but not for boys ( $p = 0.23$ ,  $p > .05$ ).

## Conclusion

This study contributes to current research in two ways. First, it focused on first and second graders that were previously underrepresented. Second, it revealed that the relationship between school connectedness and subjective wellbeing was not the same for boys as it was for girls. The researchers will further explore whether the children's daily activities and other factors played a role in the differences.

612

## 'Prosociality' in Daily School Life and Early Adolescence Peer Aggression; A Multilevel Latent Profile Analysis Approach

Reout Arbel<sup>1</sup>, Mengya Xia<sup>2</sup>, Moti Benita<sup>3</sup>

<sup>1</sup>University of Haifa, Haifa, Israel. <sup>2</sup>University of Alabama, Tualoosa, USA. <sup>3</sup>Ben Gurion University, Beer Sheva, Israel

### Abstract (max 500 words)

Prosocial behavior is considered a mitigator of peer aggression perpetration, yet findings are not robust. Thus, there may be different types of prosocial behaviors, and these may have different consequences for aggression. Prosocial motivation is a key facet of prosocial behavior, which may change its consequences for aggression. Drawing on social determination theory (SDT) (Deci & Ryan, 2012), we aimed to typify profiles of prosocial behavior, based on daily engagement levels and motivations, characterizing low versus high aggressive youth.

The sample included 242 Israeli six-graders [Mage = 11.96 (SD = 0.18), 50% girls] and their teachers. Adolescents reported on daily prosocial engagement and their autonomous and controlled prosocial motivations for ten consecutive days. Teachers and adolescents reported on adolescents' overall aggression. We used multilevel latent profile analysis (MLPA) (Vermunt, 2016).

At the daily level (Level 1), we selected a 4-profile solution (Table 1, Figure 1). Profile 1 (39% of days), high prosocial autonomous, was characterized by high prosocial engagement and autonomous motivation and low prosocial controlled motivation. Profile 2 (13% of days), high prosocial bi-motivation, was characterized by high prosocial engagement and both motivations (prosocial, autonomous). Profile 3 (14% of days), 'average prosocial controlled', was characterized by average levels of prosocial engagement, low autonomous motivation, and high controlled motivation. Profile 4 (35% of days), 'low prosocial', was characterized by low prosocial engagement and motivations.

At Level 2, we selected a 4-class model; each Level 2 class was characterized by one dominant Level 1 profile (Table 2, Figure 2); (1) stable high autonomy (33% of adolescents); stable high bi-motivation (13% of adolescents); often average controlled prosocial motivation (16% of adolescents); often low prosocial motivation (40% of adolescents). Higher self-reported aggressive adolescents had the least chance to be in the stable high autonomy group. Higher aggressive adolescents based on teachers' reports had the

most chance to be in the often low prosocial group compared to stable high autonomy prosocial and stable high bi-motivation groups (Table 3).

Findings suggest several types of prosocial behavior in adolescents' daily lives create characteristic patterns among high and low aggressive youth. This calls for a holistic conceptualization of prosocial behavior and its links to aggression.

**613**

## **Acceptance of Disability in Students with Mild Intellectual Disabilities from the Perspective of Special Needs School Teachers**

Kunihiro Ikuta

Kobe University Graduate School of Human Development and Environment, Kobe, Japan

### **Abstract (max 500 words)**

**Objective of the study:** In recent years, the number of students with mild intellectual disabilities (MID) has increased in special needs schools in Japan. At these schools, it has been pointed out clinically that some students with MID have problems regarding the acceptance of disability. However, there are few studies on acceptance of disability for MID, and the actual situations in the schools are not clear. Therefore, this study investigates the difficulties of students with MID in accepting disability, and their adjustment processes from the teachers' perspective.

**Methodology:** For data collection, the one-on-one semi-structured interview method was utilized. Through interviews of 21 teachers, case samples were obtained from 48 students. The Modified Grounded Theory Approach (M-GTA), a qualitative research method derived from Grounded Theory Approach, was applied for the analysis. M-GTA is widely used in the psychology research to investigate transformative processes in Japan. As ethical considerations, we explained to the teachers that all personal information would be kept confidential and used only for the purposes of the study. After explaining the outline of the study, we obtained their written consent.

**Results obtained:** The result of the data analyses revealed that difficulties in accepting disability were divided into two concepts: the inability to accept the characteristics of one's own disability and the inability to accept the frame of institutional supports. Furthermore, the difficulty in accepting the frame can be divided into two aspects: high resistance to be categorised as having MID and partial refusal of those who reject concrete institutional support despite recognising MID. The three adjustment processes of students with MID were: 1) students with MID understand the characteristics of their disability, 2) they become less resistant to the classification of MID, and 3) they acquire the ability to use the institutional supports for people with disabilities. In these processes, the importance of building relationships between teachers and classmates was emphasized.

Conclusion: We empirically investigated the acceptance of disability of students with MID, which has only been pointed out clinically. By focusing on the teachers' viewpoint, it became possible to categorise difficulties in accepting disability in the field of special needs education.

Acknowledgements: We would like to thank Editage ([www.editage.com](http://www.editage.com)) for English language editing.

614

## Cognitive and emotional correlates of school performance in a low-middle SES Colombian adolescent sample

Laura Di Giunta<sup>1</sup>, Natasha Duell<sup>2</sup>, Liliana Maria Uribe Tirado<sup>3</sup>, Marcela S. Ruiz Garcia<sup>3</sup>, Clementina Comitale<sup>4</sup>, Alessia Teresa Virzi<sup>1</sup>, Chiara Riccioni<sup>1</sup>, Carolina Lunetti<sup>1</sup>, Giulia Gliozzo<sup>1</sup>

<sup>1</sup>Sapienza University of Rome, Rome, Italy. <sup>2</sup>North Carolina University, Chapel Hill, USA. <sup>3</sup>Universidad de San Buenaventura, Medellin, Colombia. <sup>4</sup>IRCCS Santa Lucia Foundation, Rome, Italy

### Abstract (max 500 words)

**OBJECTIVES.** Academic difficulties have been associated with school drop-out and employment difficulties in adulthood (Alexander et al., 2001), as well as higher externalizing and internalizing symptoms (e.g., McLeod et al., 2012). Addressing issues related to academic achievement is particularly important during adolescence, which has been identified as a critical period of development with important implications for school achievement (e.g., Leeson et al., 2008). In addition to cognitive abilities (e.g., intelligence or verbal and numeric abilities), students' emotion regulation affects their learning, engagement, and motivation (Jacobs & Gross, 2014). The influence of emotion regulation on adolescents' academic performance may be clarified by considering individual differences in adolescents' sensitivity to feedback (both positive and negative). Students regularly receive positive (e.g., praise) and negative (e.g., poor test scores) feedback at school. Adolescents' sensitivity to the feedback they receive in school likely affects their ability to regulate their emotions, and consequently, their academic performance.

The present study aims to examine the interaction between feedback sensitivity and emotion regulation with academic performance among Colombian students.

**METHODOLOGY.** The sample included 244 youths from low-middle SES Colombian families (57% girls, Mage =15,40 years, SD= 1,69). Feedback sensitivity was measured using the Behavioral Inhibition/Activation Scale (Carver & White, 1994). Emotion dysregulation was indexed using an average score of the difficulties with goal-directed behavior, difficulties with impulse control, nonacceptance of emotional responses, and limited emotion regulation strategies subscales of the Difficulties in Emotion Regulation Scale (DERS) (Gratz & Roemer, 2004). To measure emotion regulation, the emotional clarity and emotional awareness subscales of the DERS were averaged. Students' school records were also collected. Parents reported on their highest level of education.

**RESULTS.** First, we examined correlations between feedback sensitivity (reward and punishment sensitivity), emotion (dys)regulation, and school performance (Table 1). Second, we examined the contribution of demographic variables, including student gender and grade and parent education (step 1), of feedback sensitivity and emotion (dys)regulation (step 2), and of the interactions between feedback sensitivity and emotion (dys)regulation (step 3) on school performance (Table 2). It emerged that female students and students whose parents reported higher education demonstrated higher school performance. There was also a significant interaction between emotion regulation and reward sensitivity ( $B = .12$ ,  $SE = .05$ ;  $p = .05$ ). Students with both high emotion regulation and high reward sensitivity demonstrated significantly better school performance (Figure 1). There was also a significant direct effect demonstrating that low emotion dysregulation was associated with higher school performance ( $B = -.28$ ,  $SE = .06$ ;  $p < .01$ ). Punishment sensitivity was not associated with school performance.

**CONCLUSION.** This study addresses a gap in the literature by jointly examining feedback sensitivity, emotion regulation, and school performance in a population that is underrepresented in the scientific literature. Findings may be useful to educators working with youths who struggle with emotion regulation and may provide educators with new perspectives on how to structure the learning environment and cultivate non-cognitive skills such as emotion regulation strategies to support greater learning.

**615**

## **Gaming, peer involvement and emotional problems: A comparison between early adolescents with and without neurodevelopmental impairment**

Sevtap Gurdal, Sabina Kapetanovic, Emma Sorbring

University West, Trollhättan, Sweden

### **Abstract (max 500 words)**

#### Objective of the study

Among children and adolescents in Sweden, internet use, including gaming, has increased during the last decade. At the same time, professionals who work with children worry that adolescent gamers, particularly those who to a lesser degree interact with peers offline will experience poor psychosocial adjustment, including mental health problems. The aim of the study is to investigate the associations between adolescent gaming, peer involvement, and emotional problems over time and test whether the potential links differ between adolescents with and without neurodevelopmental impairment (NDI).

#### Methodology

The sample for analysis consisted of 1515 adolescents (50.5% girls) beginning the sixth grade ( $n = 781$ ) and seventh grade ( $n = 734$ ), respectively. Out of those,  $n = 231$  adolescents self-reported having a neurodevelopmental impairment, thus NDI, such as ADHD, autism, intellectual/emotional disability,

speech, or language impairment/communication disorder. A two-wave, cross-lagged model was used for analysis.

## Results

Results showed that T1 adolescent gaming was linked to higher T2 emotional problems, while higher T1 peer involvement was linked to less T2 gaming at Time 2. We found no moderation by NDI in these links. Adolescents who engage in higher levels of gaming activity seem to report more emotional problems over time. The frequency of gaming activity over time is however lower when adolescents engage in peer interactions offline. More focus on peer interactions outside of the context of digital media could be an important step in preventive work with adolescents with and without NDI.

## Conclusion

In conclusion, the present study showed that gaming is linked to fewer emotional problems over time, although high levels of emotional problems are linked to less gaming activity over time. These links and the mechanisms driving the associations are, however, different for adolescents with and without NDI. For adolescents without NDI, the link between emotional problems and gaming is reciprocal, meaning that high levels of emotional problems are linked to less gaming, while high levels of gaming are linked to fewer emotional problems over time. Furthermore, both higher levels of emotional problems and higher levels of gaming were linked to less peer involvement which is also an important mediating factor in terms of gaming and emotional problems in adolescents without NDI. Gaming relates to fewer peer interactions, which in turn relates to higher levels of emotional problems. Such findings indicate that peers play an important role in terms of adolescents' gaming activities as well as emotional health.

616

## **'She makes me feel guilty': Maternal guilt-induction and young adults' adjustment across cultures**

Gulsen Guldeste<sup>1</sup>, Athanasios Mouratidis<sup>2</sup>, Bart Soenens<sup>3</sup>, Andreas Heissel<sup>4</sup>, Jolene Van der Kaap-Deeder<sup>1</sup>

<sup>1</sup>Norwegian University of Science and Technology, Trondheim, Norway. <sup>2</sup>National and Kapodistrian University of Athens, Athens, Greece. <sup>3</sup>Ghent University, Ghent, Belgium. <sup>4</sup>University of Potsdam, Potsdam, Germany

### **Abstract (max 500 words)**

**OBJECTIVES.** While some parenting practices, like parental warmth and rejection, have universal implications, others, such as guilt-induction (i.e., a relational form of psychological control) remain in a gray area. Especially, the role of culture in how parental guilt-induction relates to offspring's (mal)functioning is a debated issue. The present study aimed to contribute to this debate by investigating cultural variations in young adults' need-related experiences and their emotion regulation

in response to maternal guilt-induction. Of special interest is the moderating role of maternal warmth in these relations.

**METHODOLOGY.** In this vignette-based experimental study, participants from Germany (N = 88; Mage = 22.94; 82% female), Greece (N = 161; Mage = 21.42; 80% female) and Turkey (N = 103; Mage = 20.91; 73% female) were randomly assigned to one of three vignettes depicting maternal autonomy support, guilt-induction with warmth or guilt-induction without warmth. Participants reported on their autonomy, competence and relatedness satisfaction and frustration, and their emotion regulation strategies (i.e., cognitive reappraisal, emotion suppression, emotion dysregulation, and integration) in response to the vignette.

**RESULTS.** Multivariate analyses showed that vignette condition and participants' country had significant effects and interacted in the prediction of the need-related experiences. Participants in the autonomy support condition reported higher autonomy, competence and relatedness satisfaction and less frustration compared to the other two conditions, which did not differ. Across conditions, Turkish participants reported more need satisfaction and less need frustration compared to their Greek and German counterparts. Participants' country moderated between-vignette effects such that only Turkish participants reported higher autonomy satisfaction as well as higher competence frustration in response to guilt-induction in the presence (versus absence) of warmth. Turkish participants also reported higher autonomy, competence, and relatedness satisfaction in the guilt-induction with warmth condition compared to the Greek and German ones. Another multivariate analysis revealed that vignette condition and participants' country had significant main effects, but their interaction was not significant in the prediction of young adults' emotion regulation. Guilt-induction with warmth and without warmth vignette conditions did not differ in terms of emotion regulation, whereas there were differences with autonomy support condition.

**CONCLUSION.** This study points to the involvement of both universal and culture-specific processes and suggests parental warmth as an important mechanism in cultural variations in the relations between guilt-induction and offspring's functioning.

**617**

## **Self-defining memories of adolescents and adults: topics and relations to values**

Pirko Tõugu, Anni Tamm, Tiia Tulviste, Henriette Uustalo

University of Tartu, Tartu, Estonia

### **Abstract (max 500 words)**

Self-defining memories are memories of unique one-time experiences that are often emotionally laden, personally significant, and provide an example of significant concerns or topics (Singer, et al., 2012). Values are motivational goals that guide people's everyday life (Schwartz et al., 2001). Prior studies have shown that people in different stages of life report self-defining memories of different topics (e.g., DeVries et al., 1995) and the provided memories may have different qualities (e.g., Singer, Rexhaj, &



Baddeley, 2007). Also, personal values undergo some change throughout the years (Borg, Hertel, & Hermann, 2017). The present study focuses on the self-defining memories reported by adolescents and adults with the aim to establish the similarities and differences in the topics and characteristics of the memories and the possible links to respondents' value orientations.

The sample consisted of 500 people (25% men; 75% female) who filled in the online questionnaire. Two hundred and ten were adolescents (aged 16 – 19), 120 young adults (aged 20 – 34), 113 middle-aged adults (35 – 49), and 59 late adults (aged 50+). Parental consent was obtained for adolescents; participation was voluntary, and data collected anonymously (the procedure was approved by the University of Tartu ethics committee).

Respondents were asked to write an account of one of their self-defining memories and provide an assessment of (1) how sure they were the memory was correct; (2) how often they thought about the memory and (3) how often they talked about the memory. They also filled in the Portrait Values Questionnaire (Schwartz et al., 2001). The topics of the memories were identified as descriptions of a) life-threatening events and accidents; b) having fun and participating in leisure activities; c) relationships; d) achievements; e) doing right or wrong; f) life-changing events (based on an adapted coding scheme by Thorne & McLean, 2001).

The age group of the respondent was not related to the main topic of the memory. At the same time, adolescents seemed to have more resounding memories as they reported being more certain of the memory content, thinking, and talking about the memory more often than some adult groups. In further analyses, certain types of memory topics are expected to be linked to certain value categories (e.g. achievement memories to self-enhancement values).

Unlike other studies, the present study found that the topics of self-defining memories are not significantly different across different age-groups. Yet, age differences appeared in the characteristics of memories. Values and memories are two facets of human experience that reflect aspects significant to the self. The present study hopes to link the two across a notable age range and show how both contribute to the topical concerns pivotal to self.

**618**

## **Does the general notion of "developmental disorders" within Japanese society result in stigma?**

Aya Taniguchi

Konan university, Kobe, Japan

### **Abstract (max 500 words)**

#### **Objective of the Study**

The worldwide notoriety of the stigma towards developmental disorders is undeniable. In Japan, the umbrella term "Developmental Disorders" encompasses various diagnoses, including autism, and is widespread. Studies have revealed that the broad categorization of mental illness fosters prejudice (Corrigan et al., 2000), and this may be the case for developmental disorders as well. This study endeavors to construct a scale to quantify societal attitudes towards developmental disorders and to examine their relationship with the stigma.

## Methodology

All studies were conducted among individuals who lacked specialist knowledge of developmental disorders. Studies 1 to 4 were carried out online by research companies from January to August 2021. Creating items A total of 347 university students (mean age = 19.60,  $SD = 1.17$ ) were polled regarding their perceptions of developmental disorders. 47 items were created by grouping related content. Procedure Participants rated the extent of agreement with each statement about developmental disorders using a 7-point scale.

## Results obtained

**Study 1:** Investigated the Factor Structure of the "Developmental Disorders" Notion Scale using 1438 individuals (mean age = 40.12,  $SD=10.68$ ). An exploratory factor analysis with robust maximum likelihood and geomin rotation was conducted, resulting in a 32-item, three-factor structure (State Image/Social Segregation; Confusion with Physical and Intellectual Disorder; Affirmation of Ability and Social Comprehension)(Table 1). Substantial internal reliability was established for each sub-scale.

**Study 2:** Confirmed the factor structure of the scale using 717 participants (mean age = 39.84,  $SD = 10.64$ ) with confirmatory factor analysis. The model was deemed acceptable with a goodness of fit index of CFI = .821, RMSEA = .059, and SRMR = .084.

**Study 3:** To evaluate construct validity, relationships between knowledge, contact experience, and Disorder perspective were investigated in 476 subjects (mean age = 40.46,  $SD = 10.79$ ). Contact experience was assessed using a six-item, two-part scale adapted from Nakamura et al., (2002) and Kikuchi (2011). Knowledge was measured using ten items from Murakami et al., (2020). Attitudes towards individuals with disorders were measured using the Kawachi(1990) six-item scale using a 6-point method. Correlation coefficients were computed, and the relationships were largely consistent with prior research findings (Table 2).

**Study 4:** The causal relationship between perceptions of developmental disorders and stigma towards children with developmental disorders was explored through the cross-delay model. The stigma was based on the Japanese version of the Link Stigma Scale (Shimotsu et al., 2006), and nine items were used. The hypothesis that "Developmental Disorders" Notion Scale scores would impact stigma was tested. Models were created for each sub-scale, and causal relationships were examined. Across all sub-scales, the model was significant, but the only significant path from the Time 1 developmental disorder notion to the Time 2 stigma was found only in the State Image/Social Segregation ( $\chi^2=3.671$  ( $df=1$ ,  $p=.055$ ), CFI=.992, RMSEA=.098;  $\beta=.14$ ,  $p < .05$ ;Figure1).

## Conclusion

The results of this study indicate that the developmental disorders notion affects the stigma. Modifying general notion about developmental disorders is deemed crucial in alleviating the stigma.

619

## How do young adults in Czechia, Slovakia, Hungary, and Poland perceive their current lives? Preliminary results from a comparison study

Ilona Skoczeń<sup>1</sup>, Wanda Zagórska<sup>1</sup>, Anna Lipska<sup>1</sup>, Katarína Millová<sup>2</sup>, Veronika Kohútová<sup>3</sup>, Blanka Balogh<sup>4</sup>, Anna Lőrincz<sup>5</sup>, Laura Szabó<sup>5</sup>

<sup>1</sup>Cardinal Stefan Wyszyński University, Warsaw, Poland. <sup>2</sup>University of Ostrava, Ostrava, Czech Republic. <sup>3</sup>Trnava University, Trnava, Slovakia. <sup>4</sup>Budapest University of Technology and Economics, Budapest, Hungary. <sup>5</sup>Eötvös Loránd University, Budapest, Hungary

### Abstract (max 500 words)

In developed societies, the age between 18 and 29 years is often a period of constant change when young people do not yet make long-term choices or decisions. Arnett (2000) proposed a concept of „emerging adulthood” as a new phase in life that is related to the transition period from adolescence to adulthood during which social moratorium and process of identity formation occur. Although extensive studies have been carried out in other countries, still little is known about the experiences of emerging adults from Central and Eastern European cultural contexts (Buhl & Lanz, 2007). Therefore, we have attempted to examine this phenomenon of emerging adulthood in Czechia, Slovakia, Hungary, and Poland - Central and Eastern European countries that experienced many changes of a socio-political and economic nature in the last three decades.

In total 6,034 randomly assigned participants between the ages of 18 and 29 (Mage = 22.75; SD = 2.73), mainly students representing various professional and social backgrounds, took part in this study. The Inventory of the Dimensions of Emerging Adulthood (IDEA; Reifman et al., 2007) was used to assess five emerging adulthood characteristics. Participants were asked to describe the extent to which they consider their current life is a time of: Identity exploration, e.g. “learning to think for yourself”, Experimentation/possibilities, e.g. “trying out new things”, Negativity/instability, e.g. “many worries”, Self-focused, e.g. “focusing on yourself”, Feeling in-between, e.g. “feeling adult in some ways but not others”. The IDEA also includes a supplementary scale called Other-focused (3 items, e.g. “responsibility for others”). Responses are given on a Likert-type scale ranging from 1 (strongly disagree) to 4 (strongly agree).

The results have shown that overall emerging adults achieved the highest score in Experimentation/possibilities and the lowest score in Other-focused. Differences between countries were also found in all six dimensions of emerging adulthood. Identity exploration, Experimentation/possibilities, and Feeling in-between were the highest in the Hungarian sample, and Negativity/instability scores were the highest in the Slovak sample. Further results will be presented and possible explanations will be discussed during the conference presentation.

620

## The Development of Gender Stereotypes in Warmth and Competence among Chinese Preschool Children

Yiqing Dai, Xinming Ma

Tsinghua University, Beijing, China

### Abstract (max 500 words)

Warmth and competence are two key dimensions that influence adults' understanding of social groups. People generally hold gender stereotypes that associate males with high competence but low warmth, while females with high warmth but low competence. The current study examined gender stereotypes in warmth (sharing and empathy) and competence in Chinese preschoolers.

Study 1 examined the development of gender stereotypes in warmth and competence in children aged 4-6, using expected levels of sharing behavior and task completion as indicators respectively. The 3 tasks are 1) separate evaluation task (6-point Likert Scale, e.g. 'He/she has five cookies and could share with you, how many of these do you think he/she would share'); 2) gender forced-choice task (e.g. 'If these two had the same number of cookies to share with you, which do you think would share more') and 3) self-evaluation task (e.g. 'If you had some cookies to share with someone else, how many would you share'). Results from the current data (n=50) found that 1) girls aged 4-6 tend to increasingly believe males as being more competent than females with age; 2) girls tend to develop gender stereotypes earlier than boys, and their self evaluation on competence is closely related to the evaluation of their own gender; and 3) compared with separate evaluation task results, children showed more obvious gender stereotypes in the forced-choice task.

Study 2 focused separately on empathy under the dimension of warmth, including the emotional empathy, cognitive empathy, and behavioral empathy of these participants. We explored the explicit gender stereotypes by asking children to guess the gender of the protagonist. These stories are adapted from the Empathy Questionnaire (Rieffe et al., 2010) which measures 3 facets of children's empathy. Take one story adapted from item under emotional contagion as an example: 'When another person cries, the protagonist gets upset too. Guess whether the protagonist is a man or woman.' We recorded the proportion of relevant trials on which children linked empathy with females. Results of the current data (n=50) revealed that 1) boys generally hold more obvious gender stereotypes that associate females with emotional empathy only; 2) within behavioral empathy, boys' choices favor females in aspects of empathetic concern, while favor males in aspects of problem-solving. This also supports gender-role stereotypes; 3) from 4 to 6, boys' explicit gender stereotypes in emotional empathy tend to decrease, which may be attributed to the different development trajectories of explicit and implicit gender stereotypes.

This research reveals the early development of gender stereotypes in warmth and competence among Chinese preschool children, and we also introduce an innovative measure of empathy stereotype. These results could provide guidance for interventions in gender stereotypes in early education.

621

## Measurement Invariance across Fathers and Mothers' Reports of Maternal Gate Opening and Closing Behaviors, in a Sample of Portuguese Families.

Lígia Monteiro<sup>1</sup>, Marília Fernandes<sup>2</sup>, Carla Silva<sup>3</sup>

<sup>1</sup>Instituto Universitário de Lisboa (Iscte); Cis-iul, Lisboa, Portugal. <sup>2</sup>ISPA-Instituto Universitário; WJRC, Lisboa, Portugal. <sup>3</sup>CICPSI, Faculdade de Psicologia, Universidade de Lisboa, Lisboa, Portugal

### Abstract (max 500 words)

Maternal gatekeeping is one dimension of the coparenting relationship, and it has received increased interest due to its influence in the quality of fathers' relationships and involvement with their children (Schoppe-Sullivan et al., 2015). Different views of maternal gatekeeping can be found in the literature, but most contain the idea of gate closing (behaviors that discourage fathers' active involvement in parenting), and gate opening (behaviors that encourage father involvement and high-quality father-child relationships) (Lee et al., 2019; Schoppe-Sullivan et al., 2015). The aim of this study was to analyze, in a sample of Portuguese fathers and mothers, measurement invariance across both parents' reports of maternal gate opening and gate closing behaviors (Schoppe-Sullivan et al. (2015).

Method: Participants- 335 fathers and 367 mothers from nuclear families, with pre-school age children (45% girls), participated in the study. Both mothers and fathers' education levels ranged from secondary to university level, all parents worked. Instrument- Based on Schoppe-Sullivan et al. (2015), we used nine items to assess maternal gate opening, and nine items to assess maternal gate closing, retrieved from the Van Egeren's (2000) Parental Regulation Inventory. Parents also reported on a sociodemographic questionnaire.

Results- (see annex) First a Confirmatory Factor Analysis (CFA) was conducted using the two-factor structure (gate opening and gate closing) of the Schoppe-Sullivan et al. (2015). After that, measurement invariance across mothers' and fathers' reports on maternal gatekeeping was tested. CFA analyses were performed using AMOS 23 software, and Maximum Likelihood was used for estimation. The configural model presented an acceptable model fit, however three items (one for the gate opening and two for the gate closing) had to be dropped since they had low factor loadings for both mother and father (RMSEA = .08, CFI = .90). Mother and father reports on maternal gatekeeping were invariant at a configural level (RMSEA = .05, CFI = .91). Invariance metric was also achieved ( $\Delta CFI < .01$ ), meaning factor loadings for father reports of the maternal gate opening and gate closing were not variant. Scalar invariance was partial reached with four items presenting different means (two for the gate opening and two for gate closing). (See figures 1 – fathers, 2 – mothers; 3 -total sample). Results will be discussed focusing on the importance of validating instruments for the study of father involvement.

624

## Mental well-being among university students: a cross-country survey

Michela Bersia<sup>1,2</sup>, Emanuele Koumantakis<sup>1,2</sup>, Lorena Charrier<sup>1</sup>, Paola Berchiolla<sup>3</sup>, Paola Dalmasso<sup>1</sup>, Rosanna Irene Comoretto<sup>1</sup>

<sup>1</sup>Department of Public Health and Pediatrics, University of Torino, Torino, Italy. <sup>2</sup>Post Graduate School of Medical Statistics, University of Torino, Torino, Italy. <sup>3</sup>Department of Clinical and Biological Sciences, Orbassano, Italy

### **Abstract (max 500 words)**

**Introduction:** It is known from the previous literature that the university period is characterized by various social, psychological, academic, and lifestyle-related risk factors that can lead students to experience mental health problems such as anxiety and depression. Furthermore, the ongoing pandemic due to the SARS-CoV-2 infection, with the measures implemented by the governments aimed at curbing its spread, could lead to multiple consequences that can have a meaningful psychological impact on them. This study provides an in-depth assessment of psychophysical well-being among university students from three European countries (Italy, Spain, and Portugal). The investigation of psychophysical well-being in three Mediterranean countries sharing similar cultural heritage can enforce validity to the obtained results and provide a geographically less limited cross-section of the phenomenon.

**Methodology:** The project will involve all students from the Universities of Torino, Seville, Lisbon, and Lusófona, regardless of the course of study. Data will be collected through an online survey which each student can access through a personal link during the academic year 2022/2023. The survey will collect data about socio-demographic characteristics, gender conformity, and psychological well-being using validated questionnaires, such as the Multidimensional Scale of Perceived Social Support, the Patient Health Questionnaire-4, the Suicide Behaviours Questionnaire and the Mental Health Continuum-Short Form and the Effort-Reward Imbalance Questionnaire. The survey will be implemented using an electronic case report form on the REDCap application of the University of Torino.

**Expected results:** The survey will provide a cross-sectional picture of student well-being in three European Mediterranean countries as they differ in college organization, infrastructure, number of international students, grading systems, etc. We expect to find correlations between the level of well-being and the various aspects of society in these three countries. More specifically, we expect to find a positive association between gender nonconformity and the scores of the Effort-Reward Imbalance Questionnaire, accounting for a higher effort-reward ratio compared to gender-conformed people. It could be seen independently from the levels of mental problems. Furthermore, independently of the country involved, we expect differences in students' mental risk among degree courses: in particular, as suggested by other researchers, medical students seem to be more prone to suffer from the stressful university experience. In fact, medical training has been recognised as a highly stressful experience for medical students.

**Conclusion:** The project will generate evidence with a valuable impact on several stakeholders. First, students can benefit from the results of this project: the knowledge of the main risk factors related to youth mental well-being will enable them to pay special attention to these aspects and address them most effectively. Second, as an assessment of the student's psychological well-being will be carried out, the project will support university policymakers in planning interventions to improve students' mental well-being. Finally, physicians will benefit from the project findings since new evidence will be generated

in the mental health field. From the public health perspective, this is essential because of the high prevalence of stress among students.

**627**

## **Frustrated easily? Let's get into your childhood: Mediating effect of emotion regulation between childhood traumas and frustrative non-reward**

Sema Nur Toker, Kübra Berber, F. Cemre Yavuz Şala, Ecem Çiçek, Neslihan Güney Karaman

Ankara University, Ankara, Turkey

### **Abstract (max 500 words)**

#### Objective

Childhood traumatic experiences affect individuals' social, cognitive, physical, and behavioral developments in the short and long term. Individuals who are exposed to abuse and neglect might develop psychopathologies such as depression (Afifi, et al, 2006; Becker and Grilo, 2011), and anxiety (McLaughlin et. al, 2010; Hovens et. al,2010). Child abuse and neglect also might affect individuals' emotion regulation processes (Burns, Jackson, Harding, 2010; Alink et. al. 2009). Emotion regulation capacity develops at early ages and is affected by children's social environment, hence emotion regulation capacity of individuals exposed to trauma is adversely affected. Emotion dysregulation is associated with borderline personality disorder (Rosenthal, 2015), eating disorders (Burns et al. 2012), and depression (Brockmeyer, 2012; Garnefski and Kraaij, 2006; Ehring et. al. 2008). Emotion regulation, which plays a mediating role in reducing the effects of childhood traumatic experiences such as depression and post-traumatic stress in adulthood (Hopfinger et.al, 2016; Burns et. al. 2010), is a key variable in preventing the development of post-traumatic symptoms and psychopathology.

Frustrative non-reward refers to negative reactions or reduced motivation following prevention or withdrawal of reward (Sukhodolsky et.al. 2016, Wright, Lam & Brown, 2009). It is a common experience to be frustrated by the obstacles encountered in achieving expected results and goals. However, what is appropriate developmentally is to regulate the reactions in a socially acceptable way when facing frustration (Gatzke-Kopp, 2015). Sensitivity to non-reward is a strong indicator of having externalizing disorders (Blair, 2010; Gatzke-Kopp, 2015). When individuals with traumatic childhood experiences encounter an obstacle in reaching the reward, the neural graphics show changes in their brains' regions related to emotion regulation (Hodgdon et. al. 2021). In this context, the aim of this study is to reveal the relationship between childhood traumatic experiences and frustrative non-reward through emotion regulation.

#### Research Question

Does cognitive emotion regulation mediate the relationship between childhood traumatic experiences and frustrative non-reward?

## Methodology

Data will be collected from undergraduate university students who are between 18-29 years old using accessible sampling method. Study group is aimed to be consist of approximately 500 participants. The data collecting tools are The Childhood Trauma Questionnaire (CTQ), Cognitive Emotion Regulation Questionnaire (CERQ), and Frustrative Nonreward Subscale (FNRS). Structural Equation Modelling (SEM) will be used to test the hypothesized relationship between the variables.

## Expected Results

The hypothetical model that emotion regulation mediates the relationship between childhood traumas and frustrative non-reward is expected to be confirmed through analysis. Therefore it is expected that childhood traumas and emotional dysregulation predict lower levels of motivation when the expected reward is absent or omitted.

## Conclusion

There are many studies explaining the relationship between childhood traumas, emotion dysregulation, and psychopathology. But even if past trauma did not necessarily predict psychopathology, it strongly affects emotional regulation and everyday life. This study aims to reveal more common responses to trauma such as high levels of frustrative non-reward. The findings will be discussed in line with the existing literature and suggestions to researchers and mental health professionals will be given.

629

## What a Scary Future for my Kids: Parental Climate Change Anxiety, Threat beliefs and Overprotective Parenting

Benedicte Mouton<sup>1</sup>, Gregoire Zimmermann<sup>2</sup>, Cindy Eira Nunes<sup>1</sup>, Stijn Van Petegem<sup>1</sup>

<sup>1</sup>University of Brussels, Brussels, Belgium. <sup>2</sup>University of Lausanne, Lausanne, Switzerland

### Abstract (max 500 words)

This study aimed to better understand the relation between climate change anxiety and parenting in a sample of adolescents' parents.

While climate change has become a major concern and a source of anxiety for many adolescents and young adults (Hickman et al, 2021), studies on climate anxiety in parents and its effect on their parenting remain scarce. However, previous research has shown that when parents believe that the world is a threatening place, they are more likely to be controlling and overprotective (Gurland & Grolnick, 2005). Today, climate change and its consequences can be perceived as a major threat (Clayton et al., 2017) by parents who, in turn, might be more controlling or overprotective to protect their adolescent from potential negative future outcomes (Jonas et al. 2014). For this reason, this study examined the relation between negative feelings about climate change of mothers and fathers and



overprotective parenting, thereby investigating the intervening role of parents' threat beliefs about the world in this relation.

Eight hundred and seventy-seven parents of adolescents in Belgium (505 mothers and 372 fathers, Mean age=48.8 for mothers and 50.6 for fathers, adolescents in the last two years of secondary school, Mean age=17.0) completed questionnaires on their negative feelings about climate change, their overprotective parenting (Chevrier et al, 2022), and their beliefs about the world as a threatening place (Gurland & Grolnick, 2005). Results showed that mothers and fathers' negative feelings about climate change was positively associated with threat beliefs, which in turn were associated with overprotective parenting.

Keywords: Climate change anxiety, overprotective parenting, threat beliefs

631

## **A Systematic Review on Features of Digital Children's Books from a Developmental Perspective**

Cagla Nur Unal Ozturkci<sup>1</sup>, Ahsen Yilmaz<sup>1,2</sup>, Fatima Tuba Yaylaci<sup>3</sup>

<sup>1</sup>Mayadem Technology, Istanbul, Turkey. <sup>2</sup>Hacettepe University, Ankara, Turkey. <sup>3</sup>Fatih Sultan Mehmet Vakıf University, Istanbul, Turkey

### **Abstract (max 500 words)**

Digital children's books come with several application features such as animated pictures, hotspots, sound effects and built-in dictionaries. However, it is not clear which of these features are useful from a developmental science perspective (Strouse, Nyhout, Ganea, 2018). The emerging literature on developmental qualities of digital children's books is inconclusive. The current systematic review aimed to synthesize the current literature on the features of digital books that promote child development. Following the PRISMA guidelines, the literature search was conducted via the Web of Science and Scopus databases for articles published between years 2010 through 2023. Studies that examine features of digital children's books and associated developmental outcomes in early to middle childhood were included. Studies that focused on atypical development or studies that investigated digital textbooks were excluded. In total, 54 studies were selected for the review. The findings indicated that enhancements in children's digital books such as built-in dictionary, music, games, augmented reality, and personalization features significantly predicted improved attention, comprehension, early literacy, and receptive and expressive language skills. Our review showed that the literature on developmental outcomes associated with children's digital books' features mostly focused on the cognitive domain (specifically in language and literacy skills) and neglected the socio-emotional domain. This limitation points at the need for studies on features of children's digital books in terms of socio-emotional development. The implications of the findings are presented as guidelines for producers in children's digital media industry as well as for parents, educators, psychologists, and researchers.

637

## Exploring the Relationship Between Parental Mind-mindedness and Family Socioeconomic Status

Yiming Liang

Tsinghua University, Beijing, China

### Abstract (max 500 words)

"Mind-mindedness" is defined as caregivers' perception of their children as individuals with autonomous minds, which allows them to interpret their children's behavior as meaningful and driven by their mental states (Meins, 1997, 2013). In turn, parental socioeconomic status (SES) is associated with a range of health, cognitive, and socioemotional abilities in children (Bradley & Corwyn, 2002). The present study explored the relationship between parental positivity and family socioeconomic status and explored possible mediating variables. The mediating variables explored were the gender of the child and whether the parent participating in the experiment was the father or the mother. In the study, the coding of mind-mindedness was conducted using a "five-minute talk sample" in which a five-minute talk was conducted with the child's father or mother, and the mind-related content was coded to obtain a code for parental mind-mindedness (Meins, 2006). Socioeconomic status was briefly grouped according to sampling (kindergartens in Beijing and kindergartens for migrant workers in Hubei province), and child gender, and father or mother involvement were analyzed using statistical methods. The effect of socioeconomic status on parental mind-mindedness was analyzed using an independent samples t-test. The results indicated a positive association between parental mind-mindedness and family socioeconomic status, but there was no interaction or mediating effect of child gender and father or mother involvement. What is wanted to be explored further is how socioeconomic status affects parental mind-mindedness and thus children's cognitive abilities, etc. The impact of mind-mindedness on children's development will be further explored.

642

## Development of Narrative Skill in Young Children

Etsuko HATANO, Junko Seto

Prof., Tokyo, Japan

### Abstract (max 500 words)

Background

The assessment of narrative skills in preschoolers is an important responsibility facing educationalists today. Early identification of problems in narrative skills and, more specifically, narrative abilities is

especially important for identifying children at risk for later learning and literacy-related difficulties. Telling fictional stories is a high-level language skill, which likely contributes to the academic and social difficulties of children with communication disorder. The purpose of this study was to examine (1) the fictional narrative skills(FN) in typical development of Japanese preschool children,

(2) the fictional narrative (FN) composition and the narrative component level of the development.

## Methods

Participants were 201 Japanese children (95boys, 106girls) with typical development aged 4 to 6 years(48 to 82 months). All four figures were implemented in the situation picture where characters faced problems and struggled. Children were instructed to create a story using laminated picture cards. Each of four pictures presented the character taking some action to resolve the problem in a problem/conflict situation. Each child was presented with each picture, at a time, and then asked to tell the story while looking at the picture. The experimenter sat facing the desk with the child, and she presented the picture on the desk in front of the child. "What is this picture? What kind of picture is it? Please tell me about this picture. " After the child's response, she asked, "Is there anything else to say?" The voice data was transcribed into text data and an utterance protocol was created. In this report, the "Accident at the flower shop(Fig.3)" was analyzed.

## Results

The amount of narrative was not significantly different between the ages of the children in the early years, and the amount of narrative increased after the second half of age 5, with the average amount of narrative exceeding 20 sentences after age 6.

Children's narratives in the first half of age 4 tended to focus only on specific events. On the other hand, children in this age group did not pay attention to the relevance of the event to the prior context, and their narratives were less frequent. With age, children became more interested in the background information of the situation picture as well as the specific event,

The children converged toward integrating and expressing the situation picture by narrating not only specific events but also background information, causal relationships, and sequences of events in the situation picture.

## Conclusion

We have proposed a method of eliciting and scoring of telling fictional narratives from preschoolers and presented some normative data that would enable early detection of problems at the narrative level of language.

As for the competence on background of telling fictional narratives, central coherence, executive function, event knowledge, working memory, vocabulary, and others were discussed.

646

## Reciprocal Links Between Attachment to Peers and Sense of Agency During Adolescence

Filipa Nunes<sup>1,2</sup>, Paula Mena Matos<sup>3,2</sup>, Tiago Ferreira<sup>3,2</sup>, Ingrid Schoon<sup>4</sup>, Catarina Pinheiro Mota<sup>5,2</sup>

<sup>1</sup>Faculty of Psychology and Education Sciences, University of Porto, Porto, Portugal. <sup>2</sup>Center for Psychology, University of Porto, Porto, Portugal. <sup>3</sup>Faculty of Psychology and Education Sciences, University of Porto, Porto, Portugal. <sup>4</sup>University College London, Institute of Education, London, United Kingdom. <sup>5</sup>University of Trás-os-Montes and Alto Douro – UTAD, Vila Real, Portugal

### Abstract (max 500 words)

Sense of agency can be understood as a dynamic and contextualized process that develops through interactions between the developing individual and the changing social context. Under this perspective, sense of agency is shaped by both, individuals' characteristics and their immediate and distant social contexts, namely peers. Peer relationships are a central developmental context during adolescence and early adulthood, can shaping development of sense of agency. Nevertheless, individuals are not passive receivers of the influences of their life contexts. While life contexts and relationships can impose certain restrictions on individual agency, young people can also have the power of choice and the ability to shape those same contexts (i.e., sense of agency). Thus, young people can have the possibility of facing, transforming and shaping the contexts in which they move. This perspective highlights that adolescents develop from the relationships they establish with their peers, and that, at the same time, their actions can shape the relationships established in those relational contexts. Although the literature acknowledges that individuals do not take in passively the effects of the circumstances they live in, no study has sought yet to analyze possible bidirectional links between attachment to peers and sense of agency. The current study examines the reciprocal links between trustful and alienated relationships with peers and sense of agency. The sample comprises 470 Portuguese adolescents aged between 14 to 19 years, assessed at three-time points across 18 months. We will tested a 3-wave cross-lagged panel model to address our research questions. Results will uncover possible bidirectional links between adolescents' attachment to peers and their sense of agency, providing important evidence for interventions focused on promoting adolescents' resilient trajectories. Addressing this knowledge gap can support the development of interventions tailored to the specific needs of the individual.

648

## Investigation on the impact of social support and children's behavior on parenting stress among Chinese residents in Japan

Juan Liu, Takahiro Yamane

Kobe University, Kobe, Japan

## Abstract (max 500 words)

### 1) Objective of the study

The aging society with a declining birthrate in Japan is rapidly progressing and the active utilization of foreign labor is seen as a solution to address this issue (Lee, 2022). According to a survey until June 2022, among foreign residents in Japan, the Chinese occupy the largest proportion, accounting for 25.1%. 45.8% of foreign residents have children living in Japan (Immigration and Residency Management Agency, 2022). Caregivers with roots in foreign countries often face difficulties accessing social resources, which can lead to psychological and social problems (Sugihara, 2021). A survey by the Survey Research Center Co. Ltd. (2022) showed that 90% of families with roots in foreign countries have difficulties with child-rearing. There is limited knowledge about Chinese caregivers in Japan who are raising children with developmental disorders. Therefore, this study aims to examine the impact of social support and children's behavior on parenting stress among Chinese residents in Japan. The significance of this study lies in providing the theoretical basis to improve the support system for Chinese families residing in Japan.

### 2) Methodology

A questionnaire was given to 237 Chinese parents who reside in Japan and are raising their children there. The research used the Strength and Difficulties Questionnaire (SDQ), which included the impact items, the Parenting Stress Index Short Form (PSI-SF), and the Social Support Rating Scale (SSRS). The survey was conducted from September 2022 to December 2022.

### 3) Result

Participants (213 females),  $M=37.15$  ( $SD=4.7$ ); Children (149boys),  $M=7.62$  ( $SD=3.33$ ). In the study, 111 caregivers showed concerns about their child's development. Seventy-eight children have undergone developmental assessments. The most common diagnosis was autism spectrum disorder ( $n=31$ , 13.0%), followed by intellectual disability ( $n=14$ , 5.9%) and attention deficit hyperactivity disorder ( $n=13$ , 5.4%). Eighteen children had comorbid conditions (7.5%). The Pearson correlation coefficient was calculated to assess the relationship between social support, child behavior, and parental stress as a means of examining the stress factors experienced by caregivers. The results indicated that the caregivers of children with more behavioral problems show a higher stress score ( $r= .65$ ). Caregivers with low social support are more prone to be stressed ( $r=-.46$ ) and their children exhibit more challenging behaviors ( $r=-.31$ ). The Impact scores were higher for children who have lived in Japan for a shorter time ( $r=-.41$ ) and have lower Japanese language ability ( $r=-.35$ ). The results indicated that Chinese parents who are raising their children in Japan experience a decline in pressure as their children become more integrated into the country and improve their language abilities. When excluding Japanese-born children, the correlation between length of stay in Japan and Japanese language ability was positive ( $r= .48$ ).

### 4) Conclusion

These findings suggest that support for Chinese caregivers, particularly those who are concerned about their children's development, is essential. Providing support for the children's behavior and Japanese language skills can also alleviate parenting stress.

650

## Pattern of attention deficit based on Attention Network Test in pre-school children with ADHD or at risk of ADHD compared to non-ADHD children: results of a meta-analysis

Łucja Bieleninik<sup>1,2</sup>, Gabriela Gradys<sup>1,3</sup>, Angel M. Dzhambov<sup>4,5</sup>, Tamara Walczak-Kozłowska<sup>1</sup>, Katarzyna Sitnik-Warchulska<sup>3</sup>, Kornela Lipowska<sup>6</sup>, Ariadna Łada-Maško<sup>1</sup>, Michał Harciarek<sup>1</sup>, Małgorzata Lipowska<sup>1,3</sup>

<sup>1</sup>Institute of Psychology, Faculty of Social Sciences, University of Gdańsk, Gdańsk, Poland. <sup>2</sup>GAMUT-The Grieg Academy Music Therapy Research Centre, NORCE Norwegian Research Centre AS, Bergen, Norway. <sup>3</sup>Institute of Applied Psychology, Faculty of Management and Social Communication, Jagiellonian University, Kraków, Poland. <sup>4</sup>Department of Hygiene, Faculty of Public Health, Medical University of Plovdiv, Plovdiv, Bulgaria. <sup>5</sup>Institute for Highway Engineering and Transport Planning, Graz University of Technology, Graz, Austria. <sup>6</sup>Department of Psychology, Faculty of Social and Behavioural Sciences, University of Amsterdam, Amsterdam, Netherlands

### Abstract (max 500 words)

**Objective of the study:** to systematically review and meta-analyze patterns of attention deficit at school-age children diagnosed with ADHD or at risk of ADHD compared to non-ADHD children, as measured by the neuropsychological attention network test (ANT).

**Methodology:** A comprehensive searching strategy (including both electronic database searching and handsearching) was used to identify prospective cohort studies and prospective studies of intervention with a performance of the ANT in primary school age children with ADHD or at risk. Screening, eligibility, quality of study assessment was done independently by two reviewers. Data extraction was done by one reviewer with a second researcher independently checking the data extraction forms for accuracy and completeness. A protocol was registered with the International Prospective Register of Systematic Reviews (PROSPERO) database (registration number: CRD42021249768).

**Results obtained or expected:** Up to 15th of May 2021 we identified a total of 422 records from electronic searching and 14 studies from hand-searching. From 265 potentially relevant records, 27 met eligibility criteria. The pooled sample for meta-analysis included 7 prospective cohort studies which used the child version of an ANT (ANT-C). We included a total of 217 children (72% boys) diagnosed with ADHD, 373 children (50% boys) with a risk of ADHD and 3 236 controls. Significant pooled effects were found for alerting network scores, which were higher in both children with ADHD (Hedges's  $g = 0.235$ ; 95% CI: 0.021, 0.449;  $I^2 = 28\%$ ) and at risk of ADHD (Hedges's  $g = 0.176$ ; 95% CI: 0.003, 0.349;  $I^2 = 24\%$ ). However, the pooled difference in executive network scores ( $g = 0.130$ ; 95% CI: -0.055; 0.315) and inof error scores (Hedges's  $g = 1.110$ ; 95% CI: -1.439, 3.659) between children with ADHD and non-ADHD children was not significant in the main meta-analysis. Compared with non-ADHD children, children with ADHD had higher scores on reaction time (Hedges's  $g = 0.433$ ; 95% CI: 0.135, 0.731;  $I^2 = 61\%$ ) and reaction time STD IVRT (Hedges's  $g = 0.334$ ; 95% CI: 0.012, 0.657;  $I^2 = 42\%$ ). Compared with non-ADHD children, children at risk of ADHD had higher errors scores (Hedges's  $g = 1.956$ ; 95% CI: 0.020, 3.892;  $I^2 = 28\%$ ).

Conclusions: Based on the limited number of studies there was no possibility to establish a pattern of attention deficit based on ANT in pre-school children with ADHD or at risk of ADHD. However, we found the differences in the outcome presentation of ANT among children with ADHD or at risk of ADHD compared to non-ADHD children, prominent in the range reaction time and reaction time variability, alerting network and errors network. The results need to be interpreted with caution.

**651**

## **The contribution of recreational camps for adolescents with celiac disease to health-related quality of life and well-being**

Maor Shani

Osnabrück University, Osnabrück, Germany

### **Abstract (max 500 words)**

Leisure activities such as summer camps play a crucial role in the holistic development of adolescents and youth. By offering opportunities for personal growth, skill building, and social interaction, participants can develop self-esteem, independence, teamwork skills, and leadership abilities. Furthermore, these activities foster lifelong memories, relationships, and a sense of community that can have a positive impact on their overall well-being.

However, adolescents with chronic illness such as celiac disease (CD), which requires patients to following a lifelong strict gluten-free diet, are often unable to take part in organized activities with peers. In recent years, however, patients' societies and organizations offer specialty camps providing safe and healthy environment for children with chronic conditions to experience a "normal" summer camp with similar peers. While recent studies demonstrated the effectiveness of recreational or therapeutic camps in psychosocial domains, little attention has been paid to CD camps.

Against this backdrop, this research project sets to examine whether participation in CD camps improves health-related quality of life (HRQOL), positive illness identity, social support and indicators of positive youth development. Data was collected in a cross-sectional study among German adolescents (N=165) and in a quasi-experiment with waiting-list comparison group in Switzerland (Study 2, N=116).

In both samples, the frequency of participation in CD camps was associated with higher HRQOL, higher perceived social support, more positive illness identity, and lower CD-related anxiety. Cross-sectional serial mediation model indicated that the camping predicted having more friends with CD, which in turn positively predicted perceived support, which then led to higher HRQOL. In a quasi-experiment, mixed linear models showed that camp attendance improved emotional aspects of HRQOL, but only among young participants. Benefits were found also with regard to friendship with similar others, illness identity and identification, and social support, but only for new campers. No effects were found on positive youth development.

The results of the two studies provide initial evidence for the psychosocial benefits of CD camps and encourage the implementation of recreational social activities in the framework of a multifaceted treatment approach in CD and related conditions. Potential long-term benefits of CD and other therapeutic camps remain to be examined in studies with repeated measurements throughout critical developmental stages.

652

## Is Retaliation Okay? Social-cognitive Correlates of Judgments and Responses to Bullying and Retaliation

Seçil Gönültaş<sup>1</sup>, Kelly Lynn Mulvey<sup>2</sup>

<sup>1</sup>Bilkent University, Ankara, Turkey. <sup>2</sup>North Carolina State University, Raleigh, USA

### Abstract (max 500 words)

Bullying is a global and serious issue that children and adolescents in many countries, including Türkiye, experience. Based on recent OECD report (2018), 24.1 % of Turkish students reported being bullied at least a few times a month. Further, bullying can lead to further aggression especially if the victims seek retaliation which perpetuates the vicious circle of aggression. Considering the negative outcomes of bullying in terms of mental, social, emotional and academic long-term negative consequences for students, it is very important identify mechanisms to tackle it both bullying and following retaliation. One way to reduce bullying and following retaliation is understanding children's and adolescents' judgments and responses to bullying and following retaliation as bystanders. However, little is known about the factors that can be related to children's and adolescents' judgments about retaliation. Thus, we examined three possible factors in understanding children's and adolescents' judgments about retaliation: (1) empathy, (2) theory of mind (ToM), (3) bystander responses to initial bullying.

Data was collected from 587 Turkish adolescents in high (n = 215, Mage = 14.81, SD = .97; 142 girls) and middle (n = 372, Mage = 12.19, SD = 1.01; 208 girls) school in Istanbul, Türkiye. Participants were presented with a hypothetical scenario in which a Turkish peer is bullied by another Turkish peer because of shyness. Then, they were asked to report their likelihood of bystander responses (explicitly challenging the bully and explicitly supporting the bully) and their acceptability judgments about the victim engaging in retaliation. Participants' empathy towards victims of bullying was assessed through a self-report measure (Poyhonen et al., 2008). Further, participants' ToM performance was measured through the Strange Stories (White et al., 2009).

Two mediation analyses were conducted to examine whether the relationship between acceptability judgments of retaliation, empathy and theory of mind would be mediated by bystander responses to initial bullying. Preliminary analyses showed that both empathy and ToM were negatively related to acceptability judgments of retaliation through explicit challenging and supporting responses. More specifically, the findings showed that participants with higher empathy and ToM were more likely to report explicit challenge responses and less likely to report explicit support which in turn was related to participants' higher likelihood of judging retaliation as unacceptable. While the total effect of empathy



was significant for both analysis, total effect of ToM was only significant for explicit support model (but not for the explicit challenging model).

The present study provides a novel insight to the factors that can be related to participants' judgments of retaliation by documenting that ToM and empathy are key social-cognitive skills that can be helpful for perceiving not only initial bullying but also evaluating following retaliation as problematic. Further, it also shows that children and adolescents who challenge initial bullying are also likely to evaluate retaliation as unacceptable. The results draw attention to social cognitive skills that can be related to judgments and bystander responses to bullying and following retaliation is important to inform anti-bullying intervention studies.

**653**

## **White German parents' racial-ethnic socialization in two different cities**

Marie Kaiser<sup>1</sup>, Carolin Hagelskamp<sup>2</sup>, Philipp Jugert<sup>1</sup>

<sup>1</sup>University of Duisburg-Essen, Essen, Germany. <sup>2</sup>Berlin School of Economics and Law, Berlin, Germany

### **Abstract (max 500 words)**

Being German has for a long time been closely tied to nativist-ethnic notions (Ditlmann, 2011), with a general taboo around race (Juang et al., 2021). At the same time, societal diversification yields new negotiations of belonging (Foroutan et al., 2014). In this climate, we wondered how white German parents navigate topics related to race and ethnicity with their children, a process which has been called racial-ethnic socialization (RES).

Our studies aim to assess exploratively the socialization goals and practices of white German parents of elementary school children. To this aim, we conducted semi-structured interviews in two German cities which differ in the amount of migration as well as their historical context.

In Study 1, we interviewed 29 white German parents in an Eastern German city, which has been part of the former GDR and is relatively low in ethnic-racial diversity. A reflexive thematic analysis (Braun et al., 2019) yielded the following results: While many parents stated that whiteness had no meaning for them, they at the same time implicitly constructed Germanness as a white and nativist standard for their children. Hence a very prominent strategy was silence about race, i.e. avoiding topics around race-ethnicity, privilege and racism altogether. Many parents also reported pro-diversity messages ("diversity is valuable"), but often these approaches remained rather superficial. Only a few parents addressed structural racism. At the same time, many parents conveyed stereotyped images and Othering, and in some cases openly promoted mistrust. An important theme underlying these parents' RES beliefs and practices was insecurity and hesitancy regarding apt language, an appropriate choice of words, and age-appropriate ways to address these topics.

In Study 2 (ongoing), we interviewed 10 parents in a West German city so far, which has been subject to migration since the sixties and is high in ethnic-racial diversity now. We expected to find themes similar

to Study 1. Given the families' diverse contexts which have previously been linked to more conversations about race (Brown et al., 2007), we also expected new themes. Preliminary analyses suggest that parents dealt with diversity very pragmatically and unideologically. Even in this very diverse setting, parents remained silent about race and adopted a passive approach by mainly responding to children's questions or intervening in severe cases. Often, parents addressed reverse socialization, e.g. how they learned about diversity from their children's schools and friendships or how their children actively addressed their parents' behaviors.

Implications as well as methodological limitations and ideas for further studies will be discussed.

**654**

## **The Nature And Impact Of Appearance-Related Bullying: A Systematic Review**

Katelynn Wilson, Nathalie Noret

University of York, York, United Kingdom

### **Abstract (max 500 words)**

#### **Introduction:**

Appearance-related bullying reflects bullying which occurs because of aspects of a young person's appearance, for example, for having prominent features or a skin condition like acne, or due to being under or overweight (Kidscape, 2022). This type of bullying has been found to relate to negative body image and the development of eating disorders (Menzel et al., 2010). There have been several different definitions of appearance-related bullying, alongside different methods used. This makes it difficult to synthesise existing research. Additionally, most current research has typically focused on weight within this category of bullying (Chen et al., 2020; Day et al., 2022; Frisé & Berne, 2020). This has led to other appearance-related bullying research being overlooked. Therefore, the aims of this review are to identify available research on different forms of appearance-related bullying and 1) synthesise the definitions of appearance-related bullying, and 2) identify the relationship between this form of bullying and negative outcomes.

#### **Method:**

The search protocol for the review will be registered with Prospero, the international register for systematic reviews. The review will follow the PRISMA standards for undertaking and reporting reviews (Liberati et al., 2009).

#### **Results:**

Data will be analysed according to a pre-registered plan for the review. A qualitative, narrative approach will be taken to synthesise the results.

#### **Conclusion:**

The results of this review will be discussed in the context of previous research on appearance-related

bullying. The implications for anti-bullying interventions and future directions for research will also be highlighted.

**Implications for research/ practice:** This review will highlight different definitions of appearance related bullying and why this can cause issues for future research. Additionally, this review will provide a synthesis of research findings on the nature and impact of appearance related bullying which will be of interest to those working with children and adolescents alongside policy makers.

#### References:

Chen, X., Luo, Y. J., & Chen, H. (2020). Body image victimization experiences and disordered eating behaviors among Chinese female adolescents: the role of body dissatisfaction and depression. *Sex Roles, 83*(7), 442-452.

Day, S., Bussey, K., Trompeter, N., & Mitchison, D. (2022). The impact of teasing and bullying victimization on disordered eating and body image disturbance among adolescents: a systematic review. *Trauma, Violence, & Abuse, 23*(3), 985-1006.

Frisén, A., & Berne, S. (2020). Swedish adolescents' experiences of cybervictimization and body-related concerns. *Scandinavian journal of psychology, 61*(1), 68-76.

Kidscape. (2022). Appearance related bullying. Kidscape. <https://www.kidscape.org.uk/advice/advice-for-parents-and-carers/what-is-bullying/appearance-related-bullying/>

Liberati, A., Altman, D. G., Tetzlaff, J., Mulrow, C., Gøtzsche, P. C., Ioannidis, J. P., & Moher, D. (2009). The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate health care interventions: explanation and elaboration. *Journal of clinical epidemiology, 62*(10), e1-e34.

Menzel, J. E., Schaefer, L. M., Burke, N. L., Mayhew, L. L., Brannick, M. T., & Thompson, J. K. (2010). Appearance-related teasing, body dissatisfaction, and disordered eating: A meta-analysis. *Body image, 7*(4), 261-270.

656

### **Cognitive processing in schoolchildren with high trait anxiety: An investigation of attentional, interpretational, and memory biases**

Lavinia Cheie<sup>1,2</sup>, Laura Visu-Petra<sup>1,2</sup>, Narcisa Prodan<sup>1</sup>

<sup>1</sup>Riddle Lab, Department of Psychology, Babeş-Bolyai University, Cluj-Napoca, Romania. <sup>2</sup>Department of Social and Human Research, Romanian Academy, Cluj-Napoca, Romania

**Abstract (max 500 words)**

Cognitive biases towards prioritizing negative information processing have been linked to child and adolescent anxiety development and maintenance (Field, Hadwin, & Lester, 2011). So far, studies suggest: (1) that children are at a higher risk for anxiety if they give preferential attention to negative information (attentional biases), or if they tend to interpret ambiguous or neutral situations in a negative or threatening manner (interpretation biases); (2) mixed results in terms of retrieving negative information more easily (memory biases) as a predictor for child anxiety. However, such findings result from separate investigations, evaluating either attentional, interpretational, or memory biases, with very few studies including multiple types of cognitive biases tasks in a unitary design to highlight similarities and differences based on differential processing requirements. To overcome this limitation, this study set out to investigate children's potential anxiety-related cognitive biases by integrating all relevant levels of information processing: attentional, interpretation, and memory retrieval. Participants were 9- to 13-year-old children ( $N = 83$ ;  $Mage = 11.54$ ,  $SD = 1.33$ ; 47 girls) from two public schools, with similar socio-economic backgrounds. Using computerized tasks delivered in individual sessions, we evaluated children's (1) tendency to get distracted by negative distractors (i.e., angry, scared faces; Emotional Visual Search Task, de Voogd et al., 2016), (2) tendency to interpret an ambiguous scenario in a negative manner (via ambiguous scenarios related to social situations, general situations, potential separation, potential physical threat; task developed following Klein et al., 2018), and (3) memory for emotional information presented in verbal stories and visual information accompanying each story (Cheie et al., 2012). In line with previous evidence in terms of anxiety-related cognitive biases, preliminary results showed that high trait anxiety levels predicted both children's tendency to give preferential attention to negative information, as well as their tendency to interpret ambiguous information in a negative way. However, memory performance was not related to children's trait anxiety scores. Hence, findings suggest that (1) children showing anxiety-related attentional biases towards a preferential processing of negative information also show anxiety-related interpretational biases, processing ambiguous information in a negative or threatening manner; (2) having such anxiety-related attentional and interpretational biases does not predict retrieving negative information more easily (i.e., memory biases). Importantly, although children's bias scores on the attentional and interpretation biases tasks were interrelated, they were not associated with scores on the memory retrieval task. This may suggest that performance on a complex memory task may employ various cognitive resources, thus minimizing the potential to reveal potential retrieval biases. In this respect, studies suggest that memory bias may be restricted to cues signaling a potential danger which can be controlled (Large et al., 2016). Implications for future studies and cognitive bias modification interventions are discussed.

**657**

## **The early emergence of infant pointing: A longitudinal study**

Marina Kammermeier, Anja Kaßecker, Markus Paulus

Ludwig-Maximilians-Universität, Munich, Germany

**Abstract (max 500 words)**

The use of pointing gestures is an important social-communicative milestone. Yet, little is known about the various factors that may support the early emergence and development of pointing. Developmental theories suggest that pointing is promoted within the parent-child interaction, that is, through parental sensitive behavior and parental use of pointing gestures. In addition, infant motor development is proposed to play a relevant role in infants' point production. We investigated these potential predictors of infants' use of the pointing gesture in a longitudinal study from 6 to 14 months ( $n = 118$ ). At 6, 10, and 14 months we assessed infants' and mother's spontaneous pointing behavior in a semi-natural elicitation procedure. In this procedure mothers and their infants looked together at various objects hanging on a clothesline, that were supposed to elicit spontaneous pointing of mothers and infants. Moreover, we assessed maternal sensitivity and cooperation (following Ainsworth) in a mother-infant free play interaction at 6 months and infant motor development with a parental questionnaire at 6, 10, and 14 months. Results revealed longitudinal relations between mothers' pointing across all three time points, but no longitudinal relations of infants' pointing behavior. Further analyses showed that infants' index-finger pointing at 14 months was predicted by maternal pointing at 6 months and at 14 months. More specifically, the more mothers pointed at objects at 6 and 14 months, the more their infants showed index-finger pointing at 14 months. Moreover, infant index finger pointing at 10 months was associated with infants' gross motor skills at 6 months and their global motoric abilities at 10 months. That is, the better infants motor abilities were, the more they showed index-finger pointing at 10 months. Our findings emphasize the importance of mothers' usage of pointing in interactions with their infants as well as infants' physical abilities for early point production. Overall, this study contributes to our knowledge on factors that promote and predict early development of pointing behavior.

666

## Exploring the associations between play, language and communication behavior among preschool children

Elise Øksendal, Veslemøy Rydland, Vibeke Grøver, Ratib Lekhal

University of Oslo, Oslo, Norway

### Abstract (max 500 words)

**Introduction:** Play is one of the most prominent activities in young children's lives and influence both language development and communication behavior, which in turn, influence play behavior. Early Childhood Education and Care (ECEC) is an important environment for enhancing play, language and communication among preschool children. However, we still know little about the associations between these phenomena, and possible moderators such as whether the child is a dual language learner (DLL) and gender. Although preschool DLLs may have less developed second language skills compared to their monolingual peers, recent studies have demonstrated that DLLs show an increased ability to take the perspectives of others compared to monolingual children. This means that the association between communication and social play could be stronger for DLLs compared to monolingual children. In addition, girls and boys may have different play preferences regardless of their language skills and communication behavior. The associations between language, communication and play behavior could

therefore be altered by the child's multilingual status and gender. Knowledge about these associations is important to identify children that struggle to engage in positive social interactions with peers.

**Methodology:** Data were collected in ECEC centers participating in The Oslo Early Education Study (OEES). OEES is an ongoing longitudinal randomized control trial study. We included data from children aged 36-57 months (N=495, 73 % DLL, 48 % boys).

Play behavior was assessed with the Preschool Play Behavior Scale (reply range (RR) 1-5): "Reticent play" (4 items, mean 9.7, SD 2.5). "Solitary-passive play" (3 items, mean 8.7, SD 2.1). "Social play" (6 items, mean 22.8, SD 5.7). and "Rough and tumble play" (2 items, mean 5.34, SD 2). Communication behavior was assessed with the Conversation Compass Communication Screener-Revised (RR 1-3): "Negative communication" (8 items, mean 10.4, SD 2.8). and "Social communication" (8 items, mean 17, SD 3.5). Language skills were measured with the Norwegian Assessment of Early Language Development (TRAS) (RR 0-1): "Attention" (9 items, mean 7.9, SD 1.9), and "Language comprehension" (9 items, mean 7.5, SD 2).

The aim of this study is to explore associations between different aspects of play, language, and communication. First, we computed sum scores of all subscales. Second, bivariate correlations were performed. Going further down with these data we will investigate whether these associations are moderated by the child's multilingual status and gender.

**Preliminary results** show that social play is associated with good language skills, social communication behavior, good attention skills and low measures on negative communication. Reticent play is associated with poor language skills, poor attention skills and negative communication. Solitary-passive play is associated with poor language skills and negative communication. Rough and tumble play is associated with moderate language skills, negative communication, and poor attention skills.

**Conclusion:** Our findings indicate that preschool children with different language skills and communication behavior engage in different play behavior. Because social play is an important source for social interaction and language development, it is alarming that children with poor language skills and negative communicative behavior often engage in solitary and reticent play.

**670**

## **Temperamental and cognitive determinants of the effectiveness of emotional intelligence training in primary school students**

Katarzyna A. Knopp

The Maria Grzegorzewska University, Warsaw, Poland

### **Abstract (max 500 words)**

The aim of the research was to find subjective conditions for the effectiveness of emotional intelligence training in primary school students.

358 students aged 7 to 12 underwent a 10-hour emotional intelligence training of emotional intelligence, understood as a set of such emotional abilities as: the ability to understand emotional situations, the ability to verbalize emotions, the ability to deal with negative emotions, the ability to recognize one's own emotions and the emotions of others, as well as the ability to understand the function of emotions and their use in action. The students' emotional intelligence was measured twice - once before and once immediately after the training. Additionally, a one-time measurement of their cognitive abilities and temperamental traits was performed.

It was revealed that the effect of students' cognitive abilities and temperamental traits on the effectiveness of emotional intelligence training depends on the age of the respondents and their gender. In the presentation, there will be provided a thorough analysis of the results obtained and the conclusions drawn from them will also be provided.

**674**

### **Within individual stability of dual continua model of adolescent mental health**

Alina Cosma, Yekaterina Chzhen

Trinity College Dublin, Dublin, Ireland

#### **Abstract (max 500 words)**

**Objective:** Most previous studies relied on disease-based models, identifying symptoms of mental illness (e.g., anxiety, depression or behavioural problems), and considered mental health as merely the absence of mental illness. Yet, recent evidence shows that the absence of mental illness is a necessary, but not sufficient criterion of optimal mental health. The Dual-factor Model conceptualises mental health as a complete state comprised of two unique, but correlated, dimensions (subjective well-being and psychopathology) and uses ratings of subjective well-being and psychopathology to classify people into four categories. Thus, optimal mental health requires a positive sense of well-being in addition to the absence of clinically significant, active mental illness. There is limited evidence on specific longitudinal (within individual) trajectories of mental health (especially when focusing on the dynamic between subjective well-being and psychopathology as based on the dual-factor model). Therefore, in this study we aim to investigate the longitudinal intraindividual stability and predictors of dual-factor mental health among adolescents in Ireland (RO1.1), to identify family and school related predictors (RO1.2). This study is part of a MSCA-IF funded project (GenerationZ; Marie Skłodowska-Curie grant agreement No 101028678) and the analyses will be run in Spring 2023.

**Methodology:** This study will use data from three waves of the Growing Up in Ireland, a national representative longitudinal study (N=8,500). This cohort started in 2008 (wave 1) with 8,500 children aged 9 years, followed by subsequent measures at age 13 (wave 2), and 17/18 (wave 3). The mental health outcomes included will be Strength and Difficulties questionnaire (wave 1 to 3) as indicator of mental health problems, whereas indicator of positive mental health were: Happiness and Satisfaction subscale from Piers Harris Scale (wave 1 and 2) and Life satisfaction (wave 3). Predictor variables:

Gender; School bullying victimization; Parenting style inventory; Family Dynamics, Family finances. Data analysis will involve latent profile analysis, and growth curve modelling.

Anticipated Results and Conclusion: These results will contribute to the validation of the dual factor model of adolescent health using national representative longitudinal sample. Furthermore, we will be able to identify predictors for within individual stability for different mental health classes.

**677**

### **Predictors of father involvement with their pre-school aged children in dual-earner Portuguese families.**

Maria Costa, Lígia Monteiro, Carolina Santos

ISCTE-IUL, Lisbon, Portugal

#### **Abstract (max 500 words)**

The aim of this study was to analyze in a sample of Portuguese nuclear families, with pre-school age children, predictors of father involvement in diverse types of activities (e.g., care, play), implying engagement with the child. Sociodemographic variables, fathers' parenting styles (authoritative and authoritarian), and sense of parental competence (efficacy and satisfaction) were considered. The moderating role of parental sense of competence in the association between parenting styles and father involvement was also tested.

Method: Participants - 347 nuclear families (married or living together), with preschool-aged children (50.4% were boys; mean age of 54.5 months), participated in the study. Fathers had a mean of 12.93 years of education (SD=3.27), and mothers had on average 14.45 years of education (SD=3.34), both parents worked. Instruments/procedures - Mothers and fathers (independently) completed the Parental Involvement Scale (Monteiro et al., 2008), which assesses parents' perception of the father's involvement (in relation to the mother) in various daily activities related to the child. Intra-class correlation coefficients (ICC) showed high or very high values of agreement between fathers' and mothers' responses, so an involvement composite was created by calculating the averages of both answers. Cronbach alphas were all above .70. Fathers described their own parenting styles using the Parenting Styles and Dimensions Questionnaire (Robinson, et al. 2001; Pedro et al., 2015), one of the most used instruments for assessing parenting styles according to Baumrind's approach (e.g., Yaffe, 2020). Cronbach alphas were .78. Fathers completed the Parenting Sense of Competence Scale (Johnston & Mash 1989; Ferreira et al., 2011); Cronbach alphas were: efficacy .73, satisfaction .72.

Results - Bivariate correlations (see table 1) showed that fathers' education was significantly and positively associated with father involvement, the authoritative parenting style, and parental satisfaction; it was negatively correlated with parental efficacy. The same pattern was observed for mothers' education. Father involvement was significantly associated with the authoritative parenting style, and sense of parental competence (efficacy and satisfaction). The authoritative parenting style was positively associated with sense of parental competence (efficacy and satisfaction). Conversely, the



authoritarian parenting style was negatively correlated with these dimensions. No sex differences were found for the child's sex or associations with age for any of the variables. A multiple hierarchical regression was used, with father involvement as the outcome, and sociodemographic, parenting styles and sense of competence as predictors, the model also included the interactions terms between parenting styles and sense of competence. (Table 2). The model used was statistically significant [ $F(12,331) = 4.63$ ;  $p < .001$ ], but only father education ( $\beta = .29$ ;  $p < .001$ ), mother working hours [ $\beta = .12$ ;  $p = .02$ ], and parental efficacy [ $\beta = .17$ ;  $p = .00$ ] were significant predictors. We tested for interaction effects between parenting styles (authoritative/authoritarian) and parental efficacy and satisfaction. No interaction effects were found.

Discussion: Results will be discussed considering fathers' individual variables, family, and contextual variables, with an ecological and systemic view.

680

## Psychometric properties and validation of the Alabama Parenting Questionnaire (child form) in a Greek population

GARYFALIA CHARITAKI<sup>1</sup>, MARIA MARKODIMITRAKI<sup>2</sup>, MARIA KYPRIOTAKI<sup>2</sup>, EIRINI AMANAKI<sup>1</sup>

<sup>1</sup>Hellenic Open University, Patras, Greece. <sup>2</sup>University of Crete, Rethymnon, Greece

### Abstract (max 500 words)

Parental practices are important to be valued also from child perspective in order to detect and prevent dysfunctions at parent-child relationship at an early stage of development and design intervention programs. There is a need for simple, easy in use and valid tools to assess parental practices. The aim of the present study was to examine the psychometric properties, such as factor structure, reliability and construct validity of the Greek translation of the child report version of the Alabama Parenting Questionnaire (3-6). Hypotheses of the study are the following: 1. The APQ-GR (3-6) child form demonstrates reliability, 2. The child form of the Alabama Parenting Questionnaire (APQ-GR) for early childhood years (3-6) consists a four-factor model and 3. No measurement invariance is reported across different groups of children (gender/with and without disability). The APQ-PR consists of 33 items from the original APQ (Shelton et al., 1996), rated on a 5-point Likert-type scale ranging from 1 (never) to 5 (always). The entire sample was comprised of four-hundred four young children with and without disabilities. Firstly, a four-factor was extracted through Exploratory Factor Analysis in a subsample of  $n=204$  children. Afterwards, we performed Confirmatory Factor Analysis to build sufficient evidence for the suggested 4-factor structure, which includes Involvement, Positive Parenting, Inconsistent Discipline and Corporal Punishment, in the entire sample. According to the results of the study, the APQ-GR (3-6) for children is an easily applied and comprehensive research tool. Results confirmed the hypothesized four-factor structure of the APQ version for young children aged between 3-6. All statistical tests for goodness of fit ( $\chi^2/df=1.34 < 2$  and  $p=.317$ , TLI=.984 $\geq$ .950, RMSEA=.045 $<$ .080, CFI=.978 $\geq$ .90 and SRMR=.022 $<$ .080) of the four-factor model provided sufficient evidence. Results suggested a good fit across different groups of children [for girls ( $n=221$ ) and boys ( $n=197$ )] and across child's disability [for children with disability ( $n=169$ ) and without disability ( $n=245$ )]. Through this child report questionnaire

parental practices in both families with and without a child with disabilities, can be assessed based on the child's perspectives, which is important for the design and implementation of intervention programs.

**681**

## **Perception and Process of Lived Experience of Play for STEM Undergraduates using Mutual Squiggle and Story Making**

Tetsuko Kato

Kobe University, Kobe, Japan

### **Abstract (max 500 words)**

#### 1) Objective of the study

This study aimed to explore the effectiveness of a "play" approach in supporting undergraduate and graduate students in the field of science, technology, engineering, and mathematics (STEM students). In colleges and universities, school counselors and teachers report that some STEM students may have problems with verbal communication, interpersonal relationship, and emotional development. Such students often become laboratory truants, which has been a prevailing problem for decades. Expressive techniques that include elements of play are preferable to promote their verbal, relational, and emotional development. Particularly, using play may be beneficial, as it can provoke a strong feeling that persists lifelong time. Thus, the objective of this study was to explore the STEM students' lived experience of play during the expressive technique.

#### 2) Methodology

As an expressive technique, Mutual Squiggle and Story Making Method (MSSM) was adopted. MSSM mainly consists of the picture-drawing phase and the story-making phase. In the picture-drawing phase, each participant conducted mutual squiggling with the researcher to create six pictures on a sheet of paper. In the story-making phase, the researcher began telling a story using one of the pictures. Then, each participant developed the story using another picture. MSSM is unique in that the researcher is actively involved in the process. In this study, seven participants who belong to STEM courses conducted MSSM with the researcher once a week, for five weeks. After each session, the researcher conducted semi-structured interviews to ask them the following: Was there a sense of play? At what stage did you feel play? Are there any pictures or story developments that were unexpected? What were your creative ideas? Interview data were analyzed based on the modified grounded theory method using MAXQDA software.

#### 3) Results obtained or expected

It was found that for participants to feel a sense of play, a safe place, free of tension and anxiety, must be created first. Three qualitatively-different play processes were identified. The first is the process of co-creation in which the STEM students are "playing" by taking creative strategy in the process of

drawing and story making. The second is the process of appreciation of artwork in which they curiously watch how the researcher changes their squiggle line and develops their story. The third is the process of gameplay in which they reduce their involvement by compromising and looking at the situation from a detached point of view.

#### 4) Conclusion

In each process, affect attunement may have occurred in the intersubjective field between the participants and the researcher. Good attunement may increase the participants' creativity, resulting in the enhancement of the play experience. The sloppiness of the researcher may prevent participants from feeling play. However, the researcher's playful attitude may make the participants feel a sense of playing a game.

682

## MEG markers of Auditory Attentional Control in Persistent Reading Difficulties

Georgia Gerike<sup>1,2</sup>, Ariane Tretow<sup>1</sup>, Paavo Leppänen<sup>1</sup>, Jarmo Hämäläinen<sup>1</sup>

<sup>1</sup>University of Jyväskylä, Jyväskylä, Finland. <sup>2</sup>Niilo Mäki Institute, Jyväskylä, Finland

### Abstract (max 500 words)

The goal of this study is to explore the role of auditory working memory in adults with persistent reading difficulties (RD). While a previous study (Eloranta 2018) found that fluent rapid naming differentiated childhood RD participants from those whose reading improved as adults, there is a large body of research, both on the behavioral and neural level, that suggests that reading difficulties arise from multiple deficits beyond fluent naming abilities, and include a variety of processes related to auditory and phonological processing (e.g. Pennington 2006; Fostick and Revah, 2018; Conway 2008). Additionally, recent studies have found that adult RD also might involve executive functioning, and control of auditory attentional processes. (Longeran et al 2018; Gabay et al 2019)

This study employs an auditory working memory (AWM) task (Kayser et al 2020) to look at the relationship between attentional control of auditory working memory and persisting reading difficulties. The paradigm aims to dissect the role of perceptual "bottom-up" and "top-down" attention or inhibitory control processes in AWM. Difference in modulations of the contralateral N1, which is a marker of bottom up perceptual processing, in response to speech sounds will be compared in normal controls (n = 30) and adults with reading difficulties (n = 28). The task was carried out using MEG (magnetoencephalography) in one session with participants over the course of 2021 and 2022.

The analysis is still underway, however it is expected that greater amplitudes in N1 in both conditions will be related to severity of reading deficits in adulthood. This would suggest that more effortful control of auditory attention is required for adults who have persistent severe reading difficulties.

References

A meta-analysis of executive functioning in dyslexia with consideration of the impact of comorbid ADHD: *Journal of Cognitive Psychology*: Vol 31, No 7. (n.d.). Retrieved February 5, 2023, from [https://www.tandfonline.com/doi/full/10.1080/20445911.2019.1669609?casa\\_token=pmc1-qzSquoAAAAA%3AghULtroCQURaJEr6fh8aze2loqiCzdFyzNnysdMnjNbyQChHDYm53nRmWUuEPo6LtrOnzqMgNZs0](https://www.tandfonline.com/doi/full/10.1080/20445911.2019.1669609?casa_token=pmc1-qzSquoAAAAA%3AghULtroCQURaJEr6fh8aze2loqiCzdFyzNnysdMnjNbyQChHDYm53nRmWUuEPo6LtrOnzqMgNZs0)

Behavioral measures of attention and cognitive control during a new auditory working memory paradigm—PubMed. (n.d.). Retrieved February 5, 2023, from <https://pubmed.ncbi.nlm.nih.gov/31797177/>

Conway, T., Heilman, K. M., Gopinath, K., Peck, K., Bauer, R., Briggs, R. W., Torgesen, J. K., & Crosson, B. (2008). Neural substrates related to auditory working memory comparisons in dyslexia: An fMRI study. *Journal of the International Neuropsychological Society*, 14(4), 629–639. <https://doi.org/10.1017/S1355617708080867>

Fostick, L., & Revah, H. (2018). Dyslexia as a multi-deficit disorder: Working memory and auditory temporal processing. *Acta Psychologica*, 183, 19–28. <https://doi.org/10.1016/j.actpsy.2017.12.010>

From single to multiple deficit models of developmental disorders—ScienceDirect. (n.d.). Retrieved February 5, 2023, from [https://www.sciencedirect.com/science/article/pii/S0010027706000771?casa\\_token=qtbNQHuN2OwAAAA:kBpxvwtm-BqwP\\_e04MaS6I7yxonBKiqLjLwbEGA35C6B6sZM\\_i8wLD2SGd3gzErAS39v4NdnxA](https://www.sciencedirect.com/science/article/pii/S0010027706000771?casa_token=qtbNQHuN2OwAAAA:kBpxvwtm-BqwP_e04MaS6I7yxonBKiqLjLwbEGA35C6B6sZM_i8wLD2SGd3gzErAS39v4NdnxA)

Gabay, Y., Gabay, S., Schiff, R., & Henik, A. (2020). Visual and Auditory Interference Control of Attention in Developmental Dyslexia. *Journal of the International Neuropsychological Society*, 26(4), 407–417. <https://doi.org/10.1017/S135561771900122X>

Resolving reading disability—Childhood predictors and adult-age outcomes—Eloranta—2019—Dyslexia—Wiley Online Library. (n.d.). Retrieved February 5, 2023, from <https://onlinelibrary.wiley.com/doi/10.1002/dys.1605>

**683**

## **The effectiveness of situational parenting in the family of origin and parental competences in young adults - the role of emotional and social competences**

Katarzyna A. Knopp

The Maria Grzegorzewska University, Warsaw, Poland

### **Abstract (max 500 words)**

The theoretical basis of the presented research is the concept of situational parenting by Hersey and Blanchard (1978; see also Hersey and Campbell, 1999), which is unique because, in addition to the description of various types of parental behavior typical of upbringing models, it also strongly

emphasizes the importance of an appropriate selection of these behaviors, depending on the situation. The authors of the concept believe that the basic dimensions, support and directiveness, determine four behaviors (parenting styles) of mothers and fathers in task situations - encouraging, explaining, observing and guiding, while emphasizing that none of them alone have to be good or bad. Parental effectiveness is determined by flexibility in juggling these behaviors depending on the child's motivation and the level of his/her competences enabling (or not) to perform a given task (Hersey Campbell, 1999).

The main objective of the undertaken research was to broaden the knowledge of situational parenting among Polish parents - to identify preferred parenting styles and to assess the degree of flexibility in their use. In addition, the research was intended to answer the question about the relationship between the parental competences of young adults and the effectiveness of situational parenting in their families of origin, while the verified research model also included social and emotional competences as potential mediators of the above-mentioned relationship.

The described research is currently in progress. Ultimately, it is planned to test at least 150 people aged 20 to 24 - students of various faculties, without children. Parenting styles and flexibility in their application are measured by Rękosiewicz and Wysota's Parenting Styles Perception Questionnaire (2013), which is used to retrospectively assess parental behavior. The Parental Competences Test of Matczak and Jaworowska (2017) will be used to measure parental competencies, while social and emotional competencies are assessed using the Matczak Social Competence Questionnaire (2012) and the INTE questionnaire by Schutte and colleagues, in the Polish adaptation of Jaworowska and Matczak (2008). All these tools are characterized by satisfactory psychometric parameters.

The poster will present the obtained results and the conclusions that can be formulated on their basis.

**685**

### **Relation of Fluid Intelligence with Mathematics and Reading Comprehension Achievements: The Moderating Role of Student-Teacher Relationships**

Cristina Semeraro, Pasquale Musso, Cassibba Rosalinda, Giuditta Ricciardiello, Fabiola Silletti, Gabrielle Coppola

University of Studies of Bari, Bari, Italy

#### **Abstract (max 500 words)**

A number of studies have indicated that the quality of students' interpersonal relationships is important for their academic achievement. Nonetheless, most current studies have investigated the association between cognitive functioning and academic achievement without taking into account the quality of relationships experienced in the school setting. Additionally, little research has explored the combined effect of these factors in the prediction of academic achievement. Hence, further investigations are needed to deepen the relationship between cognitive functioning and the quality of school relationships in order to support students' academic achievement and the potential of youth. The current research aimed at examining the moderating role of the quality of student-teacher relationships in the

associations of fluid intelligence with mathematics and reading comprehension achievements among a sample of 219 Italian adolescents. A multiple-group structural equation modelling analysis,  $\chi^2(74) = 81.42$ ,  $p = .26$ , CFI = .971, RMSEA = .030, revealed that student-teacher relationship quality moderated only the link between fluid intelligence and mathematics. The findings corroborate the idea that the quality of student-teacher relationships may be a useful variable to investigate in order to better understand the relationship between domain-general cognitive functioning and domain-specific academic achievement.

686

## Sibling composition and executive functions of 8-to 9-year-old children

Lauryna Rakickienė<sup>1</sup>, Reda Gedutienė<sup>2</sup>, Dovilė Butkienė<sup>1</sup>, Kęstutis Dragūnevičius<sup>1</sup>, Dalia Nasvytienė<sup>1</sup>

<sup>1</sup>Vilnius University, Vilnius, Lithuania. <sup>2</sup>Klaipėda University, Klaipėda, Lithuania

### Abstract (max 500 words)

There are multiple ways in which siblings could boost executive function development in childhood. First, household with more than one child of comparable age provides better opportunities for social pretend play, that has been recently shown to be superior to solitary play in terms of executive function gains (White et al., 2021). Second, sibling presence ensures more diverse social interactions, including sibling conflict, providing more opportunities to practice EF-related skills in day-to-day life. Third, siblings, especially older ones, provide scaffolding during play and task performance, which is known to boost executive function development. Still, despite strong theoretical background, empirical evidence on the relationship is scarce. Some studies showed that having at least one sibling is related to better executive function skills (McAlister & Petterson, 2013; Rolan et al., 2018), but did not look into different types of sibling composition although mechanisms through which having younger versus older siblings may affect executive function development are different. Moreover, gender of siblings may also play a role, e.g. research in language development has shown that having older sisters versus brothers has distinct developmental effects (Havron et al., 2019). Further, the link between EF and sibling presence is usually studied in relation to theory of mind and not on its own (McAlister & Petterson, 2006; 2013; Kennedy, Lagattuta & Sayfan, 2015) and age of participants rarely exceeds preschool age. Thus, the objective of this study was to explore the relationship of sibling composition and three core executive functions (response inhibition, working memory and mental set shifting) of 8-to 9-year-old children.

Data from larger national study of second grade students' cognitive abilities and academic performance was used for current analysis. 196 children aged 8 to 9 (54% girls and 46% boys, mean age in months  $M = 106.43$ ,  $SD = 3.28$ ) from diverse social backgrounds, whose parents reported on sociodemographic information including age and gender of children in the family participated in the study. Total of three tasks, one for working memory, inhibition and shifting were administered to children individually as part of broader assessment. The results showed that having at least one younger sibling of either gender is related to better shifting ability, while having at least one older sister is related to better response inhibition. However, this only holds true for the families where at least one of the parents has higher than secondary education. Presence of older brothers did not have significant effect on executive

functions of 8-to 9-year-olds. Results suggest that various types of sibling composition differentially relate to different executive functions and both sibling order and sex plays a role. Further, it seems that benefits of having siblings for executive functions depend on broader socioeconomic and interpersonal context of family life, reflected by parental education level.

688

### **Do Self-Control and Parental Involvement in Early Adolescence Protect Against Internalizing Problems and Promote Prosociality in Later Adolescence? A Four-Wave Longitudinal Study.**

Fabiola Silletti<sup>1</sup>, Nicolò M. Iannello<sup>2</sup>, Sonia Ingoglia<sup>2</sup>, Cristiano Inguglia<sup>2</sup>, Rosalinda Cassibba<sup>1</sup>, Manuel Eisner<sup>3</sup>, Denis Ribeaud<sup>4</sup>, Pasquale Musso<sup>1</sup>

<sup>1</sup>University of Bari Aldo Moro, Bari, Italy. <sup>2</sup>University of Palermo, Palermo, Italy. <sup>3</sup>University of Cambridge, Cambridge, United Kingdom. <sup>4</sup>University of Zurich, Zurich, Switzerland

#### **Abstract (max 500 words)**

Early adolescence is a critical stage in human development characterized by a convergence of biological, psychological, and social challenges, which may make it a sensitive developmental period. Indeed, this phase may act as a setting for the resurgence of undesirable consequences, such as internalizing problems in later years. However, early adolescence is a developmental stage with several significant milestones as well, including the development of the social brain, in which young people evolve from egocentric thinking to regard for others. As a result, early adolescence may provide an opportunity for youths to increase their social competencies, such as prosociality. Given the aforementioned, it becomes crucial to search for the potential variables associated with these constructs, acting as risk vs protective factors. Particularly, the literature suggests that self-control and parental involvement may be associated with internalizing problems and prosociality. Drawn on the risk-and-resilience framework, the present study investigated the impact of self-control and parental involvement in early adolescence with internalizing problems and prosociality in later adolescence. Data were collected on 1522 Swiss adolescents when they were aged 11, 13, 15, and 17. A cross-lagged model approach was used and the final model fitted the data well,  $\chi^2(1379) = 3097.83$ ,  $p = .00$ , CFI = .938, RMSEA = .029, SRMR = .057. Parental involvement in early adolescence was found to be adversely connected to internalizing problems and positively related to prosociality in later adolescence. Early adolescent self-control was positively associated with later prosociality, but no link was identified with later internalizing problems. The findings also indicated that parental involvement positively impacts later self-control, as well as prosocial behavior and internalizing problems influenced reciprocally across time. The findings support the idea that early adolescence is a critical era for future sociopsychological functioning in the adolescence timeframe and can assist clinical intervention and preventative initiatives.

689

## Improving narrative skills using the short conversational intervention model in typically developing and high functioning preschool children with Autism Spectrum Disorder

HELEN VRETUDAKI<sup>1</sup>, ATHINA ANGELI<sup>2</sup>, MARIA KYPRIOTAKI<sup>1</sup>

<sup>1</sup>University of Crete, Rethymnon, Greece. <sup>2</sup>Directorate of Primary Education of Heraklion, Heraklion, Greece

### Abstract (max 500 words)

Narrative ability is considered an ecologically valid way of capturing cognitive, linguistic and social competence in preschool children. In addition, narrative ability has shown to predict future preschool children's insistent language impairment and general pragmatic ability. Thus, narrative capacities are considered to be an important skill to assess in individuals who experience pragmatic language difficulties, such as children with Autism Spectrum Disorder (ASD). The present study was conducted in the framework of the Short Conversational Intervention (SCI) introduced by Veneziano and Plumet (2019). Our purpose was to improve preschool children's narrative abilities. The sample children came from two rural kindergarten classes consisting of 22 typically developing children (control group) including 5 children diagnosed with high-functioning autism spectrum disorder (ASD), (experimental group) in the 4-to-6-year age range. The Short Conversational Intervention solicits children's thinking and talks about the causes of the events in a story of a misunderstanding between two characters, named The Stone story. Children, following this procedure, were called to: a) narrate a story after seeing carefully five pictures which represent this misunderstanding event. When the child was ready to tell the story, the pictures were removed and the child narrated his/her story, b) narrate a story after a short questionnaire that focused on the causes of each of the main events of the story. In our methodological design we added one more step in sequence to the others. Children called to narrate the same story after answering in a more detailed and focused questionnaire, for children who were struggling to understand the implicit information from the 5 pictures. These added questions help children to better analyze each picture, to find out more elements and to possibly derive a deeper understanding of the story's overall structure. In the second and in the third step when the child was ready to narrate the story, the pictures were removed and the child narrated his/her story. So, we have one free narration and two additional after the usage of the two types of questionnaires. After a week all the children were asked to narrate the same story without any visual (pictures) or verbal (questions) aid/assistance. All the children's narratives were transcribed verbatim. Each narrative was assessed following a specific coding system proposed by the two researchers. This coding system assessed specific aspects of the children's narratives (story events, the explanation of events, types of internal states, false belief and the rectification of the false belief). The results of our study are in progress but the first notion was favorable to this intervention program. This study extends the results obtained in the Veneziano and Plumet (2019) study in relation to children's age (the present consisted of preschoolers 4 to 6 years old whereas Veneziano and Plumet sample came from a wide range of age 5-11 years old, specially, children with ASD aged 8 to 11 years) and to methodological design adding some critical components to the existing one.



690

## Validating Coding System For Children's Emotional Regulation During Frustrating Task

Ashley Boros, [Mikayla Murdock](#)

Ohio State University, Columbus, USA

### Abstract (max 500 words)

As children enter early childhood and increase their social and peer interactions, they begin to develop emotion regulation abilities. Emotion regulation (ER) pertains to the management of diverse systems such as behavioral expressions and motivation (Thompson, 1994). ER abilities predict later successes in social and academic endeavors (Blair & Razza, 2007).

In early childhood, observational measures of child ER are prevalent, but in middle childhood and beyond, it is more common for children and adolescents to report on child ER using surveys. The purpose of our study was to develop and validate a coding system for an observational assessment of child ER during middle childhood.

To devise this coding system, we used already collected data from an existing study of 7.5-year-old children (N = 80). We used an adapted version of the Attractive Toy in the Transparent Box task from The Laboratory Temperament Assessment Battery (Lab-TAB; Goldsmith et al., 1993) to assess child ER during a frustrating task, originally developed for use with 3-5-year-old children. Our version included additional challenges for older children.

Given that these children were older than typical in this task, we developed a modified/adapted version of the Behavior Coding Manual (Wu, Feng, Hooper, & Ku, 2017) and the Tangram Emotion Coding Manual (Hagstrøm et al., 2019) to focus on prevalent behaviors among our 7.5-year-old participants, shifting the emphasis from emotion states (e.g., distress) to features of ER (e.g., quality) (Zeman et al. 2006). We expanded our coding to include not only the task itself but also the time span before the researcher entered the room with the Transparent Box and the brief period after the box is removed and the task is complete. Positive engagement, help-seeking behaviors, and recovery speed were among the newly added behaviors. Each behavior was coded using a 4-point scale for frequency: "never, rarely, sometimes, always", and a 3-point scale for intensity: "mild, moderate, or marked", (Hagstrøm, et. al, 2019). Each video-recorded episode will be coded by two trained raters, and reliability assessed using intraclass correlations. So far, approximately 20% of the episodes from our dataset have been coded.

We anticipate high levels of interrater reliability (ICCs > .70), and that our coding scales will capture adequate variability in child ER. To validate our coding system, we will correlate our coding scores with children's reports on the Children's Emotion Management Scales (Zeman et al., 2002), and we expect modest to moderate correspondence

691

## The impact of early-life adversity on cognitive outcomes among HIV-exposed and HIV-unexposed children in Malawi

Maria Crespo-Llado<sup>1</sup>, Andrea Buchwald<sup>2</sup>, Limbika Maliwichi<sup>1,3</sup>, Christabell Mdhuli<sup>4</sup>, Chilungamo Mchakama<sup>4</sup>, Supriya Bhavnani<sup>5</sup>, Debarati Mukherjee<sup>6</sup>, Miriam Laufer<sup>2</sup>, Melissa Gladstone<sup>1</sup>

<sup>1</sup>University of Liverpool, Liverpool, United Kingdom. <sup>2</sup>University of Maryland, Baltimore, USA. <sup>3</sup>University of Malawi, Blantyre, Malawi. <sup>4</sup>Blantyre Malaria Project, Blantyre, Malawi. <sup>5</sup>Sangath, Goa, India. <sup>6</sup>Indian Institute of Public Health, Bangalore, India

### Abstract (max 500 words)

**Background:** Recent studies estimate that nearly 250 million children in low- to middle-income countries are at risk of not reaching their full developmental potential due to the experience of adversities early in life. Evidence suggests that adverse childhood experiences (ACEs) can compromise cognitive development, leading to long-lasting consequences such as poor academic achievement. Children exposed to HIV in utero are also at higher risk of neurocognitive delays compared to unexposed children. Yet, the extent of this delay and the contribution of biological and psychosocial factors is unclear since HIV infection and adversity often correlate. Here we report preliminary findings from an ongoing longitudinal cohort study (REFINE) that evaluates the impact of HIV exposure in utero and psychosocial factors on neurocognitive development in Malawi. The talk will focus on the relationship between ACEs and cognitive outcomes.

**Methodology:** Mother and child dyads were recruited at nine months of age and are continually followed up every six months until age 5. The sample comprises two exposure groups: a) children born to HIV-infected women (n = 66), and b) children born to uninfected women (n = 9). Exposure to adversity was assessed during a lab visit at 36- or 42-months of age using the Childhood Psychosocial Adversity Scale (CPAS). Child cognitive outcomes were measured at 42-months using a gamified assessment tool known as DEvelopmental assessment on an E-Platform (DEEP), consisting of 14 games. The analysis controlled for several covariates, including the child's sex and age at assessment, their mother's HIV status and education level, and the child's prior experience with screens.

**Results:** Analysis was conducted on 76 children (36 females, 47%) with a mean CPAS score of 28.9 (SD = 16.4) out of 188 and a mean DEEP total accuracy score of 0.26 (SD = 0.15) out of 1.00. Individual DEEP game accuracy scores ranged from 0.03 (Sequence Recall game) to 0.51 (Popping Balloons game). Cognitive ability (DEEP scores) was positively predicted by maternal education and previous use of screens. These variables were unrelated to adversity (CPAS). Adversity and cognitive ability were negatively associated at 42 months ( $p < 0.05$ ); each unit increase in adversity was associated with a decrease of 0.2 units in DEEP total accuracy. The Location Recall game primarily accounted for this relationship.

**Conclusion:** In line with previous studies, early adversity had a negative effect on children's cognitive outcomes at 42 months. We will discuss these results considering different types of childhood adversity. We expect to expand our analysis in the following months as we recruit more children, particularly for the HIV-unexposed group.

693

## Father involvement and mothers' family-work conflict: The protective role of authoritative fathering.

Maria Costa<sup>1</sup>, Lígia Monteiro<sup>1</sup>, Carolina Santos<sup>1</sup>, Nuno Torres<sup>2</sup>

<sup>1</sup>ISCTE-IUL, Lisbon, Portugal. <sup>2</sup>ISPA-Instituto Universitário de Lisboa, Lisbon, Portugal

### Abstract (max 500 words)

The main goal of the study was to assess the moderating role of parenting styles (authoritative/authoritarian) in the association between father involvement (direct care, indirect care, teaching/discipline), and mothers' conflict associated with managing work/family roles. Sociodemographic variables from child, parents and family were controlled.

**Method:** Participants: Three hundred and one Portuguese mothers and fathers, with preschool-aged children (56% boys) participated in the study. All parents were either married or cohabiting. All children attended daycare programs, and none had identified developmental delays or special educational needs. Instruments and Procedures: Mothers reported on a Sociodemographic questionnaire and on the Combining Work and Family Questionnaire (Marshall & Barnett, 1993; NICHD, 1991; Martins et al., 2008). Both mothers and fathers independently reported on the Parental Involvement Scale: Caregiving and Socialization Activities (Monteiro et al., 2008). Due to high ICC (>.74) between mothers' and fathers' reports a composite measure was calculated by averaging both. Fathers described their own parenting styles using the Parenting Styles and Dimensions Questionnaire – PSDQ (Robinson et al., 2001; Pedro et al., 2015).

**Results:** Descriptive analyses were performed for father involvement, father's parenting styles, and mother's work/family balance (Table 1). Associations between the sociodemographic variables, father involvement, father's parenting styles, and mother's work/family balance were tested through Pearson correlations (see Table 2). Considering this analysis, we regressed the Mother Strains scale on parenting styles (father), father involvement dimension, controlling for relevant sociodemographic variables. We performed two OLS hierarchical multiple regression analyses using the authoritative parenting style as a predictor in one and the authoritarian style as a predictor in the other, plus the father involvement variables (direct care, indirect care, and teaching/discipline). We also included the interaction terms between the two parenting styles (authoritative and authoritarian) and the three dimensions of father involvement, hence testing for moderation of these variables on Mothers' strains. Both models attained a significant amount of explained variance (Tables 3 and 4). There was no direct and unique effect of parenting styles on mothers' strains. In contrast, mother working hours had a positive and significant effect in increasing mothers' strains in both models; greater father involvement in the child's teaching/discipline significantly decreased mothers' strains, in both models. Regarding the interaction terms, we have found statistically significant interactions between the authoritative fathering style and two dimensions of father involvement: direct care and teaching discipline (Figures 1 and 2). **Discussion:** Results will be discussed in terms of the impact that fathers' roles and involvement may have in the family system, and for mothers balancing multiple roles in the family and at work.

696

### **Anxiety during the COVID-19 outbreak - a longitudinal study**

Violeta - Stefania Rotarescu

University of Bucharest, Bucharest, Romania. MemoryLab, Bucharest, Romania

#### **Abstract (max 500 words)**

The current longitudinal study aims to identify the factors that have influenced the variance of the level of anxiety state during isolation, anticipatory anxiety, and the factors that have affected the variance of the anxiety trait measured at the beginning and the end of the lockdown. To this end, the subjects (N = 495) answered questionnaires assessing anxiety traits (before and after the lockdown), anxiety state (seven repeated measures over the course of 10 weeks), anticipatory anxiety, resilience, experiential avoidance (four repeated measures), as well as the recollection of the isolation period. Data were analyzed with R-type path analysis. The results indicate that the anxiety trait level is significantly lower at the end of isolation, compared to the first measurement. This decrease is moderated by the emotional reframing of the social isolation period. The anxiety state variance was mainly influenced by the anxiety trait level (1.06) and experiential avoidance (0.23). The anticipatory anxiety was influenced by the anxiety trait (0.23), the experiential avoidance (0.18), living environment (0.13), and cohabitation arrangements (0.13), as well as by the way people framed the home isolation time (0.13). The results may suggest an intervention in pandemic crises or similar situations.

698

### **Adverse Childhood Experiences and Psychological Well-being of Adolescents in Ibadan Metropolis: The Mediating Roles of Gratitude and Self-compassion.**

Adebunmi Oyekola

University of Ibadan, Ibadan, Nigeria

#### **Abstract (max 500 words)**

Abstract

Background: Adverse childhood experiences (ACEs) are remarkably common, and majority of children experience at least one adversity while growing especially in low-and middle-income countries. ACEs not only include all forms of physical and emotional maltreatment, sexual abuse, neglect and exploitation but it also include exposures to domestic violence, parental divorce or incarceration, caregivers alcohol or substance disorders that deprive children of the security and emotional support they need for healthy development. However, most studies have been conducted within a psychopathological framework and

focused on its role in exacerbating negative outcomes. Its adverse effect on adolescent's psychological well-being, gratitude, and self-compassion is relatively underexplored.

**Objective:** Guided by attachment theory and broaden-and-build theory of positive emotions, this study seeks to examine the relationship between adverse childhood experiences and psychological well-being using a multiple mediation model that included self-compassion and gratitude as hypothesized mediators.

**Methods:** A sample of 300 in-school adolescents (37% males and 63% females; age ranged from 12 to 20,  $M_{age}=15.98$  yrs,  $SD = 1.47$ ) completed the questionnaires regarding demographics, adverse childhood experiences, self-compassion, gratitude and psychological well-being. Data was analyzed using Smart-PLS3.

**Results:** The results indicated the prevalent rates as follows; emotional abuse (73.3%), physical abuse (68%), sexual violence (33.3%), emotional neglect (62%), physical neglect (41.7%). Others are separation (28.7%), domestic violence (40.3%), substance abuse (25%), psychiatric (26.7%) and incarceration (18.3%). Bivariate correlation showed that (a) adverse childhood experience (ACE) was negatively associated with psychological well-being and self-compassion, but negatively associated with gratitude. Also, self-compassion was negatively related with gratitude. However, all the three variables (adverse childhood experiences, self-compassion and gratitude) were positively correlated with adolescents' psychological well-being (PWB) (b) Self-compassion revealed a parallel mediated link between adverse childhood experiences and psychological well-being. Meanwhile, gratitude showed no significant mediated link between adverse childhood experiences and psychological well-being.

**Conclusion:** The study concluded that self-compassion mediate the association between adverse childhood experiences and psychological well-being of adolescents.

**Keywords:** Adolescents, Adverse Childhood Experiences, Gratitude, Psychological well-being, Self-Compassion

**700**

## **The effect of devoting resources among preschool children: How sense of wealth determines unethical behavior and prosocial behavior**

Dariusz Karaś

Cardinal Stefan Wyszyński University, Warsaw, Poland

### **Abstract (max 500 words)**

Numerous of studies with adults indicates that the state of being rich or poor affects immoral behaviors, propensity to risk taking, social perception of self and others or cognitive skills such as decision making, perception and memory. Furthermore people who perceive themselves as rich are less pro-social than those who describe themselves as belonging to the poor class. Studies on the impact of feeling rich or

poor have been conducted so far only with the participation of adults. It seems reasonable to assume that the effects of this influence on pro-social attitudes and immoral behaviors result from socialization and cultural influences, but it is not known how early these influences reveal themselves. However there are studies which show that children's preference for people with more resources, but there is very little studies on how having more or less resources affects children's behavior towards others. In our study we verify whether preschool children who experimentally built a sense of being rich or poor would present different social behaviors. We focused on unethical behaviors (prone to cheating) and pro-social attitudes. In the study 78 children took part, aged of 4-6 years ( $M = 57.17$  months,  $SD = 6.38$ ), middle-class families living in a large urban area, randomly assigned to two experimental groups. As resources are an economic category, to conduct analysis we used econometric analysis tools. We obtained the result which indicates a statistically significant difference in the tendency to cheat between a group of children with created sense of wealth and a group with a sense of poverty and pro-social behavior. Our research has shown that children who felt rich gave more resources to the anonymous child than those who felt poor. It seems that we are dealing here with the effect of interaction of unethical behavior and pro-social attitudes. Children who cheated in the experimental game, were willing to pass more resources to another child. The mechanism that explains this effect is the phenomenon of moral cleansing, according to which people are inclined to ethical behavior after behaving in an immoral way. Then, based on the obtained data, we calculated the probability of transferring resources to the absent person relative to previous (ethical or not) behavior. The results show that children with created sense of wealth are more likely to cheat than children with a sense of poverty. The probability of transferring resources to the absent person grown when previous behavior was unethical.

**702**

## **Are Cool and hot executive functions associated with scientific literacy in the preschool years?**

Aashna Doshi<sup>1</sup>, Sabina Weinert<sup>1</sup>, Manja Attig<sup>2</sup>

<sup>1</sup>University of Bamberg, Bamberg, Germany. <sup>2</sup>Leibniz Institute for Educational Trajectories, Bamberg, Germany

### **Abstract (max 500 words)**

Increasing research has pointed to a relationship between executive function abilities and scientific literacy in the preschool years. However, not many studies have examined the combined contribution of the cool and hot facets to scientific literacy in this age group. This is followed by fewer studies controlling for the contribution of other influencing factors. As a result, this study shall analyse these associations by focusing on the two facets of executive functions and their contribution to preschool scientific literacy. More specifically, the study shall analyse this among a sample of pre-schoolers from the German National Educational Panel Study (NEPS). The underlying association shall be analysed by performing various hierarchical regression models where the role of (i) the hot executive facets (ii) cool executive facets with the cool executive function facets (iii) cool and hot facets and control variables to their developing scientific literacy shall be determined. The results shall be compared to another set of hierarchical regression models that would explain the unique variance of the cool executive function

facets over and above the effects of cool executive function and control variables. The present study expects various facets of hot executive functions and cool executive functions to be significantly related to preschool scientific literacy over and above the effects of the various control's variables. These findings could be used in the implementation of specific early intervention programs, especially during the preschool years that could help strengthen this association even further.

**703**

### **Maternal perceptions on family and school inclusion of children with Attention Deficit Hyperactivity Disorder**

MARIA KYPRIOTAKI, MARIA MARKODIMITRAKI, GEORGIOS-NIKOLAOS FIORAKIS

University of Crete, Rethymnon, Greece

#### **Abstract (max 500 words)**

Raising a child with Attention Deficit Hyperactivity Disorder (ADHD) is a challenge for the family, primarily faced by parents, due to the symptoms such as inattention, hyperactivity and impulsivity (APA, 2013). ADHD has significant implications in several areas such as problems in children's relationships with parents and significant deficits in the school setting. Research data have also shown problems among family members' dynamics, as well as poor relationships with teachers and peers. The aim of the present qualitative study was to explore mothers' perceptions towards the inclusion of their child with ADHD in the family and school. Participants were two mothers of children with ADHD. They participated in the research voluntarily, after their anonymity was ensured and their written consent was given. To conduct the study, the use of the semi-structured interview (five interviews in total) was chosen. Additionally, Thematic Analysis (Braun & Clark, 2006) was used to process and describe the data. Several stages involved familiarization with the data through several readings of the interviews' transcripts, summaries of key-points from each interview that provided crucial information, formed in patterns followed by the coding of the data. These codes were then sorted into themes and subthemes. The analysis of the results revealed three dominant themes for the perceptions of mothers of children with ADHD in detecting the role of family and teachers regarding inclusion of these children: Acceptance of diversity and children with ADHD, Relationship with teachers, Influence of teachers in inclusive education. Results of the present study showed that mothers of children with ADHD face multiple issues regarding their child's acceptance and core symptoms; they also reported the crucial role of teachers due to the fact that they were involved in the educational process and students' with ADHD socialization with their peers. These findings can be useful for children with ADHD and their families, as well as teachers, professionals and services that aim at designing, implementing, and evaluating appropriate supportive intervention programs to provide support and care to children with ADHD and their families.

705

### **Adult playfulness in relation to life experiences**

Monika Skerytė-Kazlauskienė<sup>1</sup>, Giedrė Sujetaitė-Volungevičienė<sup>2</sup>

<sup>1</sup>Vilnius University, Vilnius, Lithuania. <sup>2</sup>Vytautas Magnus University, Kaunas, Lithuania

#### **Abstract (max 500 words)**

Researchers find that playfulness is important not only in childhood but also in adult life. This study was developed to analyze, how adult playfulness is related to the main life experiences, personality traits, relations with others, and well-being.

Totally 404 participants took part in the research, 83 % of them were women, 62 % had higher education, 47 % of them were studying, and 69 % were currently working. 47 % were working with children and 35 % were teachers. The research was conducted in Lithuania via a survey. Methods used: Adult Playfulness Trait Scale, WHO-5 for wellbeing, KMB Short Locus of Control Scale, Adult Attachment Scale, and Parental Bonding Instrument. All instruments were translated into Lithuanian.

We found out, that playfulness is related to the internal locus of control, close relations with others, seeing own parents as less protective in childhood, and better well-being during the last two weeks. More playfulness was reported by older, also by those, who were currently working vs nonworking. Respondents, who reported experiencing some traumatic events in their childhood or adult life, also showed more playfulness in adulthood. Childhood play experiences also were connected to playfulness, also having their own children in adulthood. Working with children does not have any differences in playfulness, but being a teacher does – teachers reported more playfulness. Subscales of playfulness give some more information on these relations.

The APTS scale looks at playfulness as a personality trait, but our research shows that playfulness might have some interesting relations not only with our traits but also with our relationships and experiences.

708

### **Participation in organized civic engagement activities during high school predicts academic success and correlates with positive development**

Nessa Ghassemi-Bakhtiari<sup>1</sup>, Aurélie Thuot-Jolicoeur<sup>1</sup>, Ariane Chevalier-Pomerleau<sup>2</sup>, Frederick L. Philippe<sup>1</sup>

<sup>1</sup>Université du Québec à Montréal, Montréal, Canada. <sup>2</sup>Université de Montréal, Montréal, Canada

#### **Abstract (max 500 words)**



Civic engagement is defined as individual or collective actions done with the purpose of positively impacting or transforming one's society or community. During high school, such activities generally involve participating in one or several activities pertaining to themes relating to Democracy, Ecology, Social Solidarity, or Pacifism (DESP). Few studies have investigated the differentiated impact of participating in civic activities on academic success and youth development in comparison to other types of activities (such as sports). In an era of climate and socio-ecological changes requiring the civic engagement of populations across the globe, youth civic engagement has become a central objective targeted by youth policies in many countries. Though civic engagement during high school has been associated with a variety of positive outcomes – such as the development of prosocial behaviour, academic success, and psychosocial wellbeing – most studies have been cross-sectional and did not separate civic activities from other types of activities. This study investigated the longitudinal effects of participating in civic engagement activities on the academic success and wellbeing of high school youth. A total of 1650 high school adolescents aged 12 to 17 responded to a questionnaire measuring their participation in civic engagement activities, other activities (e.g., sports, arts), values, motivation, civic behaviour, and other measures of control. Academic grades at the end of the year and from the previous year were also collected. Hierarchical regression analyses were conducted. Results demonstrated that participation in a civic activity over the year predicted an increase in academic grades over the year, independently from the participation in other types of activities and after controlling for several potentially confounding variables, such as adolescents' motivation, self-esteem, and socio-demographic variables. Further investigation revealed that autonomous or controlled motivation for civic or non-civic activities were the most important predictors of psychological wellbeing. Moreover, for high school adolescents who were engaged in both types of activities, autonomous motivation for civic activities was a better predictor of wellbeing. The findings of this study highlight the importance of youth participation in organized activities and its specific effect on their academic success and wellbeing.

**709**

### **Age-related changes in the functional structure of actions**

Łukasz Krzywoszański, Natalia Józefacka

Pedagogical University of Krakow, Krakow, Poland

#### **Abstract (max 500 words)**

The study aimed to determine whether the functional structure of function in adults shows age-related changes. 461 adults from the general population aged between 18 and 88 participated in a cross-sectional web-based anonymous survey. The Auxiliary Actions Scale was used to assess action styles, understood as individual differences in the functional structure of activities. The total score on the Auxiliary Actions Scale and the scores on the preliminary, and protective activities subscales showed an increasing trend with age. This may be indicative of developmental changes in the functional structure of actions in adults. However, the effect found needs to be confirmed in longitudinal research.

710

## School climate and migrant students' psychosocial wellbeing in secondary education

Kevin van der Meulen<sup>1</sup>, Cristina del Barrio<sup>1</sup>, Pablo Puyol<sup>1</sup>, Rocio Herrero Romero<sup>1</sup>, Laura Lara<sup>2</sup>, Laura Granizo<sup>1</sup>, Miruna Bivol<sup>1</sup>

<sup>1</sup>Universidad Autonoma de Madrid, Madrid, Spain. <sup>2</sup>Universidad de Sevilla, Sevilla, Spain

### Abstract (max 500 words)

Students' perceptions of their school's climate give insight into the school's role in enabling and improving student's wellbeing. Although school climate is a broad concept without a straight-forward, commonly accepted definition, Thapa et al. (2013) proposed several dimensions that have been frequently referenced, such as safety, teaching and learning, relationships in school (e.g., respect for diversity, support received from teachers) and institutional environment. Part of the perceptions in this last area relate to "school connectedness", which includes the extent to which students believe their teachers and schoolmates care about them (Thapa et al., 2013). Among 12-17-year-olds in public Australian high schools, Aldridge et al. (2016) found school connectedness to be positively related with students' wellbeing; other research has shown strong associations with health outcomes (Thapa et al., 2013). In addition, the perception of how diversity is respected in one's school or on the contrary, of discrimination situations are indicators of a positive or hostile school climate.

The significant increase of the number of migrants entering Spain in recent years is reflected in the proportion of students with a migrant background in primary and secondary school. In 2020, 10% of all learners were first- or second-generation migrants in the region of Madrid (Fundación Ramón Areces, 2020). Within the frame of a wider research and intervention project, SURE (Strengthening social support systems for migrant and refugee adolescents in secondary education), we will present results of our study on the impact of the school climate on the psychosocial wellbeing of students with a migrant background. While education can work as a source of resilience for young migrant students, they are also at risk for not being treated with respect in schools, such as being bullied by their peers (e.g., Strohmeier et al., 2011; Maynard et al., 2016). In relation to school climate, Caravita et al. (2021) found that for adolescents with more contact with migrant schoolmates, bullying migrant peers was associated with lower perceived acceptance of cultural diversity at school. However, there is a need for more research in order to get a better grasp on the complex role of school context on the wellbeing of adolescents with a migrant background.

The present study, which includes a participatory research methodology involving migrant adolescents, aims at showing a comprehensive picture of school climate in its multidimensional nature in relation to migrant students' psychosocial wellbeing. Participants are secondary school students from metropolitan areas of Madrid with high proportions of migrant population. Data are currently being collected through questionnaires in mainstream secondary, as well as vocational schools. Results will be presented that are related to safety and institutional atmosphere, peer- and teacher-student relationships, acceptance of diversity, discrimination experiences, school engagement, school-family relations and received social support. We will discuss our results with implications for good school practice and larger intervention programs.

711

## The longitudinal association between the time of smartphone use and positive and negative affect in early adolescence

Marina Merkaš<sup>1</sup>, Ana Žulec<sup>1</sup>, Matea Bodrožić Selak<sup>1</sup>, Vanesa Varga<sup>1</sup>, Marina Kotrla Topić<sup>2</sup>, Katarina Perić Pavišić<sup>3</sup>, Susanne Schulz<sup>4</sup>, Stefanos Mastrotheodoros<sup>5</sup>

<sup>1</sup>Department of Psychology, Catholic University of Croatia, Zagreb, Croatia. <sup>2</sup>Institute of Social Sciences Ivo Pilar, Osijek, Croatia. <sup>3</sup>Institute of Social Sciences Ivo Pilar, Zagreb, Croatia. <sup>4</sup>Research Institute for Child Development and Education, University of Amsterdam, Amsterdam, Netherlands. <sup>5</sup>Utrecht University; University of Crete, Athens, Greece

### Abstract (max 500 words)

Smartphone overuse can put adolescents at risk of mental health problems. Previous studies on the longitudinal association between time spent using smartphones and adolescent well-being showed different results. This study examined the longitudinal associations between the time of smartphone use and positive and negative affect in adolescents using a cross-lagged panel model (CLPM). The data comes from a three-wave longitudinal study of the project "Digital technology in the family: patterns of behaviour and effects on child development". Participants were Croatian adolescents (N = 255; 59.8% girls;  $M_{\text{age T1}} = 12.24$  years; mostly medium to high socioeconomic backgrounds). Adolescents reported their positive and negative affect on the PANAS-C scale (Ebesutani et al., 2012) and marked the average time they used their smartphones per day on a timeline constructed for the purposes of this study in all waves (W1: Dec. 2021–Mar. 2022; W2: May–Jun. 2022; W3: Nov.–Dec. 2022). The average results show adolescents spend around 3 hours per day using smartphones and report a little negative and moderate positive affect across all three waves. More time spent using a smartphone was associated with higher negative affect in the first and second wave. In the second and third waves, more time spent using a smartphone was associated with lower positive affect. More time spent using a smartphone at W2 was negatively correlated with positive affect at W3. More negative affect at W2 was positively correlated with more time using a smartphone at W3. The results of CLPM testing revealed no significant longitudinal cross-lagged association between the time of smartphone use and positive and negative affect, suggesting that affect and time of use were not associated longitudinally in this sample of early adolescents. The finding about the significantly correlated errors between the time of smartphone use and negative affect in all three waves and the time of smartphone use and positive affect in two waves may contribute to an explanation of the common covariation in smartphone use and mood over a period in adolescence.

717

## Longitudinal development of global self-worth and peer relationship during early adolescence: cross-lagged analysis

Chika Yamamoto

College of Nagoya Bunri University, Nagoya, Japan

### **Abstract (max 500 words)**

#### Purpose

Are there any changes in global self-worth during early adolescence? Previous studies had shown that many junior high school students declined in global self-worth, and there were few junior high school students who kept high global self-worth during early adolescence (Yamamoto, 2019). What kind of factor does affect global self-worth? The purpose of this study was to examine how peer relationship affected global self-worth during early adolescence. This study examined the bidirectional relationship between global self-worth and peer relationships to determine whether global self-worth is affected by peer relationships or whether peer relationships affect global self-worth by using cross-lagged analysis.

#### Method

Global self-worth was the degree to which the adolescent likes oneself as a person and is happy with oneself. Responses ranged from 1 to 6, with higher scores indicating more positive self-evaluations. Peer relationship was assessed 'attachment' and 'anxiety for peer relationship'. Attachment was the security and warmth of the relationship with friends. Anxiety for peer relationship was the tendency to care or worry about the relationship with friends. Responses ranged from 1 to 6. The questionnaire was administered at three different times, repeatedly. Time1 the second term of seventh grade. Time2 was the second term of eighth grade. Time3 was the second term of ninth grade. The analyses reported here are based on 431 junior high school students (188 males and 243 females). They answered the questionnaire at all three times.

#### Results and Conclusions

Cross-lagged analysis assessed whether either of the global self-worth predicted peer relationship, or if peer relationship predicted global self-worth. Results indicated global self-worth and 'attachment' decreased. 'Anxiety for peer relationship' did not change. Global self-worth did not predict attachment, nor did attachment predict global self-worth. This result was the same for both males and females. Global self-worth predicted 'anxiety for peer relationship' from Time 2 to Time 3, for males. While for females, 'anxiety for peer relationship' predicted global self-worth from Time1 to Time2. Thus, the association between global self-worth and peer relationships in early adolescents is likely to differ by aspect. Attachment in peer relationships does not appear to predict global self-worth. Anxiety for peer relationship is associated with global self-worth, but this association is likely to differ by gender.

**719**

### **Intervention programs for improving adolescent emotional competencies and psychosocial well-being: a systematic review**

Miruna Bivol<sup>1</sup>, Laura Quintanilla<sup>1</sup>, Rocío Herrero Romero<sup>2</sup>, Laura Granizo González<sup>2</sup>, Yulia Shenderovich<sup>3</sup>

<sup>1</sup>Universidad Nacional de Educación a Distancia (UNED), Madrid, Spain. <sup>2</sup>Universidad Autónoma de Madrid (UAM), Madrid, Spain. <sup>3</sup>Cardiff University, Cardiff, United Kingdom

### **Abstract (max 500 words)**

School is the first institutional and social space in which migrant students engage in their cultural adaptation and the main place of contact between migrant and native students, making it the ideal place for programs that aim to promote integration and inclusion (Eurydice, 2019). The recent umbrella review by Meroni and Velasco (2023) highlights the enormous potential of school-based interventions based on a holistic approach to improve the well-being of migrant adolescents and youth. However, despite the numerous school-based programs that have been developed to prevent socioemotional and behavioral problems and to promote the health, education, and adjustment of migrant students, little is known about the implementation process (Goldberg, 2019; Meroni and Velasco, 2023). The purpose of this study is to conduct a process review of school-based interventions to improve the psychosocial and emotional well-being of migrant adolescents and youth in high-income countries from a whole-school approach; and thus "open the white box" to obtain a clearer picture of how and why certain elements contribute to the success or failure of a particular intervention (Stame, 2004). This research will be conducted in accordance with the PRISMA statement. The MRC's Process Evaluation of Complex Interventions (Moore et al., 2015) guide and Template for Intervention Description and Replication (TIDieR) guide and template will be used to plan, conduct, and report the results of this process review. Theoretical approaches underpinning such programs, training materials, intervention procedure, administrators and recipients, how, where and when the intervention is delivered, duration of interventions, adaptations and modifications (if any), fidelity and degree of success of the interventions will be studied. The evidence presented in this study can assist researchers, practitioners, and policy makers in making decisions in the areas of education and health related to migrant adolescents and youth.

**722**

### **Address emerging situational factors: Mental health in contemporary higher education**

Megan Zhang

Brunel University London, London, United Kingdom. University College Duclin, Dublin, Ireland

### **Abstract (max 500 words)**

**Objective.** Students' mental health in higher education is an area of rising concern worldwide. Assuming academic demands as the main cause, the extant research and practices focus on formulating coping strategies such as awareness promotion and early intervention on campus. Nevertheless, higher education has been consistently demanding, and it cannot justify why students are increasingly impacted by mental problems. This study purports to explore whether and how contemporary higher education has transformed situational factors that influence students' perception of higher education and themselves, resulting in increasing mental health crises.

### **Method.** Autoethnography

Results. Higher education is perceived as the human experience that facilitates students' self-discovery, which informs their approach to lifetime learning and development. Nevertheless, contemporary higher education is transforming situational factors that are relevant to students' self-discovery. First, specialisation and standardisation are reducing students' self-discovery adventure into the acquisition of grades and diplomas via the anchoring effect and availability heuristic. While self-discovery involves pluralistic trials, the acquisition of grades and diplomas becomes a unified game that nobody can afford to lose. The narrowed self-concept makes students becoming more vulnerable to unachieved academic goals, contributing to anxiety and depression. Second, with the commercialisation of higher education, students increasingly identify themselves as customers rather than the co-creators of higher education, reducing their agency in the journey of self-discovery and constructive interactions with academics, contributing to anxiety and depression. Third, commercialisation also changes long-term self-discovery to short-term narrowly defined business objectives, pushing students to maximise their profit (grades and diploma) with the least cost (engagement), reducing their purpose in life and contributing to their anxiety and depression. Fourth, by providing preferential treatment in academic assessment, the standardised administration processes reward mental issues rather than intervening in them, demotivating students from improving their mental states.

**Conclusions.** Contemporary higher education may introduce situational factors that systematically impact students' mental health. Rather than only coping with the consequent symptoms, it is critical to restore the richness of self-discovery and students' agency in self-discovery in higher education. Without denying the benefits of specialisation and standardisation, this study suggests higher education cope with students' cognitive biases triggered by specialisation and standardisation and help them establish and maintain a holistic view of self-construction.

723

### **Feasibility of the Mindkiwi online bicultural mindfulness intervention for children and families with Attention-deficit/ hyperactivity disorder in Aotearoa New Zealand.**

Mairin Taylor<sup>1</sup>, Kelly Tikao<sup>2</sup>, Jase Te Patu<sup>3</sup>, Cheyenne Scown<sup>1</sup>, Aaron Hapuku<sup>1</sup>, Kelly Carrasco<sup>4</sup>, Annabel Ahuriri-Driscoll<sup>1</sup>, Melany Tainui<sup>1</sup>, Joseph Boden<sup>2</sup>

<sup>1</sup>University of Canterbury, Christchurch, New Zealand. <sup>2</sup>University of Otago, Christchurch, New Zealand.

<sup>3</sup>m3mindfulness.com, Wellington, New Zealand. <sup>4</sup>Victoria University, Wellington, New Zealand

#### **Abstract (max 500 words)**

Objective of the study:

ADHD is a common neuro-developmental disorder with associated risks of poorer outcomes (Biederman et al, 2012). Child and family mental health services in Aotearoa New Zealand struggle with meeting the

needs of children with ADHD, particularly during the COVID-19 pandemic. This feasibility is a merging of mindfulness strategies for ADHD and mātauranga Māori, through a He Awa Whiria- braided rivers model, whereby indigenous knowledge is interwoven with Western-‘adopted’ knowledge on an equitable level (MacFarlane, 2015). Mindkiwi has been adapted to a free online format to increase accessibility during the pandemic.

#### Methodology:

12 children aged 8-12 with ADHD and their whānau (families) are recruited to complete the 8-week online programme. Weekly sessions (30mins long for parents/ caregivers, 20mins for children) focus on learning key aspects of mindfulness (breathing, movement and cognitively based) with underlying stories around indigenous manu (birds) and related knowledge.

#### Results expected:

This mixed methods study quantitatively compares pre-post measures of behavioural and core ADHD symptoms and psychological and family functioning among all family members (using paired t-tests) in addition to qualitative feedback regarding acceptability of the programme and barriers to change. As this study is in progress, available data from completed participants will be presented.

#### Conclusion:

Increasing international evidence demonstrates the efficacy of mindfulness among children with ADHD (Zhang et al, 2017) in addition to adjunctive mindful parenting programmes (Siebelink et al, 2022). The Mindkiwi programme has the potential to fill a significant gap in whole of whanau/ family early interventions for ADHD in New Zealand. The equitable development of psychological interventions with indigenous knowledge and genuine research partnerships enhances both the appropriateness (Kana & Tamatea, 2006) and efficacy (Muriwai, Houkamau & Sibley, 2015) in bicultural nations. This study serves as a pilot for a larger RCT study planned for 2023-5 with over 120 children with transdiagnostic emotion and behavioural dysregulation.

**725**

### **Predictors of children’s outgroup prosocial behaviour towards socially relevant groups**

Deidre Moran<sup>1</sup>, [Vivian Liu](#)<sup>1,2</sup>, Laura Taylor<sup>1</sup>

<sup>1</sup>University College Dublin, Dublin, Ireland. <sup>2</sup>New York University, New York City, USA

#### **Abstract (max 500 words)**

Although children are observed to engage in prosocial acts from infancy (Dunfield & Kuhlmeier, 2010; Warneken & Tomasello, 2006), an ingroup bias is also observed from a young age (Buttelmann & Böhm, 2014), resulting in less outgroup prosocial behaviour. Understanding children’s prosocial behaviour

towards people who are different from them holds the potential to increase intergroup harmony and contribute to the development of a more peaceful society (Taylor, 2020; van Leeuwen & Zagefka, 2017). We conducted a systematic review to examine the targets, types, predictors, and conditions surrounding outgroup prosocial behaviour among children aged 3 – 12 towards socially relevant outgroups.

In this review, first, we present definitions of prosocial behaviour and argue for the need to define it according to the type, target, and context of the behaviour. Second, we highlight four specific theoretical frameworks relevant to understanding outgroup prosocial behaviour in childhood – Social Identity Development Theory (Nesdale, 1999, 2004), Social Reasoning Development Framework Development (Killen & Rutland, 2013; Rutland, Killen, & Abrams, 2010), Intergroup Contact Theory (Pettigrew, 1998), and Empathy-Attitudes-Action Model (Batson, Chang, Orr, & Rowland, 2002; Batson, Polycarpou, et al., 1997) – and propose the Developmental Peacebuilding Model (Taylor, 2020) as an integrative framework to understand outgroup prosocial behaviour. The DPM incorporates developmental and social theory, within the context of an ecological framework (Bronfenbrenner, 1992). Third, we present the systematic review methodology, followed by a synthesis of the relevant literature to examine the predictors of prosocial behaviour towards socially relevant outgroups during childhood, including individual-level, contextual and age-related factors.

A total of 24 studies were included in the narrative synthesis. There was variability in the targets of prosocial behaviour (i.e., who was the intended recipient of the act), highlighting the diverse social identities that children engage with, influencing prosocial outcomes. The target also ranged from an individual outgroup member to the collective outgroup. Furthermore, studies also varied in the types of outgroup prosocial behaviour assessed, including resource allocation, helping intentions, and collective prosocial behaviour. Finally, predictors of prosocial behaviour occurred at the individual and contextual levels. Individual-level predictors included contact, outgroup stereotypes, essentialist beliefs, empathy and mentalisation, fairness, and the cost of helping. Contextual factors included geographic proximity, reciprocity and collaboration, structural inequality, and intergroup conflict. These predictors offer additional insights into the theories and mechanisms of change in outgroup prosocial behaviour.

Our findings also reveal two main gaps in the literature future work should strive to fill: 1) the need for longitudinal designs that cross developmental periods and, 2) the importance of including culturally-relevant contexts. This type of research is vital in our divided world, as prosociality has not only personal and direct benefits for the helper and target (Eisenberg, 2006), but also promotes cooperative intergroup relationships in childhood has the potential for broader constructive, societal-level change (Moran & Taylor, 2021).

**726**

## **Nurturing Healthy Psychosocial Development in Spain's Refugee Communities: Assessing the Merits and Limitations of Spanish NGO-Administered Care Interventions**

Nidhi Patel, Cristina del Barrio

Universidad Autónoma de Madrid, Madrid, Spain



## **Abstract (max 500 words)**

### **Background**

Spain is home to 122,539 refugees, predominantly from Latin American, African, and Arab countries like Venezuela, Colombia, Morocco, Mali, and Senegal (World Bank, 2021). In their journeys within home countries and across international borders, refugees are more likely than the average person to experience sustained stress (Henkelmann et al., 2020). A 2017 study found that 60% of individuals entering Spain via the Western Mediterranean route had experienced some form of abuse as they traveled from their origin to host communities (CSIC and UNHCR, 2019). Discrimination and acculturation challenges upon arrival to Spain can further contribute to low levels of belonging among refugees (Agudelo-Suarez et al., 2009; Benavides, 2018). These experiences result in a significantly higher risk for depression, anxiety, and post-traumatic stress disorder (PTSD), conditions that can considerably interfere with daily life (Henkelmann et al., 2020).

Despite the urgent demand for psychosocial care in this population, precarious political circumstances, such as a lack of citizenship, often leave this population without access to proper healthcare. Even for Spanish citizens, Spain's health system poses challenges to accessing adequate mental healthcare. In comparison to other countries in the European Union, Spain dedicates lower levels of funding to mental health and has lower numbers of psychiatrists, psychologists, and other mental health professionals (Gabilondo et al., 2011). Furthermore, refugees face significant administrative, linguistic, and socioeconomic problems in accessing the little mental healthcare the Spanish health system does provide (Giacco et al., 2014).

### **The Current Study**

Spanish non-governmental organizations (NGOs) constitute one channel through which refugees access psychosocial care. Psychosocial care consists of counseling-based, educational, and social support services that target individual well-being and foster more inclusive community environments for refugees (Im et al., 2021). The primary aim of this study is to assess the merits and limitations of NGO psychosocial care practices within the Spanish context, a gap in existing research.

I use a mixed-methods approach. First, I administer two surveys, separately aimed at NGO staff members and refugee recipients of care across Spain. I ask nonprofit staff members about the nature of care provided, and any information their organization may have on the effectiveness of its past and present services. I ask receivers of care to self-report their psychological distress levels before and after obtaining NGO psychosocial care. Secondly, I conduct interviews with nonprofit employees and care recipients to more deeply probe existing barriers to care, and the broader impact of psychosocial interventions on well-being and belonging. Thirdly, I analyze data collected to determine the extent to which Spanish NGO psychosocial care design is reflective of theoretical and empirical findings in the psychology and neuroscience literature on interventions that promote healthy psychosocial development.

At ECDP, I will present both quantitative and qualitative results from this study. Although my project empirically focuses on Spain, refugees and immigrants around the world face social exclusion, abuse, and mental health challenges. This work sheds light on how displaced populations can access adequate psychosocial care, a necessity for healthy psychological and neurobiological development across the lifespan.

727

**Systematic review: Intrinsic emotion regulation and aggression in preschoolers.**Desirée Llamas-Díaz, Rosario Cabello, Pablo Fernández-Berrocal

University of Malaga, Malaga, Spain

**Abstract (max 500 words)**

Abstract: Aggression in early childhood (preschoolers) is related to behavior problems at present and later in life. Emotion regulation (ER) is the process used to manage and change if, when, and how (e.g., how intensely) one experiences emotions and emotion-related motivational and physiological states. Although ER is included as a component in different child aggression intervention programs, there is no recent systematic review of the relationship between both variables. Therefore, this systematic review explores the relationship between intrinsic ER and aggressiveness in preschool children to establish and consolidate the theoretical bases for future specific interventions to prevent aggressive behavior through the training of ER. Twenty-four studies met the inclusion criteria for this review. The results were classified according to the evaluation measure, the type of studies, gender, and socio-economic level. We found 33 effect sizes for the correlation between ER and aggression. Following Cohen's (1988) criteria for R correlations, 13 of these were small (-0.12 to -0.29), eight were moderate (-0.30 to -0.48), and 12 were high (-0.58 to -0.69). ER appears to be negatively related to aggressiveness in preschool children. Measurement method, gender, and age are essential factors in this relationship. We discuss possible future research lines, the study's limitations, and the implications of these outcomes at the preventive level.

728

**A Qualitative Study of Parental Reflection in Early Childcare Period**SAORI KOYAMA<sup>1</sup>, MASAKO MORIYAMA<sup>2</sup>, SACHIKO KOBAYASHI<sup>3</sup>, TOMOKO OBARA<sup>2</sup><sup>1</sup>Kansai Medical University, Osaka, Japan. <sup>2</sup>Ohkagakuen University, Nagoya, Japan. <sup>3</sup>University of Shizuoka, Shizuoka, Japan**Abstract (max 500 words)**

Purpose

This study aimed to clarify the details of daily parental interactions in the early childcare period by using the concept of reflection and to examine the related factors.

Method

The study participants were 10 pairs of parents who had a 2-month-old infant at the start of the study. We conducted an interview survey focusing on their infant's crying scenes at home at 2 and 4 months of age.

### Result

The results revealed that the parental reflections consisted of three categories: [Reflections on Oneself (PR): childcare policies / childcare behavior / evaluation of spouse]; [Reflections on Children by Parents (CR): children's characteristics / children's changes and growth]; and [Parents' Reflections on Themselves Through Other People (OR)]. Overall, [CR: children's characteristics] tended to be high at 2 months of age and [CR: children's characteristics / children's changes and growth] and [PR: childcare behavior / evaluation of spouse] tended to be high at 4 months of age.

The contents of parental reflection differed for each couple, and were classified into the following three types: Couples who talked about all reflection categories (overall reflection-type), couples who talked about PR and CR (parent and child reflection-type), and couples who talked about CR only (child reflection-type).

### Conclusion

Overall reflection-type mothers had childcare leave of less than a year and had already planned childcare before returning to work. In addition, they had expectations of and made adjustments concerning their husbands in regard to childcare. The characteristics of this type of father included that they could obtain childcare information from sources other than their wives (e.g., at work, at nursery school), and that they shared housework and childcare responsibilities with their wives.

## 730

### Socialization of Emotion Regulation in Preschool Classrooms: Do Peers Matter?

Tatiana Diebold<sup>1,2</sup>, Ann-Kathrin Jaggy<sup>1,2</sup>, Sonja Perren<sup>1,2</sup>

<sup>1</sup>Thurgau University of Teacher Education, Kreuzlingen, Switzerland. <sup>2</sup>University of Konstanz, Konstanz, Germany

#### Abstract (max 500 words)

The development of emotional competence is an important milestone during early childhood (Denham, 2018). Deficits in emotion regulation have been identified as having a long-term negative impact on children's social and academic development (Valiente et al., 2020). Young children develop effective self-regulation of emotions through the input of interaction partners (co-regulation) (Holodynski et al., 2013; Silkenbeumer et al., 2018). Therefore, early socialization experiences within and outside the family play a crucial role in the development and interindividual differences in emotion regulation skills. Many studies have provided evidence that parental socialization shapes early emotion regulation (Eisenberg et al., 1998). Caregivers and teachers also contribute to children's emotion-regulated outcomes (Valiente

et al., 2020). Relationships and interactions with peers have often been linked to children's outcomes. However, there has so far been no research on peers' role in children's emotional competence (Eisenberg, 2020). The current study aimed to gain initial insights about whether and how peers act as emotion socialization agents in preschool classrooms.

To address the research questions, a longitudinal study with three assessment points was conducted. 27 Swiss playgroups including N = 211 children (M = 43.3 months, SD = 6.5; 47% girls) participated in the study. Playgroup educators completed a questionnaire on children's emotion regulation, empathy, and prosocial behavior at each assessment point. They also provided up to three nominations of peers, with whom each child typically plays in the playgroup. To investigate whether children develop differently in their emotion regulation competence depending on the level of their peers' emotion regulation and empathic co-regulation, we used three different strategies. We calculated (1) the mean level of playgroup emotion regulation and empathic co-regulation by aggregating playgroup educator ratings of children enrolled in classroom, excluding the target-child score, (2) the mean level of children's closest friends' emotion regulation and empathic co-regulation, and (3) playgroup centrality scores, which were equal to the playgroup educator ratings of the child that has been nominated more often as a playmate. We hypothesized that the higher the mean playgroup, friends and centrality levels of emotion regulation and empathic co-regulation, the greater the increase in emotion regulation competence of individual children over time would be. To test the hypotheses, six multilevel growth models with cross-level interactions will be conducted, after the study has been preregistered (registration prior to analysis of the hypothesis).

First results will be presented and the role of peers for the socialization and developmental changes in preschoolers' emotion regulation competence will be discussed.

**731**

## **The roots of affective flexibility during adolescence: the role of inhibition and working memory**

Oana Mărcuș<sup>1,2</sup>, Raluca D. Szekely-Copîndean<sup>3</sup>, Laura Visu-Petra<sup>2</sup>

<sup>1</sup>Human Behaviour and Development Research Lab, Department of Psychology, Lucian Blaga University of Sibiu, Sibiu, Romania. <sup>2</sup>Research in Individual Differences and Legal Psychology (RIDDLE) Lab, Department of Psychology, Babeş-Bolyai University, Cluj-Napoca, Romania. <sup>3</sup>Department of Social & Human Research, Romanian Academy, Cluj-Napoca, Romania

### **Abstract (max 500 words)**

There are several studies stating that cognitive flexibility is a complex ability by showing that it is based upon working memory and inhibition skills. However, most of these studies did not take into account if this relation holds true when we look at executive functions in an affective context. The present study aimed to take a closer look at the relation between individual differences in affective flexibility and affective measures of inhibition and working memory in adolescents. Specifically, we employed three executive functioning tasks using emotional stimuli namely the Attentional Control Capacity for Emotion

(ACCE) task, the Emotional 2-back task and the Emotional Stroop task in order to assess affective aspects flexibility, working memory and inhibition during adolescence. A total of 110 of preadolescents and adolescents (54 girls), aged between 12 and 18 years old ( $M = 15.36$ ,  $SD = 2.07$  years) participated in this study. Firstly, our findings revealed that affective executive functions in general and affective flexibility in particular still continue to develop from middle childhood to late adolescence. Secondly, we found an interesting gender-related difference in terms of affective flexibility with boys displaying longer reaction times compared to girls when applying the emotional rule after performing a non-emotional, or a different emotional rule. This is the first study to show that affective flexibility is highly predicted by both inhibition and working memory processes at the level of accuracy performance and reaction time. In conclusion, our research provides valuable insights into how affective flexibility relates to affective aspects of inhibition and working memory during adolescence.

**732**

### **The relationship between attachment styles with symptoms of depression, alcohol abuse and Social connectedness: the role of mediators of loneliness in students of Bandar Abbas.**

nooshin taghinejad, samira mehni

Azad University, Bandar Abbas, Iran, Islamic Republic of

#### **Abstract (max 500 words)**

Objective of the study: This study was done aimed to investigate relationship between attachment styles with depressive symptoms, alcohol abuse and social connectedness : mediating role of loneliness in students of Bandar Abbas. Methodology: The research method was descriptive and path analysis. The statistical population included all students of Bandar Abbas city in 2022 that 203 people were selected by random sampling. Revised Adult Attachment Scale (RAAS), Beck Depression Inventory (BDI), the Alcohol Use Disorders Identification Test (AUDIT), Short form of the Social and Emotional Loneliness Scale for Adults (SELSA-S) and Lubben Social Network Scale (LSNS-12) were used for gathering data. Data analyzing was conducted with structural equation and also SPSS and AMOS software. Results obtained or expected: The results of direct effects showed that attachment styles have an effect on loneliness, depressive symptoms, alcohol abuse and social connectedness. Also, the loneliness has an effect on the depressive symptoms, alcohol abuse and social connectedness. The results of indirect effects showed that secure, ambivalent and avoidant attachment with the mediating role of loneliness had an indirect effect on depression with the rate of -0.080, 0.047 and 0.073 respectively, on alcohol abuse with the rate of -0.231, 0.134 and 0.211 respectively and on social connectedness with 0.137, -0.080 and -0.126. Conclusion: According to the findings of this research, it can be concluded that attachment styles can directly and indirectly affect the mental health of students.

733

## **"I feel guilty that we didn't do more to intervene": The impact of young peoples' experiences of bullying on their parents/ carers mental health.**

Nathalie Noret

University of York, York, United Kingdom

### **Abstract (max 500 words)**

Bullying in school is a frequent experience for many adolescents and one which is associated with poor mental health in both the short and long term. Parents/ carers are often viewed as a valuable source of social support for young people experiencing bullying. As such, advising those experiencing bullying to talk to their parents/ carers is a fundamental principle of many intervention programmes (Huang et al., 2019). However, the impact of young peoples' experiences of bullying on their parents'/ carers' mental health, and subsequently on their ability to support their child, is relatively unknown. The Stress Contagion effect is the transmission of affect between individuals in close relationships (Wethington, 2020). From this perspective, the negative impact of bullying experienced by their child can be transmitted to parents/ carers, subsequently impacting on their own mental health. Therefore, the aim of this study is to examine the stress contagion effect in parents/ carers of young people currently experiencing bullying in school.

Data are currently being collected as part of a larger study on parents/ carers reports of their child's experiences of bullying in school. Participants will be approximately 20 parents/ carers in the UK who complete an online questionnaire on the nature and impact of their child's experiences of bullying. As part of this project, participants are asked about the impact of these experiences on them and their families. The data are currently being collected, and responses to the qualitative question will be analysed using thematic analysis to explore the different impacts of bullying on parents/ carers.

The findings of the study will be discussed in the context of the Stress Contagion Effect (Wethington, 2020). The implications for our understanding of the relationship between young peoples' experiences of bullying and their parents'/carers' mental health will be discussed, alongside implications for intervention programmes. The implications of the findings of this study for both research and practice will be discussed. Understanding the impact of young peoples' experiences on their parents/ carers mental health has the potential to aid our understanding of how best to guide parents/ carers to support their children if they experience bullying in school.

736

## **Entering the Classroom: Do newcomers report higher peer victimization than their peers?**

Essi-Lotta Tenhunen<sup>1</sup>, Sarah Malamut<sup>1,2</sup>, Patricia McMullin<sup>1</sup>, Christina Salmivalli<sup>1</sup>

<sup>1</sup>University of Turku, Turku, Finland. <sup>2</sup>Radboud University, Nijmegen, Netherlands

### **Abstract (max 500 words)**

Student mobility, defined as a non-promotional classroom or school change, is a widespread phenomenon, touching many schools, classrooms, and students each year. Students who change classrooms or schools are in a vulnerable position as they tend to lose their friends in the transition, might be stressed about entering a new peer context, and stand out from the crowd as newcomers. Prior research on student mobility has linked newcomers to lost social ties (South & Haynie, 2004; Pribesh & Downey, 1999), mental health problems (Li, Li & Li 2019), secondary education drop-out (McMullin, Karhula, Kilpi-Jakonen & Erola, 2021), and risky or problematic behavior (South & Haynie, 2004). However, the association between newcomer status and peer victimization remains largely under-explored. In two studies, using large-scale data from Finland, the concurrent (T1) and prospective (T2) association between being a newcomer and peer victimization among compulsory school students were investigated, including the impact of socio-demographic moderators (age group, immigrant background, family composition) social anxiety, and having good friends in the new classroom (Study 1: n= 12468; Mage=12.20, SD = 2.14; 49.28% boys). Study 2 investigated whether being victimized as a newcomer differed based on the reasons given for mobility (Study 2: n= 58567; 44.09% middle schoolers). In both studies, newcomers reported higher peer victimization than their counterparts (i.e., established students). Peer victimization was lower among newcomers who had made good friends by the end of the school year and newcomers who reported peer victimization at T1 at risk of longer-term victimization in T2 (Study 1). Study 2 indicated that all observed reasons for student mobility, except changing to a more suitable school (n.sig), predicted higher peer victimization in the new classroom, with prior victimization and bullying history having the most substantial impact.

**737**

### **Modifiable Resilience Factors after Adversity in Early Adolescence**

Ayla Pollmann<sup>1</sup>, Divyangana Rakesh<sup>2</sup>, Katie McLaughlin<sup>2</sup>, Delia Fuhrmann<sup>3</sup>

<sup>1</sup>King's College London, London, United Kingdom. <sup>2</sup>Harvard University, Cambridge, USA. <sup>3</sup>King's College London, London, USA

### **Abstract (max 500 words)**

#### **Aim and Objectives**

Over two-thirds of all young people globally encounter adverse experiences like abuse or family dysfunctions before the age of eighteen. These adversities are linked to structural and functional brain development changes, potentially contributing to mental health conditions, including depression or substance abuse in later life.

It is crucial to research protective factors, such as factors increasing adaptive resilience against adverse experiences in the individual. Resilience can be defined as the "maintenance of positive adjustment

under challenging conditions" and describes the response of a group or individual to adverse situations or experiences. Recently, researchers have begun to uncover modifiable environmental factors that make a person more resilient to stress and adversity. For example, positive childhood experiences may weaken the link between adversities and depression. Possible resilience factors during adolescence include friendships and sibling relationships, but systematic evidence on the interplay of resilience, adversity and mental health is lacking. This study will aim to gain further insight into the paths after adverse adolescent experiences and the protective effects of resilience.

### Methodology

Using the prospective, longitudinal Adolescent Brain Cognitive Development study (ABCD, N ≈ 12.000), we will examine individual trajectories in adolescents exposed to adversity and investigate the influence of resilience factors on mental health. Using the R lavaan package, we will also conduct a cross-legged panel model in relation to resilience to test how individual trajectories mediate the relationship between adverse experiences and mental health issues.

### Hypotheses

We hypothesise that (1) individual trajectories mediate the relationship between adverse life experiences and mental health issues. We predict that (2) there will be differences in mental health outcomes dependent on individual trajectories.

### Results & Conclusion

Results are expected.

738

## Validating A Virtual Reality Inhibitory Control Paradigm For Capturing Naturalistic Neurocognitive Developmental Differences In Children And Adults

Larisa Dinu<sup>1,2,3</sup>, Paola Pinti<sup>2</sup>, Ilias Tachtsidis<sup>3</sup>, Tim Smith<sup>2</sup>

<sup>1</sup>King's College London, London, United Kingdom. <sup>2</sup>Birkbeck, University of London, London, United Kingdom. <sup>3</sup>University College London, London, United Kingdom

### Abstract (max 500 words)

**Background:** Executive functions (EFs) emerge in the first years of life and continue to develop throughout childhood (Best & Miller, 2010). Inhibitory control is one of the core EFs, and refers to the ability to actively suppress or delay responses. Disregarding irrelevant stimuli is essential for action planning and goal-directed behaviour in everyday life. Nonetheless, despite widespread standardised assessments of inhibitory control at the behavioural level and measurement advancements, constrained, non-naturalistic experimental paradigms remain the norm in the field (Hartley, 2022; Nastase et al., 2020) and there is a lack of age-appropriate and ecologically valid tasks for assessing



inhibitory control in children. To address these limitations, an age-appropriate Go/No-Go paradigm was developed and implemented in a Cave Automatic Virtual Environment (CAVE), and compared with a standardised, computer-based Go/No-Go task. **Objectives:** The first objective was to compare performance on the computerised Go/No-Go task with a naturalistic CAVE Go/No-Go paradigm in a sample of adults (18-50 years,  $N = 24$ ,  $M = 30.38$ ,  $SD = 10.54$ ), where executive functions are developed and well-characterised. The second objective was to then use the tasks in toddlers (3-6 years,  $N = 40$ ,  $M = 4.45$ ,  $SD = 1.08$ ) and establish if they are suitable for capturing developmental differences in inhibitory control. **Methods:** Two block-designed tasks were evaluated: (1) a computerised Go/No-Go task; (2) a CAVE Go/No-Go paradigm. The outcomes of interest were error rates and reaction times in Go and mixed blocks. Performance was compared for the naturalistic and standardised tasks, and between developmental groups. **Results:** Error rates were higher in mixed blocks compared with the Go blocks for both the adult ( $t = 4.72$ ,  $df = 22$ ,  $p < .001$ ) and the toddler group ( $t = 10.90$ ,  $df = 32$ ,  $p < .001$ ) in the CAVE task. Conversely, reaction times were higher in the Go blocks in the CAVE task for both groups (adults:  $t = 10.49$ ,  $df = 22$ ,  $p < .001$ ; toddlers:  $t = 24.74$ ,  $df = 36$ ,  $p < .001$ ). **Conclusion:** This work contributes to understanding how cognitive correlates are implicated in inhibition in naturalistic settings across development. The neural correlates of inhibitory control will also be investigated using child-friendly portable functional imaging (functional near-infrared spectroscopy). Furthermore, acceptability, trait measures of executive functioning and attention deficit hyperactivity disorder-related symptoms will be assessed.

## Acceptance type: Roundtable discussion

91

### The Presidents Round Table. Discussions on the past and future of EADP

Willem Koops<sup>1</sup>, Christiane Spiel<sup>2</sup>, Ersilia Menesini<sup>3</sup>, Frosso Motti<sup>4</sup>, Marcel van Aken<sup>1</sup>, Katariina Salmela-Aro<sup>5</sup>, Dagmar Strohmeier<sup>6</sup>, Maria Jose Rodrigo<sup>7</sup>, Spyros Tantatos<sup>4</sup>

<sup>1</sup>Utrecht University, Utrecht, Netherlands. <sup>2</sup>University of Vienna, Vienna, Austria. <sup>3</sup>University of Firenze, Firenze, Italy. <sup>4</sup>university of Athens, Athens, Greece. <sup>5</sup>University of Helsinki, Helsinki, Finland. <sup>6</sup>University of Applied Sciences Upper Austria, Linz, Austria. <sup>7</sup>University of Laguna, Laguna, Spain

#### Abstract (max 500 words)

The topic of the discussion is the past, present and future of the AEDP. The main issue will be: the policy of AEDP as a European Association, dedicated to research, teaching and societal applications in the broad domain of developmental psychology.

229

## **Pillars of Developmental Psychology. Global history of developmental psychology in autobiographies.**

Frank Kessel<sup>1</sup>, Willem Koops<sup>2</sup>

<sup>1</sup>University of New Mexico, Albuquerque, USA. <sup>2</sup>Utrecht University, Utrecht, Netherlands

### **Abstract (max 500 words)**

In this round table session professors Frank Kessel and Willem Koops will present the content of a book (in press) about the history of developmental psychology: **Pillars of developmental psychology**. The book presents an array of personal histories written by living "pillars" of developmental psychology. The basic assumption is that any historical picture of the discipline is either incomplete or unduly impersonal-cum-analytical, or both, without the autobiographically articulated views and visions of such founders. Along with the chapters themselves a projected "genealogy picture" and an emergent "thematic profile" will confirm how the work of the contributors has been extended in noteworthy generative directions by the next generation(s). All of which underlines the potential value of such a reflective, reflexive historical collection for current and future scholars and students alike.

Within the 42 chapters contributors ("pillars") explore 1) how they became interested in the overall field/discipline; 2) how at that point they viewed the substantive shape of the field - its positive features as well as possible lacunae; 3) Who and what (intellectually and/or socio-politically) inspired and guided their paradigms, theories and research in particular areas, both initially and in later years; 4) how the (sub-)field they influenced has been transformed over the course of their careers; 5) The direction(s) they imagine the overall discipline and their specific (sub-)field could and should now pursue; 6) On the basis of such stories of their personal journeys, what advice they might have for future generations.

In this round table session the editor (Frank Kessel) will discuss the selection of the authors, the sense of this form of historical descriptions of the field, and will give interesting examples of the content of the book

411

## **Perspectives on implementing bullying prevention programs: How to promote the sustainment and long-term effectiveness of program implementation?**

Sanna Herkama<sup>1</sup>, Juuso Repo<sup>1</sup>, Lucy Bowes<sup>2,1</sup>, Kyrre Breivik<sup>3</sup>, Marika Haapalainen<sup>4</sup>, Inari Harjuniemi<sup>1</sup>, Eeva-Liisa Markkanen<sup>5</sup>, Miia Sainio<sup>6</sup>, Chloé Tolmatcheff<sup>7</sup>

<sup>1</sup>University of Turku, Turku, Finland. <sup>2</sup>University of Oxford, London, United Kingdom. <sup>3</sup>Regional Centre for Child and Youth Mental Health and Child Welfare, NORCE Norwegian Research Centre, Bergen,

Norway. <sup>4</sup>Lappee primary school, Lappeenranta, Finland. <sup>5</sup>Finnish Education Evaluation Centre, Helsinki, Finland. <sup>6</sup>University of Jyväskylä, Jyväskylä, Finland. <sup>7</sup>University of Groningen, Groningen, Netherlands

### **Abstract (max 500 words)**

The aim of this round table discussion is to shed light on implementing bullying prevention programs from various perspectives. Several bullying prevention programs and practices have been developed, and their effectiveness has been evaluated. Yet, it is evident that far less emphasis has been placed on both research and societal discussion on the implementation and sustainment of these programs and practices under real-life conditions. Recent studies have highlighted multiple factors, such as bullying prevention policies, school resources, human resource management, staff training, and commitment which all can contribute to program sustainment either by fueling or hindering it (see for more Herkama et al., 2022; Sullivan et al., 2021). Furthermore, recent results on evaluating several bullying prevention programs and practices carried out by the Finnish Education Evaluation Centre in 2022 stressed the importance of on-going monitoring and development of practices in schools to promote staff commitment and know-how for sustainable program delivery (KARVI 2022). Also, there are studies emphasizing the need for implementation support in school context (Herkama et al., 2022; Sainio et al., 2020), but so far evidence-based models on providing schools implementation support do not exist. In order to benefit from bullying prevention programs and practices as well as utilize their full potential, more attention should be paid to implementation in all levels of the educational system.

This round table discussion reflects on how to promote more effective, high quality, and sustainable implementation of various bullying prevention programs and practices. Improving the implementation of bullying prevention programs will be addressed from various perspectives from the very early stages of developing interventions and practices to later stages of implementation and scaling-up of and sustaining them. The viewpoints of cutting-edge research, program development, teacher education, practitioners, education providers, as well as national level evaluation will be elaborated on. Furthermore, different contexts, intervention programs, and approaches are represented by the individual panel members. The topics to be discussed are as follows but are not limited to implementation assessment, implementation facilitators and barriers, utilization of several programs simultaneously in everyday life at school, promoting sustainability and high-quality implementation, individual and organizational implementation capacities, changing environments and contexts, as well as teacher's skills and knowledge and their development in teacher education.

The round table discussion starts with a short introduction by chairs followed by a brief presentation given by each discussant elaborating on how to promote more effective, high quality, and sustainable implementation from their own perspective. In addition, each discussant will formulate one core problem, challenge, or statement that should be addressed in order to guarantee successful program implementation and sustainment in future. The statements will be shared in interactive online platform Flinga, offering both the discussants and participants the possibility to participate in a solution oriented discussion on the topic.

465

## Case Studies in Threading A Needle: How & When – Three Examples of Thematic Analysis Employing A Spectrum of Reflexivity and Post-Positivist to Constructivist Paradigmatic Starting Points

Ashley Ison, Shandra Jones, Megan Satterthwaite-Freiman

Harvard University, Cambridge, USA

### Abstract (max 500 words)

Although the six steps of thematic analysis have grown in use and popularity among qualitative research methods, there is ongoing work to refine the definition of thematic analysis as a qualitative method (Braun & Clarke, 2006, 2019). Depending on the epistemological and paradigmatic starting points of any research inquiry, thematic analysis applications can vary along a spectrum of reflexivity. But, what does it look like to implement research methods in a real-world scientific context? As scholars within the field of developmental science, we are fundamentally asked to align research questions, theoretical foundations, analytic approaches, epistemologies, and the day-to-day decision making required to manage research projects in the real, non-theoretical world. In this roundtable, participants will engage in discussion with three scholars-in-training whose current research projects have confronted the following questions specific to the application of thematic analysis:

1. Topic 1a: What does thematic analysis look like in practice when it varies along the spectrum of reflexivity, from reflexive thematic analysis to more deductive approaches to thematic analysis?
2. Topic 1b: What are the practical considerations when determining if and how thematic analysis meets the larger methodological and theoretical research process and ultimately transitions to other qualitative paradigmatic approaches?

The three discussants will use a case study approach to share details of three ongoing research studies, each grounded in developmental psychological theories of lifespan ethnic-racial identity development as well as educational psychology theories of teaching and learning. Developmental stages represented in the samples include late adolescence through middle adulthood. Author 1 will discuss the reflexive thematic analysis process used to analyze interview responses drawn from a sample of U.S.-based secondary education teachers who self-identified as culturally responsive (n = 24), discussing the role of their own ethnic-racial identity in their teaching practice and their relationships with students. Author 2 will discuss the use of a more deductive thematic analytic approach to interpreting the interview responses of college students in the U.S. (n = 11) during a randomized pilot study of the feasibility and possible adaptations needed to bring a developmentally grounded curriculum called The Identity Project to students enrolled in a residential college, degree-granting program. Author 3 will reflect on transitioning from thematic analysis to consensual qualitative research during the analytic process of analyzing interviews of U.S.-based secondary education teachers (n = 20) to identify challenges with respect to engaging in conversations and activities related to race, ethnicity, and identity in the secondary classroom. Each author will discuss how their research study presents a case distinguished by the application of the six thematic analysis steps, the relative degrees to which reflexivity was central to their analytic approach, and/or the process of determining methodological fit. Roundtable participants will be invited to share different viewpoints on the use and practice of thematic analysis, raise questions

for discussion, and share their own experiences based on using the method or planning their own qualitative or mixed methods studies.

**557**

## **ICDSS panel discussion: Benefits and challenges of open science for developmental science**

Susan Branje<sup>1</sup>, Marcel van Aken<sup>1</sup>, Charissa Cheah<sup>2</sup>, Nancy Hill<sup>3</sup>, Velma McBride Murry<sup>4</sup>

<sup>1</sup>Utrecht University, Utrecht, Netherlands. <sup>2</sup>University of Maryland, Baltimore County, Baltimore, USA.

<sup>3</sup>Harvard University, Cambridge, USA. <sup>4</sup>Vanderbilt University, Nashville, USA

### **Abstract (max 500 words)**

The International Consortium of Developmental Science Societies (ICDSS) is a “world” umbrella organization of developmental science societies (among which EADP). ICDSS aims to facilitate collaborative multinational developmental research across the lifespan and across the globe, to represent Developmental Science in collectively informing international public policy, and to expand collaborative training and research opportunities for young scholars and address global issues in research. As part of the latter aim, in this roundtable discussion we will discuss current developments in open science.

Open science is a movement that aims to make scientific research more open. It is a broad set of practices that increase the transparency and accessibility of scientific research. Often the first thing that comes to mind is open access publication, but open science can cover all phases of research, including participation of citizens in research, preregistration, open data and code, and changing criteria for evaluating scientific merit.

In this roundtable discussion we will discuss the many advantages of open science, such as increasing findability and accessibility of research, improving reliability and replicability, increasing team science and increasing useability/applicability of research. In a brief introduction the chair will outline these developments, after which each of the discussants will take one aspect and present their perspective on the benefits for the developmental science community but also the challenges we have to face. These challenges might include: How do we avoid the risk of devaluing research that is more difficult to preregister or submit a registered report? How can we facilitate open science around the globe for researchers with less facilities or finances? How can we evaluate scientific merit by balancing quantitative and qualitative indicators? How do you preregister longitudinal developmental studies with existing data, or balance the requirements for open data and confidentiality? In an open discussion with the session audience, we will address these and other questions and concerns and aim to set an agenda for open science for developmental science across the lifespan and across the globe.

## Acceptance type: Symposium

60

### Early behavioral and attentional predictors of child environmental sensitivity at 9.5 years of age

Saara Nolvi<sup>1,2</sup>, Riikka Korja<sup>2</sup>, Eeva-Leena Kataja<sup>2</sup>, Eeva Eskola<sup>1,2</sup>, Pauliina Juntunen<sup>1,2</sup>, Venla Huovinen<sup>1,2</sup>, Aino Luotola<sup>1,2</sup>, David J Bridgett<sup>3</sup>

*et al*

<sup>1</sup>Department of Psychology and Speech-Language Pathology, University of Turku, Turku, Finland.

<sup>2</sup>FinnBrain Birth Cohort Study, Department of Clinical Medicine, University of Turku, Turku, Finland.

<sup>3</sup>Department of Psychology, Northern Illinois University, Illinois, USA

#### Abstract (max 500 words)

##### Objective

There is convincing evidence that some people are more influenced by negative and positive environmental factors, whereas others remain relatively unaffected by the same exposures (Greven et al., 2020). There have been calls for a better understanding of the developmental origins of this environmental sensitivity (Assary et al., 2019). For instance, it is suggested that environmental sensitivity is partially overlapping with the trait negative emotional reactivity, especially when measured within the first year of life (Slagt et al., 2016). Furthermore, attentional biases to socially salient stimuli, such as faces, could potentially also reflect the functioning of these brain networks relevant for social-emotional sensitivity (Peltola et al., 2014; Bedford et al., 2015). However, to date, very little research has been conducted on the development of sensitivity and its early precursors. To fill in this gap, we will examine whether negative emotional reactivity and attentional biases towards social stimuli in infancy and toddlerhood are associated with child parent- and self-reported environmental sensitivity at 9.5 years of age.

##### Methodology

Infant negative emotional reactivity was assessed using Infant Behavior Questionnaire Revised (Gartstein & Rothbart, 2003) at 6 and 12 months and Laboratory Temperament Assessment Battery (Goldsmith et al., 1999) at 8 months. Early attentional biases were assessed using eye tracking and overlap paradigm, where the children watch emotionally salient face stimuli, at 8 months. Based on the experiment and child attendance to difference categories of stimuli, face bias (child bias to attend faces over non-face control stimuli) and fear bias (child bias to attend fearful over non-fearful faces) were calculated. Child environmental sensitivity is assessed using Highly Sensitive Child Scale parent and child versions (Pluess et al., 2018) at 9.5 years. Data collection at 9.5 years is ongoing at the time of conducting the first analyses, and current N is 47 for negative emotional reactivity and 22 for attentional bias data. The analysis plan has been pre-registered prior to conducting analyses ([osf.io/46zxm](https://osf.io/46zxm)). Analyses regarding parent-reported sensitivity are presented.

## Results

At the time of the abstract submission (N = 47, for attentional biases N = 22), there were no significant associations between infant negative emotional reactivity or infant fear bias and parent-rated child sensitivity at 9.5 years ( $r = .01-.08$ ,  $p > .77$ ). Infant face bias was negatively associated with child parent-rated sensitivity at 9.5 years ( $r = -.45$ ,  $p = .037$ ), although the association diminished when maternal depressive symptoms in infancy were controlled for (from  $B = -1.58[-3.08, -.08]$  to  $B = -1.08[-2.55, 0.38]$ ).

## Conclusion

We conduct a systematic, pre-registered analysis of early behavioral and attentional predictors of child sensitivity at 9.5 years. The data collection is still ongoing, but based on the preliminary data, there is no association between infant negative emotional reactivity and child later sensitivity. There is some preliminary support for child attentional bias to faces being negatively related to school-age child sensitivity. This suggests a potential novel early marker for long-term child sensitivity. Analysis of a more complete data will be presented and discussed.

## 61

### **For Better, for Worse, or Both? Testing Environmental Sensitivity Models with Parenting at the Level of Individual Families**

Savannah Boele<sup>1,2</sup>, Anne Bülow<sup>1,2</sup>, Amaranta de Haan<sup>1</sup>, Jaap J. Denissen<sup>3</sup>, Loes Keijsers<sup>1</sup>

<sup>1</sup>Department of Psychology, Education and Child Studies, Erasmus University Rotterdam, Rotterdam, Netherlands. <sup>2</sup>Department of Developmental Psychology, Tilburg University, Tilburg, Netherlands.

<sup>3</sup>Department of Developmental Psychology, Utrecht, Netherlands

#### **Abstract (max 500 words)**

##### Objective

Environmental sensitivity models state that some children are more susceptible to parenting than others, describing susceptibility to (1) negative parenting ('for worse'; e.g., Monroe & Simons, 1991), (2) positive parenting ('for better'; Pluess & Belsky, 2013), or (3) both ('for better and worse'; Pluess & Belsky, 2009). We tested the hypothesis that these three different responsivity patterns co-exist (Pluess, 2015). Specifically, we tested whether and how individual adolescents were differentially affected by negative (psychological control) and positive parenting (support) in terms of psychological well-being. We explored whether trait levels of sensory processing sensitivity (SPS) were related to these differential responsivity-to-parenting patterns.

##### Method

The sample included 256 Dutch adolescents (Mage=14.8, 72% female). They completed 26 bi-weekly ratings of positive and negative parenting and several indicators of psychological well-being. Moreover, they filled out a single measure of SPS (i.e., 12-item HSC). Dynamic Structure Equation Modelling (DSEM) was used to derive the within-family lagged effects of parenting on adolescent well-being at the level of the individual family. Individual standardized effects were interpreted based on a smallest effect size of interest of .05.

## Results

For most adolescents (72%), their psychological well-being could be predicted by preceding changes in perceived parenting. Among these 'susceptible-to-parenting' adolescents, we detected all hypothesized responsivity patterns. One group were susceptible 'for better and worse' (26%), such that their well-being seemed affected by both parental psychological control and support. Specifically, increased psychological control predicted lower well-being and increased support predicted better well-being two weeks later. The other groups were susceptible 'for worse' (5%) or 'for better' (3%), or unexpectedly, showed opposing parenting effects (37%). These groups did not differ on the measure of SPS, however. The 28% of the adolescents who perceived no over-time changes in parenting (we labeled 'unperceptive') did report lower SPS than the susceptible-to-parenting adolescents ( $p = .002$ ,  $d = -.49$ ).

## Conclusion

In sum, we found different patterns of how perceived changes in parenting predicted well-being of adolescents. Adolescents who were unsusceptible to parenting, were so because they did not perceive bi-weekly changes in parenting in the first place. Therefore, findings highlight the need for tailoring parenting interventions to the individual family, as adolescents differ in whether and how they react to changes in parenting.

## 62

### **Environmental Sensitivity and parenting: data from two independent and exploratory bio-behavioral studies**

Francesca Lionetti<sup>1</sup>, Maria Spinelli<sup>1</sup>, Mirco Fasolo<sup>1</sup>, Massimiliano Pastore<sup>2</sup>, Michael Pluess<sup>3</sup>

<sup>1</sup>Department of Neuroscience, Imaging and Clinical Sciences, G. d'Annunzio University of Chieti-Pescara, Chieti, Italy. <sup>2</sup>Department of Developmental Psychology and Socialisation, University of Padova, Padova, Italy. <sup>3</sup>Department of Biological and Experimental Psychology, Queen Mary University of London, London, United Kingdom

#### **Abstract (max 500 words)**

Objective



According to available evidences, Environmental Sensitivity (ES) is associated with less than optimal parenting strategies (Aron et al., 2019; Branjerdporn, et al., 2019; Goldberg et al., 2019) and is a potential risk factor for problematic child development. But available studies mainly adopted self-report measures, and the only laboratory study involved non-parent adults (Andeweg et al., 2021). We aimed to investigate the role of ES for parenting in observed child-parent interactions across two independent studies, and to explore the moderating role of the rearing experiences and physiological regulatory competences of the parent.

## Method

Data were available across two independent samples. In both samples, the dyad was observed during free-play interactive contexts when infants were three months of age. Parents' behaviors were coded with the Emotional Availability Scales (Biringen, 2008) and parents reported on their Environmental Sensitivity with the Highly Sensitive Person Scale (Pluess et al., 2020). In Sample 1 ( $n = 41$ ), the dyad was invited back to the lab when infants were nine months old. In Sample 2 ( $n = 56$  dyads), parents also completed the Adverse Childhood Experience (ACE) questionnaire (Felitti et al., 1998) and the Parenting Stress Index (Abidin, 2012). Physiological regulatory competences of the parent were measured via Respiratory Sinus Arrhythmia (RSA).

## Results

When infants were three months old, ES was associated with less optimal parenting behaviors and more stress in both samples. Conversely, at nine months of age, longitudinal data showed ES predicted less intrusiveness in the dyadic interaction. In Sample 2, Bayesian posterior distributions showed that ES was negatively related with sensitive behaviors when infants were three months of age mainly in parents who experienced at least one ACE event (with  $r = -.17$ , 90% CI  $[-.46, .01]$  for parents with at least one ACE vs.  $r = -.01$ ,  $[-.28, .25]$  for no ACE events). Inner regulatory competences of the parent further contributed to parenting behaviors with positive associations between RSA and positive parenting in highly sensitive parents (from  $r = .38$  to  $.62$ , depending on the parenting interactive dimension considered), and lower to negative associations in parents low and medium in ES (ranging from  $r = .01$  to  $r = -.32$  in parents with medium sensitivity levels and  $r = -.21$  to  $r = .21$  in low sensitive).

## Conclusion

ES was associated with more difficulties in parenting behaviors and higher levels of stress especially when parents experienced ACE and with younger infants. When infants were nine months, however, parents scoring high in ES outperformed those scoring low, suggesting they took longer to adjust to being a parent to the child. Regulatory competencies further contributed to parenting depending on ES levels. In parents high in ES, higher physiological regulatory competences were associated with more positive parenting behaviors, whereas for low and medium sensitive parents a less consistent pattern of findings emerged, with mainly negative associations. Results suggest the need of adopting a longitudinal and comprehensive approach including the analysis of inner (regulatory) and external (environmental) variables for uncovering the role of ES in parenting.

## The Construction and Negotiation of Social Identities following a School Bussing Project in Sweden

Ylva Svensson, Karin Flensner

University West, University West, Sweden

### Abstract (max 500 words)

**Background and Objective.** Swedish schools are highly segregated along the lines of non-im/migrant and im/migrants and their descendants. The Swedish free school choice and independent school reforms were presented to counteract segregation but have been found to have the opposite effect (Bunar & Ambrose, 2016). Consequently, municipalities around Sweden have taken active measures, such as closing of schools, school mergers and bussing, to create schools with more heterogeneous student bodies (Arneback et al., 2021). This project follows a municipality's initiative to counteract school segregation, where two elementary schools in a socio-economically vulnerable area with poor academic achievement and a large proportion of students with migrant backgrounds were closed. Consequently, 269 pupils in grades 3–8 (age 9-15) were assigned to five other schools and offered bussing. This study focuses on the content of social identities by exploring the identity categories constructed and the processes of how boundaries between in- and out groups are negotiated as the school compositions change. Drawing on the Master Narrative Framework (McLean & Syed, 2015), we will explore social identities at different levels and expect macro level identities to filter down and be visible at the micro level at the schools (Way & Rogers, 2015), and to affect the negotiation processes.

**Methodology.** Data were collected before the two schools were closed and at two time points after the school merger. Across the three timepoints, this study is based on interviews with students who either changed school or attended the receiving schools (n = 59), interviews with school staff at the seven schools (n = 62), and observations of formal and informal school settings. We employed a qualitative approach, where all instances related to group belongings, self-defined or ascribed identities were selected from the transcribed interviews and field notes and analyzed using thematic analyses (Braun & Clark, 2006).

**Results.** Initial results show identity categories at both macro and micro levels, which the students are identified and identify with. Macro level identities such as "Swedish" were often the norm which other identity categories were negotiated against, e.g. "non-Swedish", based on aspects such as language use, phenotypes, religion, neighborhood of residence, and friendships. Micro level identity categories were mainly related to school belonging before the merger, and to being the "new" or "old" students. While new in-groups were formed, mainly based on shared interests, the division also prevailed and there were cases of internal segregation a year after the merge. We saw examples of macro level identities filtering down to the micro context and overlapping in different ways, e.g. politically sensitive macro level identities being replaced with less charged micro level identities, such as "the bus kids" when describing the students who changed school, all with migrant backgrounds.

**Conclusion.** Social identities are interactional and fluid, and although new in-group identities were formed following a school bussing project these processes need to be guided as they are intervened with

macro level identities. The study offers unique knowledge about changes in social identities and the negotiation processes related to changing micro settings.

**64**

## **Same, same but different: What it means to be European for adolescents from diverse backgrounds living in Germany**

Anna-Maria Mayer, Philipp Jugert

University of Duisburg-Essen, Essen, Germany

### **Abstract (max 500 words)**

**Background and Objective.** European societies are increasingly diversifying, which has led to a broad discussion on social cohesion and the use of (sub-)national identities to create a sense of we-ness. But those (sub-)national identities are often unfit to provide this, as they are usually narrowly and exclusively ethnically defined. A European identity could serve as a shared group identity instead. But as being European can mean different things to different people (i.e., more or less inclusive) it is important to not only examine strength but also content of identity. Therefore, we were interested in what it means to be European for an ethnically diverse group of adolescents, whether distinct classes of European identity could be found and whether European identity classes would differ in regard to membership of national identity classes, ethnic self-identification, and the school environment.

**Methodology.** Our sample included 1,206 students from Germany (pfem= 51.7%, Mage = 14.39, SDage = 0.02). The majority of our sample self-identified as German (ngerman = 42.7%, neu = 6.6%, nnon-eu = 14.2%, missing = 36.5%). European identity content was assessed via open-ended essays and five Eurobarometer items. Three coders coded all student's answers for European identity consensually. After coding, we conducted latent class analysis to identify meaningful classes of European identity based on seven identity codes and the Eurobarometer items. EU support and antiimmigration attitudes were used for validating the classes. Multinomial logistic regression analysis with German identity class, ethnic self-identification and opportunities to learn about Europe in school were conducted.

**Results.** We identified three distinct classes of European identity: a living-based class (46%), a culture- & value-based class (27%) and an ancestry-based class (25%). Classes were not significantly predicted by EU Support, but by antiimmigration attitudes. Participants with an ancestry-based understanding showed significantly higher antiimmigration attitudes than other participants, while participants with a culture- & value-based understanding showed the lowest antiimmigration attitudes. Multinomial regression analysis indicated that class membership was significantly predicted by German identity class; an ethnic-understanding of being German was associated with an ancestry-based understanding of being European, while a civic-understanding of being German was associated with the other two European identity classes. Class membership was not predicted by the other predictors.

**Conclusion.** Our results indicated that adolescents differed in their understanding of being European; most of them saw being European as living in Europe, but also a substantial part thought that European

ancestry is important to be European. Classes did not differ with regard to EU Support, but for their antiimmigration attitudes, in the direction that a culture- & value-based understanding of being European was associated with low and an ancestry-based understanding with high anti-immigration attitudes, and for their German identity class. By implication, educational institutions should explicitly foster a culture- & value-based understanding of being European and a civic-based understanding of one's national identity.

65

## Experiences in School and Youths' Identification as National and European Citizens

Astrid Körner, Katharina Eckstein, Peter Noack

Friedrich Schiller University Jena, Jena, Germany

### Abstract (max 500 words)

**Background and Objective.** Forming a mature and coherent identity characterizes the adolescent years and is a pivotal developmental task during this period. This also includes the development of social identities in the sense of national and supranational (e.g., European) identities. However, little is known whether the development of national and supranational identities differ between young people with and without immigrant background. There is also a lack of longitudinal studies allowing to address questions about the stability and change as well as predictors of national and supranational identities. Moreover, since youths' development cannot be understood apart from environmental workings and schools are a significant context of socialization, the role of school-based experiences will be considered in greater detail.

The aim of the present study is threefold: (1) The first research question examines whether distinct profiles for youths' identification as national and European citizen can be found. Longitudinal analyses will further focus on stability and changes of identity profiles across time. (2) A second research question considers the role of experiences in school (e.g., school climate) in relation to youths' national and supranational identity. (3) The third research question examines whether associations between experiences in school and national/supranational identity differ among youth with and without immigrant background.

**Methodology.** Data were drawn from an ongoing research project (JUROP; Youth & Europe) that aims at getting a deepened understanding on attitudes towards Europe and the EU among a diverse sample of young people from 31 schools in Thuringia and North Rhine Westphalia, Germany. Students filled in a questionnaire at the beginning (NT1 = 1,206) and at the end (NT2 = 1.096) of the 9th grade (25.1 % immigrant descent). An adaptation of the Utrecht-Management of Identity Commitments Scale (U-MICS) was used to examine adolescents' identification as German and European citizens. Identity dimension (i.e., commitment, exploration, and reconsideration) were assessed by three items each scale. Experiences in school were captured with two indicators: open classroom climate for discussion (6 items) as well as perceptions of cultural pluralism in school (6 items). Besides information on immigrant

background, the effects of further socio-demographic variables (age, gender, SES, region) were taken into account.

**Results and Conclusion.** In line with theoretical expectations, latent profile analysis (LPA) identified four distinct identity status profiles for both national as well as European identity that reflected different degrees of identity consolidation (i.e., Diffusion, Early Closure, Moratorium, Achievement). Latent transition analyses (LTA) further confirmed interrelations between the national and European identity profiles as well as changes in identity profiles across time (e.g., moratorium led to more consolidated identity statuses). Experiences in school were shown to be related to more consolidated identity profiles. Follow-up analyses will focus on the role of immigrant background on the identified patterns in greater detail. The results will be discussed in terms of their practical implications concerning school's role for understanding and promoting identity development among youth.

66

## **Is Well-Being Fed by Social Identities? A Longitudinal Study with Ethnic Majority and Minority Adolescents**

Elisabetta Crocetti, Beatrice Bobba

University of Bologna, Bologna, Italy

### **Abstract (max 500 words)**

**Background and Objective.** Adolescence is a crucial phase of the life span for identity formation. In fact, in this developmental period, young people define themselves, their places within society, and their ways of relating to members of other social groups, thus managing both their personal and social identities (Crocetti et al., 2022). Identification with social groups, as a core component of social identity, satisfies individuals' sense of belonging and fosters self-esteem, which are fundamental needs of human development (Ryan & Deci, 2017). However, less is known about how multiple social identifications are longitudinally intertwined with well-being in adolescence and whether these associations vary depending on the youth's ethnic background. The current three-wave longitudinal study aims to fill this gap by studying the reciprocal associations between adolescents' identification with several proximal (i.e., family, peers, classmates) and distal (i.e., national, European, human) social groups and multiple indicators of well-being (i.e., physical health, subjective, psychological, and social well-being).

**Methodology.** Participants were 1,367 adolescents (Mage=15.73; 50% females) involved in the ongoing IDENTITIES project (GA n° 101002163), 78.8% of whom had an ethnic majority (i.e., Italian) background, while the remaining 21.2% had an ethnic minority background (i.e., they were born outside Italy and/or had at least one parent born outside Italy). They completed questionnaires in 2022 (T1: January, T2: May, T3: October), assessing their social identifications (Thomas et al., 2017), physical health (Ware & Gandek, 1998), subjective, psychological, and social well-being (Keyes, 2005).

**Results.** Results of cross-lagged panel models highlighted significant reciprocal associations between identification with family and physical health, subjective, and social well-being. Additionally,

identification with classmates was associated with higher psychological and social well-being over time. In turn, psychological well-being was linked to higher identification with the European and human groups, while social well-being was associated with higher identification with both proximal and distal social groups. Multigroup analyses further revealed significant differences in the longitudinal associations between multiple identifications and well-being. Specifically, among Italian adolescents, psychological well-being was linked to increased identification with the family and human groups, whereas this was not the case for the ethnic minority participants. Conversely, among the youth of immigrant descent, but not among their ethnic majority peers, higher identification with the family was associated with increased psychological and social well-being over time. Additionally, significant correlated changes were found between identification with classmates and physical health and social well-being of ethnic minority adolescents, suggesting the intertwined nature of identity and well-being.

**Conclusion.** Overall, this study highlights the importance of social identifications for the well-being of adolescents with and without a migrant background and points to a nuanced dynamic process of reciprocal influences.

## 72

### **Home-learning during COVID-19: The psychological adjustment of minority and majority adolescents**

Mădălina A. Paizan, Alison E. F. Benbow, Lara Aumann, Peter F. Titzmann

Institute of Psychology, Leibniz University Hannover, Hannover, Germany

#### **Abstract (max 500 words)**

The COVID-19 pandemic and the resulting infringements of day-to-day life have affected families through school closures and home-learning. The effect of these drastic and unique measures on adolescent adjustment remains unclear. In this longitudinal study, we therefore considered how the COVID-19 pandemic school closures affected adjustment outcomes that reflect positive development during adolescence and may offer important insights for an optimal adaptation in times of crisis. The first outcome, life satisfaction has been defined by Diener et al. (1985) as the cognitive, global evaluation of one's present life situation. The second outcome, academic self-efficacy refers to the beliefs in one's own capabilities to organize and execute acts that lead to desired educational goals (Zimmerman, 1995). Our two-wave study had three aims. First, we examined life satisfaction and academic self-efficacy trajectories among ethnic minority and majority adolescents. Second, we considered the role of the home learning environment (learning conditions and parental involvement) in explaining ethnic status group differences. Third, we studied pandemic-related familial factors that contributed to positive home learning environments.

The data used in this study originates from a larger German project on the role of parent-teacher interactions in improving academic achievement of ethnic minority and majority adolescents. Recruitment took place in integrated comprehensive schools (Integrierte Gesamtschule), a type of state school for all competence levels (no fees, no entry exams), which combines vocational and higher

education tracks and usually serves families from the school neighborhood with similar socioeconomic background characteristics. The sample comprised 121 ethnic minority (Mage= 14.04; SD = 1.25; 53% female) and 105 ethnic majority adolescents (Mage= 14.36; SD = 1.25; 59% female) in Germany. We used established instruments for the outcomes and developed scales that reflect both the particularities of the COVID-19 pandemic and the challenges of home-learning. McDonalds' omega, as well as Cronbach alphas showed acceptable reliabilities for all scales. Systematic and expectable associations with other theoretical constructs provided evidence for the validity of the assessed constructs.

Results of repeated measures ANCOVAs showed distinct trajectories in adolescents' adjustment (Time x Ethnic status group interaction:  $\eta^2=.02$  for academic self-efficacy and  $\eta^2=.03$  for life satisfaction). Whereas ethnic minority adolescents reported stable academic self-efficacy and a decrease in life satisfaction, ethnic majority adolescents reported stable life satisfaction and an increase in academic self-efficacy. Accounting for learning conditions reduced the differences between minority and majority adolescents to non-significance. Parental involvement did not explain these differences, although it was itself important for adjustment outcomes in both groups. Hierarchical regression analyses showed that good student-teacher communication, a positive family climate and fathers' short-time work contributed to the home learning environment.

Findings show that the school closures due to the COVID-19 pandemic uphold (and possibly exacerbate) previously existing educational disparities in ethnic minority families, who are often also less technologically equipped and adept. Our study advances the idea that home-learning can only function when all the involved actors in the school context (teachers, parents, and students) are taking action and the required equipment for virtual learning is available.

## 73

### **Don't worry, be happy: The role of parent-child relationship quality and corona-related concerns during COVID-19 school closure among minority and majority adolescents**

Jessie Hillekens<sup>1,2</sup>, Gülseli Baysu<sup>3</sup>, Karen Phalet<sup>2</sup>

<sup>1</sup>Tilburg University, Tilburg, Netherlands. <sup>2</sup>KU Leuven, Leuven, Belgium. <sup>3</sup>Queen's University of Belfast, Belfast, United Kingdom

#### **Abstract (max 500 words)**

As schools closed to confine the spread of the COVID-19 virus, adolescents were forced to spend entire days at home with their family. They were not able to see their peers, friends, and teachers, resulting in feeling of isolation (Romm et al., 2021) with important implications for their well-being (Branje & Sheffield Morris, 2021). Although the adverse consequences of school closures are becoming clearer, it remains unclear how school closures affect life satisfaction of minority and majority adolescents and which factors may buffer against potential adverse consequences. This longitudinal study therefore examined 1) changes in psychological adjustment one week before, during, and one year after the first

school closure in Belgium; and 2) how parent-child relationship quality and corona-related concerns buffered against its negative consequences; 3) comparing minority and majority adolescents.

Adolescents ( $N = 124$ ;  $M_{age} = 12.86$ ,  $SD = 0.91$ ; 40.3% girls, 0.8% non-binary) in a secondary school in Belgium participated in the study. Minority adolescents (47.9% vs. 52.1% majority) were mostly second or later generations (69.6% vs 30.4% first generation) and originated from 27 different countries across the world. Adolescents filled out a paper and pencil questionnaire during class hours one week before (T1) and approximately a year after (T3) the first school closure; and they filled out an online questionnaire during school closure (T2). Life satisfaction was assessed in all three waves; parent-child relationship quality (i.e., warmth and conflict) and corona-related concerns were measured during school closure (T2).

Lagged regression analyses and estimated mean comparisons showed a significant decrease in life satisfaction across all adolescents from one week before to during school closure; and this decrease only partially recovered when schools reopened. Although we could not establish ethnicity-based differential changes, boys benefitted more from reopening the schools than girls ( $B = -0.81$ ,  $SE = 0.36$ ,  $\beta = -0.22$ ,  $p = .025$ ). Moreover, warmth from parents was associated with higher life satisfaction ( $B = 0.63$ ,  $SE = 0.28$ ,  $\beta = 0.25$ ,  $p = .026$ ) and conflict with parents ( $B = -0.40$ ,  $SE = 0.17$ ,  $\beta = -0.23$ ,  $p = .022$ ) and corona-related concerns ( $B = -0.46$ ,  $SE = 0.17$ ,  $\beta = -0.27$ ,  $p = .006$ ) with lower life satisfaction during school closure. Importantly, parental warmth was mainly protective among minority youth (for the interaction:  $B = -1.16$ ,  $SE = 0.53$ ,  $\beta = -0.37$ ,  $p = .027$ ); and corona-related concerns were mainly harmful among majority youth (for the interaction:  $B = -0.84$ ,  $SE = 0.32$ ,  $\beta = -0.41$ ,  $p = .010$ ), pointing towards ethnicity-based differences in protective mechanisms.

Our findings thus highlight the detrimental consequences of school closures for the life satisfaction of all adolescents, regardless of ethnic origin. Importantly, this decrease did not fully recover when schools reopened again, pointing towards critical long-term implications of school closures. However, our study also shows that boosting parental warmth and reducing parental conflict and corona-related concerns may buffer against these adverse consequences; and points towards differential protective mechanisms in different ethnic origin groups, with important implications for interventions.

## 74

### **Psychosocial impact of the COVID-19 pandemic on unaccompanied immigrant minors in Italy: a mixed-method study**

Chiara Ceccon, Ughetta Moscardino

Department of Developmental Psychology and Socialization University of Padova, Padova, Italy

#### **Abstract (max 500 words)**

Unaccompanied immigrant minors (UIMs) are individuals aged less than 18 years who arrive in a foreign country without a parent/guardian (UNHCR, 1997). UIMs are at increased risk of experiencing psychological distress due to separation from their families and the potentially traumatic challenges



they face before, during, and after migration (Kelles et al., 2016; NeMoyer et al., 2020). Emerging evidence suggests that the COVID-19 outbreak substantially impacted on UIMs' everyday life and mental health by contributing to feelings of depression and apathy, limiting their job and study prospects, and enhancing an already existing condition of isolation and uncertainty (Isernia et al., 2021; You et al., 2020). However, little is known about the positive assets and resources which characterized UIMs during the public health emergency. The current study investigated the psychosocial impact of the COVID-19 pandemic and related restrictions on UIMs in Italy using a mixed-methods approach. Drawing from approaches that emphasize the contribution of individual and contextual features to youth positive development (Benson, 1997; Lerner et al., 2005), we aimed to explore how both risk and protective factors affected UIMs' mental health and future orientation during a period of partial lockdown.

We individually interviewed 80 male UIMs (Mage = 17 yrs) living in residential communities in Italy between December 2020 and March 2021. Main countries of origin were Albania, Bangladesh, and Pakistan. Questionnaires assessed COVID-19 related stressful events, psychological distress, and future orientation, while open-ended questions explored perceived social support, intolerance of uncertainty, and future goals.

The most frequently experienced stressful events were change of habits (97%), worries about family in the home country, lack of freedom, and impossibility to be close to their loved ones (94%). Psychological distress significantly increased ( $t(79) = -7.99, p < .001$ ), whereas positive future orientation did not change between the preceding period and the second partial lockdown ( $t(79) = -1.27, p = .21$ ). Thematic analysis showed that UIMs benefited greatly from social and practical support received from the family of origin, community social workers, and peers. Participants described various emotional reactions to uncertainty (including irritability and concern), and reported how focusing on future aspirations helped them cope with this unstable and often-changing situation.

Overall, the findings seem to confirm how the recent COVID-19 emergency exacerbated UIMs' psychological vulnerabilities. However, they also lend support to theoretical frameworks emphasizing the importance of positive personal and environmental factors, such as social support and future orientation, in dealing with times of uncertainty. More research is warranted to shed light on the role of these assets and inform possible interventions.

## 83

### **An ecological exploration of ethnic-racial socialization through experiences of German young adults of immigrant descent**

Tuğçe Aral, Linda Juang

University of Potsdam, Potsdam, Germany

#### **Abstract (max 500 words)**

Navigating societies designed with ethnic-racial hierarchies exposes youth to messages and experiences relevant to ethnic-racial group memberships. Ethnic-racial socialization refers to the "myriad ways that

varied agents of socialization transmit messages about ethnicity and race to children" (Hughes & Watford, 2021, p.3). While we know more about the content and process of the ethnic-racial knowledge transmitted through marginalized parents in the U.S., there is growing literature on racial knowledge, its contexts, and agents beyond parents and families. In the present study, by drawing on an ecological perspective on ethnic-racial socialization (Hughes et al., 2016) and the concept of racial regularities (Hughes & Watford, 2021), we first describe the content of racial knowledge, its contexts, and agents for German young adults of immigrant descent. Second, considering young adults' agency in making sense of the messages and the dynamic nature of socialization, we explore how young adults respond to these messages (i.e., racial learning).

We conducted 30 to 90 minutes of semi-structured interviews with 26 German young adults of Turkish, Kurdish, and East and Southeast-Asian heritage (aged between 18-32 years, Mage = 26.7, SD = 3.08, 16 women, seven men, and three non-binary) in Germany. Interviews were conducted in German, English, and Turkish, depending on the participant's preference. We employed reflexive thematic analysis to engage in qualitative data analysis (Braun & Clark, 2022). The coding process benefitted from inductive (data-driven) and deductive (theory-driven) approaches. Coding was done by the first author and two trained student assistants. Final codes were decided through weekly discussions.

The analysis resulted in five overarching messages transmitted through various agents and contexts: 1) Most family members (parents, grandparents, older siblings) provided a future-oriented perspective in Germany. This perspective was transmitted through motivating to be active members of society through language, behaviors, and relations. 2) Family members, family friends, and community centers provided information about heritage culture values, norms, language, and religion. 3) Family members provided messages about the boundaries and hierarchies between their cultural ingroups vs. outgroups. 4) Schools (teachers, peers, principal) and streets (strangers) were the contexts where participants received messages that denied their "Germanness" and equal status to white Germans. 5) Most adults ignored and minimized discrimination experiences, whereas peers were the main actors of support for discrimination experiences. Finally, most of the participants engaged in passive coping with discrimination (e.g., ignoring and taking as harmless jokes). Yet, some employed active coping strategies against discrimination (e.g., confrontation, discussion) and challenged the messages that did not align with their values and perspective. Overall, the findings suggest a need for supportive tools for parents, teachers, and youth to recognize and respond to discrimination that threatens the well-being and identity development of youth of immigrant descent. In addition, fostering an inclusive definition of who is German is a step towards reducing the negative messages.

**84**

## **Parental ethnic-racial socialization among young adults: The impact on psychosocial adjustment and support for social change**

Gülsele Baysu<sup>1</sup>, Melis Ulug<sup>2</sup>

<sup>1</sup>Queen's University of Belfast, Belfast, United Kingdom. <sup>2</sup>Sussex University, Brighton, United Kingdom

**Abstract (max 500 words)**

The approach parents take to talking about race and ethnicity with their children is known as ethnic-racial socialization (ERS). Commonly studied aspects of ERS include cultural/heritage socialization (teaching the culture and history of one's own group), preparation for bias (preparing children for the bias/discrimination they may experience due to their background), and mistrust (promoting mistrust of other groups). While the cultural dimension of ERS has been associated with stronger ethnic-racial identification and better psycho-social adjustment, evidence regarding preparation for bias and mistrust has yielded mixed results (Huguley et al., 2019; Wang et al., 2020). Not only is this research heavily weighted to US samples and children under the age of 18 (Priest, 2014), but also their focus is mainly on psycho-social adjustment. While parents talking about race and ethnicity with their children might also predict children's support and actions for social change (Bañales et al., 2021), this is an understudied area within the ERS literature. Addressing these gaps, we study ERS among young adults from Black and Asian minority ethnic groups in the UK. We aim to investigate whether ERS predicts their psycho-social adjustment and their support for social change and whether ethnic-racial identification mediates these associations.

The participants were 400 young adults (18-25,  $M = 22.14$ ,  $SD = 1.94$ , Male=43%, Female=57%) from various British Asian (62%), Black (23%), or mixed (15%) minority ethnic groups. While 46% were students, 41% were employed and 11% were unemployed. The study included four measures of psycho-social adjustment (depressive symptoms, life satisfaction, satisfaction with friendship quality, and school belonging) and three measures of support for social change (structural action, measuring their likelihood of collective action for various social/political causes; interpersonal action, measuring their likelihood of intervening if they observe discriminatory acts; participation in racial justice movements such as BLM).

Findings showed that the young adults who reported more parental cultural socialization reported stronger ethnic-racial identification and in turn better psycho-social adjustment as well as more support for social change. In contrast, parental promotion of mistrust at home predicted weaker ethnic-racial identification and in turn both worse adjustment and lower support for social change among young adults. While preparation for bias predicted stronger ethnic-racial identity and in turn more support for social change, its effects on adjustment were mixed: indirectly preparation for bias predicted better adjustment via stronger identity but directly it predicted worse adjustment. Stronger ethnic-racial identity buffered against the negative impact of preparation for bias on young adults' adjustment.

Findings show that the impact of ERS continues to play out in young adulthood which is characterized by multiple changes such as the transition from school to work or university and less influence of parents. They shed light on some of the mixed findings regarding the impact of preparation for bias on adjustment, as we found both positive and negative effects, eventually canceling each other out. Finally, we present for the first time the impact of the three dimensions of ERS on various forms of support and action for social change.

85

## **'Dutch' according to children and mothers: Nationality stereotypes and citizenship representation**

Ymke de Bruijn<sup>1</sup>, Yiran Yang<sup>2</sup>, Judi Mesman<sup>3</sup>

<sup>1</sup>Utrecht University, Utrecht, Netherlands. <sup>2</sup>Radboud University, Nijmegen, Netherlands. <sup>3</sup>Leiden University, Leiden, Netherlands

### **Abstract (max 500 words)**

Stereotypic ideas about who belongs to a national group can result in members from ethnically underrepresented groups experiencing foreigner objectification, despite having legal citizenship (Juang et al., 2021). At the same time, nationality stereotypes hamper possibilities for common ingroup identities that could benefit interethnic relations (Gaertner et al., 2016). Improving interethnic relations should start at a young age, given the early emergence of prejudice (Raabe & Beelmann, 2011). Therefore, understanding what nationality stereotypes look like among children, and how they acquire these stereotypes is of great importance. The current research investigates (1) the endorsement of the nationality stereotype Dutch = White among children of different ethnic-racial backgrounds in the Netherlands, (2) the endorsement of ethnic and civic citizenship representations among their mothers, and (3) associations between maternal citizenship representations and children's nationality stereotypes (Study 1). In addition, the current research provides insight in mechanisms behind these potential associations, by exploring (4) how mothers include the subject of Dutch citizenship in the upbringing of their children (Study 2).

In Study 1, 197 children (57% girls, 43% boys) between 7 and 13 years old ( $M = 9.75$ ,  $SD = 1.08$ ) of different ethnic-racial backgrounds (106 White Dutch, 35 Turkish-Dutch, 32 Afro-Dutch, 24 Chinese-Dutch) participated. During a social categorization task, they were asked to point out who they thought were Dutch from photos of children with different ethnic-racial backgrounds. Additionally, their mothers filled out a citizenship representation questionnaire rating the importance of civic and ethnic dimensions of citizenship (Reijerse et al., 2013). In Study 2, qualitative interview data of 60 mothers (20 White Dutch, 20 Turkish-Dutch, 20 Afro-Dutch) on socialization practices regarding Dutch citizenship were analyzed using an inductive thematic approach.

Results from Study 1 show that children from all ethnic-racial backgrounds named White children as Dutch far more often than they did Black, Middle Eastern/North-African, or East Asian children. This endorsement of the nationality stereotype did not differ among the ethnic-racial participant groups. In contrast, most mothers (White Dutch, Afro-Dutch and Chinese-Dutch) rated the civic dimension of citizenship as more important than the ethnic dimension, and Turkish-Dutch mothers rated them as equally important. These maternal citizenship representations, however, were unrelated to children's nationality stereotypes. Results from Study 2 can partly explain this lack of association, as mothers often described that they did not explicitly talk to their children about who they should see as Dutch. Additionally, mothers frequently confirmed the nationality stereotype in their choice of words and through more subtle messages, irrespective of their explicit beliefs about Dutch citizenship or their own sense of Dutch identity.

The current research suggests that children are left to form their views on who they think is Dutch based on these more subtle messages from mothers as well as other sources, currently clearly resulting in a stereotypic view. Future studies are needed to examine how to counter children's nationality stereotype to work towards a more inclusive view of nationality, so that all people who feel Dutch are actually seen as such.

## Color-evasiveness and White normativity in Chinese immigrant mothers in the Netherlands

Yiran Yang<sup>1</sup>, Ymke de Bruijn<sup>2</sup>, Rosanneke Emmen<sup>3</sup>, Judi Mesman<sup>3</sup>

<sup>1</sup>Radboud University, Nijmegen, Netherlands. <sup>2</sup>Utrecht University, Utrecht, Netherlands. <sup>3</sup>Leiden University, Leiden, Netherlands

### Abstract (max 500 words)

Color-evasive behavior (reluctance to talk about skin color or race) is commonly found among members from the dominant White ethnic group in the United States (Apfelbaum et al., 2008). It can have a negative impact on cognitive and psychological outcomes of members from underrepresented ethnic groups (Holoien & Shelton, 2012), because it provides an environment that conceals societal inequalities based on race. In addition, adults from the dominant ethnic group also convey white normativity, i.e., White being the normative state, or 'unmarked' (Frankenburg, 2020). Although people from underrepresented ethnic groups might be expected to challenge color-evasiveness and white normativity, this is not what empirical research shows. In fact, children from underrepresented ethnic groups already start to show color-evasive behaviors in middle childhood (Pauker et al., 2015). Parents are one of the important social referents for children when it comes to instilling norms regarding race, including color-evasiveness and white normativity. The present study provides insight into these issues in a largely ignored underrepresented ethnic group in a less studied context: Chinese mothers in the Netherlands.

The current study includes a sample of 78 Chinese immigrant mothers of 7 to 11-year-old children. During a mother-child interactive game *Guess Who?*, the mother was shown a game board with multiple photos of people and had to guess the target photo through asking yes/no questions to the child. There were two versions of the game which included different pictures: photos of White adults and Black adults, and photos of White adults and East Asian adults. Due to the even distribution of ethnicity, gender and t-shirt color, there were three most efficient question types, i.e., about ethnic-racial background, gender, and t-shirt color. This study investigates (1) strategic color-evasiveness among Chinese immigrant mothers (2) white normativity among Chinese immigrant mothers, and (3) differences in color-evasiveness and ethnic-racial focus based on the ethnic-racial background of adults in the pictures of the two versions.

Color-evasion was coded from videotapes and reflects avoiding ethnic questions, asking such questions later and taking more time to formulate them. White normativity was coded as the extent to which parents focused ethnic questions more on the adults of color rather than on the White adults. As a result, although most of the mothers asked ethnic-racial questions, these questions were asked less often, later in the game, and took longer to formulate compared with gender questions, especially in the version of the game that included pictures of White and Black adults. All mothers who asked ethnic-racial questions displayed patterns of ethnic-racial focus that reflect white normativity, by focusing more on people of color than on White people.

The results suggest that Chinese-Dutch children are exposed to social norms by parents that could translate to prejudice against underrepresented ethnic groups. The present study indicates that color-evasiveness and white normativity are also present in populations of color in the European context. Further research is needed to understand how people of color internalize these white social norms and how white hegemony affects the self-image of populations of color.

90

## **Maternal Sensory Signals and Child Cognitive Development Among Substance-Using and Non-Using Mother-Child Dyads**

Noora Hyysalo<sup>1</sup>, Minna Sorsa<sup>1</sup>, Eeva Holmberg<sup>1</sup>, Riikka Korja<sup>2</sup>, Marjo Flykt<sup>3</sup>

<sup>1</sup>University of Tampere, Tampere, Finland. <sup>2</sup>University of Turku, Turku, Finland. <sup>3</sup>University of Helsinki, Helsinki, Finland

### **Abstract (max 500 words)**

#### Objective

Maternal sensory signals are a novel area of research that focus on understanding maternal interactive behavior on a fine-grained level. Patterns of sensory signals, which include vocal, tactile, and visual signals observed in a dyadic interaction are suggested to be associated with changes in children's brain development, thus also affecting their subsequent development. However, previous studies have been performed among community samples and we do not know whether parenting risks, namely maternal substance use, shapes sensory signals. Maternal substance use is known to affect child development via dyadic interaction as well as via fetal exposure that associates with brain development. Therefore, it is important to assess whether maternal substance use also shapes maternal sensory signals potentially amplifying developmental risks experienced by children. Previous studies have found an association between the unpredictability of maternal sensory signals and children's poorer cognitive development. This association remains unknown among high-risk, substance-using mother-child dyads. In this exploratory study, we first assess maternal sensory signals and their structure (quantity and duration) in substance-using and non-using mothers and their children. Second, we explore the association of maternal sensory signals and children's cognitive development in these dyads.

#### Methodology

We studied 59 mother-child dyads (34 with and 25 without maternal substance use) when children were 2 and 4 years of age. We recruited dyads with maternal substance use from a well-baby clinic specialized in substance-using families and non-using dyads from communal well-baby clinics in southern Finland. Videorecorded dyadic free-play situations were used to evaluate maternal sensory signals at children's age of 2 years. Entropy rate was calculated as a measure of the unpredictability of maternal sensory signals. The quantity and duration of maternal sensory signals were also coded from the same video recordings. We evaluated children's cognitive development at 2 years of age with Bayley Scales of Infant

and Toddler Development (third edition) and at 4 years of age with Wechsler Preschool and Primary Scale of Intelligence (third edition).

### Results

We expect that our explorative study will provide new insights into the unpredictability as well as quantity and duration of maternal sensory signals in substance-using and non-using mother-child dyads. We will provide descriptive information and visual assessment of maternal sensory signals in these groups. Based on previous findings, we expect to find an association between maternal sensory signals and children's cognitive development so that mothers' more predictable behavior pattern would be associated with children's higher cognitive functioning.

### Conclusion

This explorative study will seek to understand dyadic interaction on a fine-grained level. We also provide new insights into how maternal substance use associates with sensory patterns of interaction.

## 92

### **Consequences of maternal childhood maltreatment and predictable parenting behavior on infant and child socio-cognitive development in Uganda**

Moritz Köster<sup>1</sup>, Herbert Ainamani<sup>2</sup>, Eunice Murokor<sup>3</sup>, Eeva Holmberg<sup>4</sup>, María José Lobeda-Garzón<sup>5</sup>, Julian Busch<sup>6</sup>, Riikka Korja<sup>4</sup>

<sup>1</sup>University of Regensburg, Regensburg, Germany. <sup>2</sup>Kabale University, Kabale, Uganda. <sup>3</sup>Universität Greifswald, Greifswald, Germany. <sup>4</sup>University of Turku, Turku, Finland. <sup>5</sup>Humbolt University Berlin, Berlin, Germany. <sup>6</sup>Ruhr Universität Bochum, Bochum, Germany

#### **Abstract (max 500 words)**

##### Objective of the study

Women growing up in low- and middle-income countries have a high risk to experience interpersonal adversities such as childhood maltreatment and intimate partner violence (WHO, 2013). Not only do these maternal adversities affect the exposed individuals but they may also have consequences for their offspring, who are at increased risk of emotion regulation difficulties and deficiencies in socio-cognitive development. This longitudinal study investigates the consequences of maternal childhood maltreatment on early infant and child development in a sample of N = 120 mothers and their offspring in rural and urban Uganda. Maternal depressive symptomatology and predictable parenting have been assessed as potential mechanisms of intergenerational transmission. Infant emotional reactivity was assessed in a still face paradigm and the consequences for their socio-cognitive development are assessed in the third year of life.

## Methodology

Mothers visited mobile laboratories at the ages of 8 and 36 months of age. At the first assessment (T1), mother's early trauma and depressive symptoms were assessed via the Childhood Trauma Questionnaire and the Center for Epidemiologic Studies Depression Scale, respectively. Furthermore, the predictability of their behavior was assessed in a free play period using the entropy rate. Infants' emotional reactivity was measured via behavioral coding derived from their joint participation in the standardized procedure (Still Face Paradigm) and was assessed as an integrated measure that included duration, intensity, and latency to negative affect. At the second assessment (T2), we assess the same measures from T1, with an age-adapted version of the still face paradigm, as well as infants' socio-cognitive development using the INTER-NDA Early Child Development scale.

## Results

Findings for the first assessment revealed that both maternal predictability and greater early trauma exposure was associated with lower infant reactivity. However, a bootstrapping-based mediation analysis showed that maternal predictability did not mediate the effects of maternal childhood maltreatment on infants' emotional reactivity. For the second assessment, we will present results with regard to the hypothesis that maternal childhood maltreatment has long term consequences for children's emotional reactivity and socio-cognitive development in the third year of life. These effects may be mediated by maternal predictability as an important mechanism for intergenerational transmission of adverse experience.

## Conclusion

Our study adds a crucial piece of puzzle to our growing understanding of the intergenerational transmission of adverse experience, first, by studying a sample with high prevalence of maternal childhood maltreatment that has rarely been investigated, and, second, by investigating underlying mechanisms of intergenerational transmission in the early mother-child interaction.

93

## **The effects of unpredictable maternal sensory signals on child's self-regulation and emotional reactivity– FinnBrain Birth Cohort Study**

Riikka Korja, Holmberg Eeva, Saara Nolvi, Lahtela Hetti, Hasse Karlsson, Elisabeth Nordenswan, Kataja Eeva-Leena, Linnea Karlsson

University of Turku, Turku, Finland

### **Abstract (max 500 words)**

Background and aims: Maternal sensory signals in early life play a crucial role in programming the structure and function of the developing brain (Davis et al, 2017). In this presentation we will summaries our findings about the effects of unpredictable maternal sensory signals on child's emotional and



cognitive regulation and reactivity from infancy to preschool years. More specifically our aim was to assess whether unpredictability of maternal sensory signals in mother-infant interaction situation is associated with child's self-regulation capacity during early childhood (Study 1) and at five years of child's age (Study 2) and with child's internalizing behavior at five years of child's age (Study 3).

Methods: Study participants included 126 (Study 1), 133 (Study 2) and 239 (Study 3) mother-infant dyads that are a subset of the large FinnBrain Birth Cohort Study and its Focus Cohort, a nested case-control population (Karlsson et al., 2018). The Focus Cohort is comprised of mothers with high or low psychological distress based on self-report measures collected during gestational weeks 14, 24 and 34. Women with at least two positive screens for distress were identified as high prenatal psychological distress. Maternal prenatal distress was assessed using the questionnaires of EPDS, SCL-90 anxiety subscale and PRAQ-R2.

The degree of predictability of maternal sensory signals was measured using entropy rate derived from behavioral coding of a play interaction of mother and child at 8 months (Study 1 and 2) and 30 months (Study 3) of child's age. Mother-child interaction was video-recorded in a semi-structured 10-minute play episode.

Child's self-regulation was assessed using the dimension of regulation and orientation from IBQ questionnaire at 12 months and the dimension of effortful control from ECBQ questionnaire at 24 months (Study 1) and the dimension of effortful control from CBQ questionnaire at 5 years (Study 2). Child's internalizing behavior was measured using the sub-scales of sadness and fearfulness from Children's Behavior Questionnaire (CBQ; Rothbart et al., 2001) when children were 5 years old (Study 3).

Results: Findings showed that unpredictable maternal sensory signals at 8 months associated with child's lower regulation at 12 months and with child's lower effortful control at 24 months after controlling the significant covariates (Study 1). Furthermore, correlational analyses showed that higher unpredictability of maternal sensory signals associated modestly with children's poorer effortful control at 5 years of age. Moreover, the exposure to very high unpredictability was associated with poorer child effortful control at 5 years after controlling the significant covariates (Study 2). In addition, findings showed that maternal unpredictable sensory signals during toddlerhood predicted child's higher fearfulness at 5 years after inclusion of covariates.

Conclusions: Our findings suggest that unpredictability of maternal sensory signals influence the maturation of developing brain involved especially in the emotional and cognitive regulation and reactivity. Our findings suggest that maternal unpredictable care is a risk factor for child's lower effortful control from infancy to preschool years and to child's higher internalizing behavior during preschool years.

94

**Multimodal dyadic interaction: The role of maternal reflective functioning, emotional availability, and predictability of sensory signals**

Eveliina Mykkänen<sup>1</sup>, Vänskä Mervi<sup>1</sup>, Jani Käylä<sup>1</sup>, Sari Peltonen<sup>2</sup>, Eeva Holmberg<sup>3</sup>, Riikka Korja<sup>3</sup>

<sup>1</sup>University of Tampere, Tampere, Finland. <sup>2</sup>University of Tampere, Tampere, Finland. <sup>3</sup>University of Turku, Turku, Finland

### **Abstract (max 500 words)**

Objective of the study: The parent-infant interaction integrates a dynamic set of social-behavioural signals that incorporates multimodal sensory, vocal and emotional processes. In order to gain a comprehensive understanding of the dyadic interaction, multiple approaches are necessary. These should comprise maternal mentalization, dyadic emotional connection, and microlevel sensory behaviors. Maternal mentalizing capacity, assessed by Parenting reflective functioning (PRF), refers to her ability to hold the child's mental states in mind and reflect upon the child's experience. Dyadic emotional connection, assessed by Emotional availability (EA), refers to caregivers' and infants' healthy shared emotional interaction, involving their initiative, structuring and sensitivity actions. Microlevel sensory behaviors refer to second by second unfolding patterns of maternal gaze, vocal and touching behaviors, assessed by Predictability approach of maternal sensory interaction signals.

While knowledge is abundant about PRF and EA in parent-infant interaction, research on maternal sensory signal predictability is scarce. It is important to learn about the role of maternal mentalization and dyadic emotional connection in associating with microlevel sensory behaviors. Therefore, the present study analyses, how maternal reflective functioning and emotional availability are associated with predictability of maternal sensory interaction signals. We also examine the role of maternal postnatal depressive mood and infant health in the association.

Methodology: Participants of the study were 60 voluntary mothers with 6-month-old infants, taking part of the Machine understanding of mother-infant interaction -study in Tampere University, Finland. The mother-infant dyads visited university laboratory, where a 12-minute free-play interaction was recorded with multimodal sensors including video. The mothers also filled in a short electronic questionnaire. Predictability of maternal sensory interaction signals was analyzed from the free-play interaction video using the Maternal Sensory Behaviour Coding Scheme (MSBCS) by a trained psychology master student. Maternal reflective functioning, emotional availability, postnatal depression, and infant health were self-reported by the mother. The statistical analyses will be conducted by SPSS version 27.

Expected results: Results of the analyses will be presented at the European Conference on Developmental Psychology (ECDP) 2023. We expect to find associations between maternal reflective functioning, emotional availability, and predictability of maternal sensory interaction signals.

Conclusion: We need to deepen our understanding of the processes through which mother-infant interaction finds its way to child wellbeing and development. One way of doing this is learning about the unique and shared features of early interaction approaches. This is where the present study contributes to.

110

## Gene-environment interplay in externalizing behaviour from childhood through adulthood

Tina Kretschmer<sup>1</sup>, Charlotte Vrijen<sup>1</sup>, Ilja Nolte<sup>2</sup>, Jasmin Wertz<sup>3</sup>, Catharina Hartman<sup>2</sup>

<sup>1</sup>University of Groningen, Groningen, Netherlands. <sup>2</sup>University Medical Centre, Groningen, Netherlands.

<sup>3</sup>University of Edinburgh, Edinburgh, United Kingdom

### Abstract (max 500 words)

#### Background and objectives

Externalizing behaviour refers to difficulties with regulating emotions, exerting self-control, and inhibiting impulsivity. Examples for externalizing behaviour in childhood are defiance and opposition, temper tantrums, and aggressive behaviour toward peers. Prior work has shown that externalizing behaviour is influenced by genetic and environmental factors but these components are often studied separately. To tackle this limitation, we used longitudinal data spanning almost two decades and polygenic scores of externalizing behaviour available for offspring and both parents to test genetic nurture and evocative gene-environment correlation, two mechanisms of gene-environment interplay. With respect to genetic nurture, we hypothesized that parents' genes would predict family dysfunction which in turn would predict offspring early adult externalizing behaviour. We tested whether family dysfunction functions as an intermediate variable in the pathway from parents' genes to offspring externalizing behaviour in early adulthood while controlling for offspring polygenic score. With respect to evocative gene-environment correlation, we hypothesized that genetically-influenced offspring externalizing traits would predict family dysfunction, which in turn would predict early adult externalizing problems.

#### Methods

Longitudinal data from seven waves of the TRacking Adolescents' Individual Lives Survey (TRAILS), a prospective cohort study of Dutch adolescents followed from age 11 to age 29 (n at baseline = 2734) were used. Child externalizing behaviour was assessed using self- and parent-reports. Family dysfunction was assessed from parents. Early adult externalizing behaviour was assessed using self-reports. Genome-wide polygenic scores for externalizing problems were constructed for mothers, fathers, and offspring.

#### Results

Offspring externalizing polygenic score was associated with child externalizing behaviour ( $r = .07$ ,  $p = .001$ ) and externalizing behaviour in early adulthood ( $r = .15$ ,  $p < .001$ ). Family dysfunction was higher in families where offspring displayed externalizing behaviour in childhood ( $r = .13$ ,  $p < .001$ ) and in early adulthood ( $r = .14$ ,  $p < .001$ ). No indirect effects from parents' polygenic scores to offspring early adult externalizing behaviour via family dysfunction were detected, suggesting that genetic nurture did not play a detectable role for the development of early adult externalizing problems. Similarly, support for

evocative gene-environment correlation was low. That said, the individual's polygenic score stably predicted behaviour and parental effects on offspring outcomes ran via genetic transmission.

## Conclusion

Even though our analyses did not provide strong support for gene-environment interplay, genes are clearly implicated in externalizing problems, even when family environment is accounted for. This underlines that "purely environmental" studies miss out on an important source of variance of behavioural development.

## 111

### Gene-environment interplay in the development of overweight

Marthe de Roo<sup>1</sup>, Catharina Hartman<sup>2</sup>, Rene Veenstra<sup>1</sup>, Ilja Nolte<sup>2</sup>, Karien Meier<sup>3</sup>, Charlotte Vrijen<sup>1</sup>, Tina Kretschmer<sup>1</sup>

<sup>1</sup>University of Groningen, Groningen, Netherlands. <sup>2</sup>University Medical Centre, Groningen, Netherlands.

<sup>3</sup>Parnassia Psychiatric Institute, The Hague, Netherlands

#### Abstract (max 500 words)

##### Background & objectives

Overweight in youth is influenced by genes and environment. Gene-environment interaction (G×E) has been demonstrated in twin studies and recent developments in genetics allow for studying G×E using individual genetic predispositions for overweight. We examined genetic influence on the development of overweight during adolescence and early adulthood and determine whether genetic predisposition is attenuated by higher socioeconomic status and having physically active parents.

##### Methods

Latent class growth models of overweight were fitted using data from the TRacking Adolescents' Individual Lives Survey (TRAILS, n = 1676). A polygenic score for BMI was derived using summary statistics from a genome-wide association study of adult BMI (N = ~700,000) and tested as predictor of developmental pathways of overweight. Multinomial logistic regression models were used to examine effects of interactions of genetic predisposition with both socioeconomic status and parental physical activity.

##### Results

A three-class model of developmental pathways of overweight fitted the data best. The polygenic score for BMI and socioeconomic status distinguished the persistent overweight and adolescent-onset overweight trajectories from the non-overweight trajectory. Only genetic predisposition differentiated the adolescent-onset from the persistent overweight trajectory. There was no evidence for G×E.

## Conclusions

Higher genetic predisposition increased the risk of developing overweight during adolescence and young adulthood and was associated with an earlier age at onset. We did not find that genetic predisposition was offset by higher socioeconomic status or having physically active parents. Instead, lower socioeconomic status and higher genetic predisposition acted as additive risk factors for developing overweight. Our study underlines the value of a polygenic score approach to differentiate groups of individuals following distinct trajectories of overweight and for studying the joint contributions of genes and environments to traits. The mechanisms through which genetic predisposition for overweight translates into these trajectories and the environments that effectively modify genetic risk remain areas for future research.

## 112

### Genetic risk for mental health disorders – the moderating role of an adverse childhood environment

Henrik Dobewall<sup>1</sup>, Katri Kantojärvi<sup>2</sup>, Jari Lahti<sup>3</sup>, Maria Vaalavuo<sup>1</sup>

<sup>1</sup>Finnish Institute for Health and Welfare, Helsinki, Finland. <sup>2</sup>THL Biobank, Helsinki, Finland. <sup>3</sup>University of Helsinki, Helsinki, Finland

#### Abstract (max 500 words)

##### Background & objectives

The use of genetically informed data offers interesting opportunities to answer important research questions on the development of social inequalities in mental health. We exploit polygenic scores combined with longitudinal register data from Finland to analyze how adverse childhood experiences interact with genetic disposition in predicting psychiatric diagnoses.

We want to explore whether the genetic risk is similarly distributed across social strata and whether an adverse childhood environment makes individuals particularly susceptible to developing a mental illness when genetic disposition is accounted for. To study the gene-environment interactions (GxE), our principal research question is whether genetic risk for mental illness is moderated by adversity in childhood. Our hypothesis is that a higher genetic risk for mental health problems is more likely to be realized among children with poorer parental resources and living conditions, supporting the idea of accumulation of disadvantage. Second, we investigate whether differences between internalizing problems and externalizing problems can be detected.

##### Methods

We use a large, genotyped dataset (~40k, 54.3 % female) that combines information from FINRISKI 1992-2012, Terveys 2000-2011, and Finterveys 2017 surveys with rich register data for the years 1987-2020. We focus on individuals born in 1987 and later (n=7,583) for whom data on their own and parental background is comprehensively available. Genetic disposition was measured with polygenic

scores (PGS) for Bipolar disorder, Schizophrenia, Depression, Post-traumatic stress disorder, ADHD, Neurotic disorder, Mood disorder, Drug addiction, and Alzheimer. We study psychiatric diagnoses based on ICD-10 classification recorded in public specialized health care will be used to measure the onset of mental illness (age of the first diagnosis). Mental illnesses will further be categorized into internalizing and externalizing problems and combined into having “any” psychiatric diagnosis. An adverse childhood environment is assessed with a broad index of the family background during childhood. It includes parental resources such as education, occupation, income, receipt of social benefits, family type, and health factors such as health behaviours from the birth register and parental psychopathology. We exploit the panel structure of our data and use survival methods to study the onset of mental health disorders.

#### Expected results

In Finnish health registers, the prevalence of having any mental health diagnosis at age 13-19 was 8.0%, but some have more than one diagnosis (internalizing: F30-F39 3.4%, F40-F48 2.9% / externalizing: F10-F19 0.9%, F90-F98 2.2%).

Survival analysis indicated that children with socially disadvantaged parents had a higher probability that a mental health problem was diagnosed before age 19 than those growing up in socially advantaged families. We will control for PGS for mental health disorders and other risk factors to see whether the gap between SES groups changes. Whether being diagnosed with a mental illness is moderated by family background is analyzed by interacting the PGSs with our indicators of parental resources and living conditions.

#### Conclusion

Permission to merge the genetic information with register data has been recently granted to us by the data provider. Based on the expected new knowledge about gene-environment interactions societal implications will be discussed.

## 113

### **Parents’ mental health symptoms hardly affect children’s educational achievement - evidence from a large children-of-siblings study**

Perline Demange<sup>1,2,3</sup>, Michel Nivard<sup>1,2</sup>, Fartein Ask Torvik<sup>4,5</sup>, Espen Eilertsen<sup>4,5</sup>, Rosa Cheesman<sup>4</sup>, Torkild Lyngstad<sup>6</sup>, Eivind Ystrøm<sup>4,7</sup>, [Elsje van Bergen](#)<sup>1,2,3</sup>

<sup>1</sup>Department of Biological Psychology, Vrije Universiteit Amsterdam, Amsterdam, Netherlands.

<sup>2</sup>Research Institute LEARN!, Vrije Universiteit Amsterdam, Amsterdam, Netherlands. <sup>3</sup>Amsterdam Public Health Research Institute, Mental Health, Amsterdam, Netherlands. <sup>4</sup>PROMENTA Research Center, Department of Psychology, University of Oslo, Oslo, Norway. <sup>5</sup>Centre for Fertility and Health, Norwegian Institute of Public Health, Oslo, Norway. <sup>6</sup>Department of Sociology & Human Geography, University of

Oslo, Oslo, Norway. <sup>7</sup>Department of Mental Disorders, Norwegian Institute of Public Health, Oslo, Norway

## **Abstract (max 500 words)**

### Objective

Children's academic skills, such as reading and math, are predictive of later health and wealth. Behavioural genetic research has shown that individual differences in children's academic skills are ~30% due to environmental influences. It is important to identify specific environmental influences that matter. Here we focus on their parents' mental health. Some studies have shown weak associations between parental mental health and children's educational outcomes. However, these associations may not reflect causal effects, as they could be confounded by factors shared in families, like social-economic position and genetic influences.

### Methodology

We preregistered this study using a quasi-experimental design to reduce familial confounding and get closer to causal effects. We employ data from up to 24,000 families of the Norwegian Mother, Father, and Child Study (MoBa). We exploit the family structure to investigate effects within families. That is, we test within sets of adult siblings whether the sibling with worse mental health is more likely to have a child with lower academic skills. We refer to this design as the children-of-siblings design. It allows us to control for the factors shared among adult siblings that might be related to both their own mental health and their children's educational outcomes. Unlike regular correlations or regressions, this design allows us to estimate effects controlled for various unmeasured sources of confounding.

In MoBa, parents filled out surveys on their symptoms of anxiety, depression, eating disorders, ADHD, and alcohol use disorder. Children's academic skills were assessed at age 10 using nationally standardized tests in mathematics, reading comprehension, and English as an additional language.

### Results

Simple regressions, not controlling for familial confounding, showed that children tend to score slightly lower on some academic skills if their parents had more symptoms of anxiety, depression, or eating disorder ( $\beta_s \geq .05$ ). Within families, so controlling for familial confounding, these associations disappeared.

### Conclusion

While parental mental health symptoms correlate weakly with children's educational achievement, our findings suggest that these correlations are due to familial confounding. That is, our findings suggest no causal effect, or at least no substantial effect, of parental mental health on children's achievement. Regarding research, our study highlights the value of genetically-informed designs to understand the causes and consequences of psychopathology. Regarding impact, parents suffering from mental health problems already have enough worries. It is one worry less that their mental health problems do not seem to affect their child's school performance.

116

## Adolescent internalizing behavior, self-efficacy, social support, and COVID-19 in three countries

Mette Ranta<sup>1</sup>, Ann T. Skinner<sup>2</sup>, Carmen Kealy<sup>3</sup>, Aprile D. Benner<sup>4</sup>, Ersilia Menesini<sup>5</sup>, Ingrid Schoon<sup>6</sup>

<sup>1</sup>University of Helsinki, Finland, Finland. <sup>2</sup>Duke University, Durham, USA. <sup>3</sup>University of Galway, Galway, Ireland. <sup>4</sup>University of Texas at Austin, Austin, USA. <sup>5</sup>University of Florence, Florence, Italy. <sup>6</sup>University College London, London, United Kingdom

### Abstract (max 500 words)

Strict regulations during the COVID-19 pandemic forced adolescents to make major adjustments in everyday life. Such major negative life events often relate to anxiety and depression (Punamäki et al., 2001; Magson et al., 2020; Parola et al., 2020). Prior research has shown that adolescent adjustment is predicted by both family and peer contexts. In addition to parent and peer social support (Siedlecki et al., 2014; Scardera et al., 2020), self-efficacy (Bandura, 1997; Bandura et al., 2003; Cattellina et al., 2021; Hussong et al., 2021) is also related to adolescents' positive adjustment.

Although extant literature on COVID-19 and adolescents includes findings on maladjustment (Mastrotheodoros, 2020), few cross-national studies explore the associations among maladaptive symptoms and individual, family, and peer-level predictors. More research is also needed on the impact of the pandemic on adolescents' mental health over the course of the pandemic and in different cultural contexts.

In response, this collaborative study utilizes data from the United States (US), the United Kingdom (UK), and Italy to examine:

1. What is the relation between self-efficacy, friend and family social support, knowing someone with COVID-19, and internalizing symptoms?
2. Do self-efficacy, social support, gender, or knowing someone with COVID-19 moderate the relation between internalizing symptoms measured before the pandemic or during a pandemic "re-opening" phase, and internalizing symptoms during an active COVID-19 period?

Data were collected from adolescents aged 15-19 years in Italy (n = 803), the US (n = 725) and the UK (n = 620) during the COVID-19 pandemic in 2020-2021. Data collected at two time points was used, Time 1 (T1) was either pre-pandemic (Italy and US), or during a significant re-opening period (UK), and Time 2 (T2) during a COVID-19 lockdown in each site. Regression analyses were conducted to examine the interaction of gender, self-efficacy, COVID-19 experience and support with T1 internalizing scores to predict T2 internalizing scores. Nationality/minority status was included as a covariate. Analyses were conducted with Mplus using FIML to account for missing data.

In all three countries, adolescents' T1 internalizing symptoms predicted T2 internalizing symptoms. Similarly, concurrent self-efficacy was associated with internalizing symptoms in all three countries. Self-



reported female gender predicted higher T2 internalizing scores in Italy and the US. In the US, higher levels of general self-efficacy exacerbated the relation between T1 and T2 internalizing, but in Italy, regulatory self-efficacy had a buffering effect on the relation between T1 and T2 internalizing (see attachment). In Italy, peer support also had a buffering effect on the relation between T1 and T2 internalizing.

Our project addresses adolescent mental health during the COVID-19 pandemic in different cultural contexts; Italy, the United Kingdom, and the United States, all of which have utilized different governmental strategies to mitigate the pandemic. We discuss these findings considering these differences and how youth development should be supported in the pandemic aftermath. We also discuss how secondary analyses of existing data can serve as a case study of how to build collaborative teams to answer important questions without collecting new data.

117

### **The moderating roles of father internalising symptoms and parent support in Germany and Slovakia: Changes in adolescents' internalising symptoms during the COVID-19 pandemic**

Ann T. Skinner<sup>1</sup>, Tamara Ondruskova<sup>2</sup>, Eva Klotz<sup>3</sup>, Sierra Jones<sup>1</sup>, Leyla Ciftci<sup>3</sup>, Rick Hoyle<sup>1</sup>

<sup>1</sup>Duke University, Durham, USA. <sup>2</sup>University College London, London, United Kingdom. <sup>3</sup>Utrecht University, Utrecht, Netherlands

#### **Abstract (max 500 words)**

The large literature on the impact of the COVID-19 pandemic and adolescent adjustment includes only a handful of studies that account for both mother and father reports of parent-child relationship quality or parents' mental health. This is especially true of father reports, even when prior research shows that fathers' parenting is associated with child adjustment at multiple developmental stages (e.g., Gassman-Pines and Skinner, 2017). Further, the extant literature on social support during the pandemic is mixed regarding whether peer or parent support is associated with better adolescent adjustment. Our study aimed to examine the relations among aspects of parental mental health, parent-child relationship quality, and social support in two understudied countries with varied governmental responses to the pandemic: Germany and Slovakia. Specifically, we explored the following:

1. What is the association between pandemic disruption, parental warmth, social support, and parental internalising symptoms and youth perceptions of changes in internalising symptoms during the pandemic?
2. Do parental warmth, social support, or parental internalising symptoms moderate the relation between adolescent perceptions of pandemic disruption and adolescent perceptions of changes in their own internalising symptoms?

Mothers, fathers, and adolescents (adolescent Mage = 14.6; n= 106 families in each site) were interviewed separately in Germany and Slovakia either in person or using web-based surveys between January of 2021 and May of 2022. In addition to providing demographic information, adolescents completed measures of COVID-19 experiences, parental warmth, and perceptions of peer and parent support. Parents completed measures of depression, trait anxiety, and parental warmth. Co-variants included child-reported gender, SES, and weeks since the pandemic lockdown began in each country in 2020. Interviews lasted approximately 20 minutes, and individuals were provided modest compensation for their time. Ethics board review was obtained by cooperating universities. Multi-group path analyses were conducted in MPlus using FIML to account for missing data. Measurement invariance across sites was established using the alignment method when measures had not already been validated cross-culturally in prior studies. Regions of significance will be explored for any significant interaction effects.

In both sites, fathers' internalising symptoms exacerbated the relation between adolescents' perceived levels of pandemic disruption and perceived changes in internalising symptoms (Figure 1); at higher levels of paternal internalising symptoms, the relation between pandemic disruption and adolescent increases in internalising symptoms was stronger. In both sites, youth reports of parental support buffered the relation between disruption and perceived increases in adolescent internalising symptoms during the pandemic (Figure 2).

This study provides new information about the relation between father symptoms of anxiety and depression and adolescent adjustment during the COVID-19 pandemic in two under-studied countries and adds to the mixed literature on the role of social support in buffering some of the negative impacts of the pandemic. The results underscore the importance of approaching pandemic research from a cross-cultural perspective using multiple reporters. Adolescent adjustment during the pandemic will be discussed in the broader context of how individual, family, and community factors interact with major disruptions in support systems for adolescents.

## 118

### Loneliness as experienced by adolescents and young adults: A qualitative study

Jessica Hemberg<sup>1</sup>, Lillemor Östman<sup>2</sup>, Yulia Korzhina<sup>1</sup>, Henrik Groundstroem<sup>1</sup>, Lisbet Nyström<sup>1</sup>, Pia Nyman-Kurkiala<sup>1</sup>

<sup>1</sup>Åbo Akademi University, Vaasa, Finland. <sup>2</sup>Luleå Municipality, Luleå, Sweden

#### Abstract (max 500 words)

Objective of the study: Mental health problems among adolescents and young adults are increasing worldwide together with loneliness, which is considered a global public health problem. The aim of this study was to explore loneliness through adolescents' and young adults' own descriptions and experiences. The research questions were: (1) How do adolescents and young adults describe and experience loneliness? and (2) What types of loneliness do adolescents and young adults describe?

Methodology: Data were collected through interviews with 15 Swedish-speaking Finns aged 17-30. Content analysis was used for data analysis.

Results obtained: Loneliness was linked to earlier negative experiences, mental illness or physical disorders, a self-centered society, social norms and social media. Three different types of loneliness were identified: social loneliness, emotional loneliness and existential loneliness.

Conclusion: It is important that adults and professionals are able to identify, interpret and understand signs that adolescents and young adults are experiencing negative feelings, which may indicate underlying loneliness.

**119**

## **Causes of involuntary loneliness among adolescents and young adults: An integrative review**

Yulia Korzhina<sup>1</sup>, Jessica Hemberg<sup>1</sup>, Pia Nyman-Kurkiala<sup>1</sup>, Lisbeth Fagerström<sup>2</sup>

<sup>1</sup>Åbo Akademi University, Vaasa, Finland. <sup>2</sup>Åbo Akademi University, Vasa, Finland

### **Abstract (max 500 words)**

Objective of the study: Today loneliness is admittedly a global public health problem and it is actually most prevalent during the adolescent years causing many health issues. The ability to identify the underlying reasons for loneliness among adolescents and young adults is of clinical importance as an important step in mitigating the negative effects of loneliness in this group. The aim of the study was to synthesize the existing knowledge on the different causes of involuntary loneliness among adolescents and young adults. The research question was: What underlies involuntary loneliness among adolescents and young adults?

Methodology: A modified integrative literature review on the existing research and literature on the causes underlying involuntary loneliness among adolescents and young adults. Original, peer-reviewed articles in English published from 2010 to 2020 were sought. The theory of caritative caring was chosen as the theoretical framework for this study.

Results obtained: Four main themes and seven subthemes emerged linked to causes of involuntary loneliness among adolescents and young adults: Loneliness due to different dimensions of suffering, Loneliness due to personal barriers, Loneliness due to negative life experiences, Loneliness due to life transitions. The subthemes were: Physical suffering, Mental suffering; Personality traits, Inefficient coping strategies; Significant loss, Bullying/cyberbullying, Insecure family relationships.

Conclusion: We found that involuntary loneliness among adolescents and young adults may have different underlying reasons. This understanding of loneliness as a multifaceted experience is important, and professionals should apply this new understanding when implementing interventions to alleviate loneliness among adolescents.

120

## A three-wave study of emotional fluctuations during the COVID-19 pandemic: The moderating role of environmental sensitivity

Concetta Esposito, Mirella Dragone, Alessandra Colella, Federica De Masi, Dario Bacchini

University of Naples "Federico II", Naples, Italy

### Abstract (max 500 words)

**Introduction.** The coronavirus (COVID-19) outbreak raised a global impact on adolescents' daily life, leading them to experience emotional fluctuations toward heightened negative affect and dampened positive affect (Rogers et al., 2021). However, among the few studies evaluating emotional responses across different stages of the pandemic, it was found that negative emotional experiences, instead of growing as the virus spread, reversed back to normality soon (Li et al., 2021). Furthermore, guided by the Environmental Sensitivity meta-framework (Pluess, 2015), some studies reported that due to their heightened sensitivity to environmental influences, young people are more likely to experience poor mental health during stressful life events, such as the COVID-19 pandemic, compared to less sensitive ones (Iimura, 2022). To date, there is little research on youths' emotional responses across different stages of the pandemic, and even less that has investigated the potential role of environmental sensitivity in making them more vulnerable to the psychological impact on emotional responses after prolonged pandemic restrictions. Informed by the Differential Susceptibility theory (Pluess & Belsky, 2013), this study aims to evaluate how adolescents' emotional responses (positive and negative emotions) changed as the pandemic evolved and whether this change in emotionality varied depending on the adolescents' level of environmental sensitivity.

**Methods.** We used a three-wave longitudinal study with a sample of 453 (34.4% males; Mage=15.91, SD=1.32) who self-reported their positive and negative emotionality (PANAS; Watson et al., 1988) and environmental sensitivity (HSC; Pluess et al., 2018) through an online survey across three stages of the pandemic: onset of the viral outbreak (March 2020), ongoing risk (March 2021) and contained risk (March 2022). Following the evidence suggesting that sensitivity is normally distributed, and people generally fall into three distinct sensitivity groups from low (bottom 30% of HSC scores) to medium (40%) to high (top 30% of HSC scores) sensitivity (Lionetti et al., 2018), a grouping variable reflecting the three sensitivity groups (low, medium, and high) was created and used in the analyses.

**Results.** Multiple-group latent growth curve analyses revealed a significant linear increase in negative emotions over time for highly sensitive adolescents, while a quadratic trend with a significant increase between the first and the second wave followed by a slight downward trend between the second and third wave was found for the low- and medium-sensitive adolescents; conversely, for positive emotions, no significant differences were found in change over time across groups, with all individuals, independent of their environmental sensitivity, showing a decrease of their positive emotionality between the first and second wave, which rises again between the second and third wave.

**Conclusions.** Our findings provide further evidence that the COVID-19 pandemic negatively impacted adolescents' emotionality. Emotional responses changed across the different stages of the pandemic, with a tendency to reverse back, especially for low- and medium-sensitive individuals. The results empirically confirm the theoretical proposition that differences in environmental sensitivity translate into different abilities to respond and adjust to adverse life events, with significant implications for practice and future research.

**121**

## **The two-sided coin of adolescents' and young adults' experiences of loneliness and its relationship to social media**

emelie Käcko, Jessica Hemberg, Pia Nyman-Kurkiala

Åbo Akademi University, Vaasa, Finland

### **Abstract (max 500 words)**

**Objective of the study:** Youth is associated with various feelings and experiences that can negatively affect adolescents' health and well-being, loneliness being one of them. In the transition between childhood and adulthood, experiences of loneliness are common and can often have a negative impact on young adults' psychological well-being. The aim of this study was to investigate how adolescents and young adults experience and describe negative and positive experiences of loneliness, as well as how social media can affect their loneliness.

**Methodology:** Data was collected through individual essays with nine (n=9) Finnish adolescents and young adults aged 19-27 in Finland and analyzed using qualitative content analysis.

**Results obtained:** Three main themes and eight subthemes were found. The three main themes were: Negative experiences of involuntary loneliness, Positive experiences of voluntary solitude, and Social media can reinforce and alleviate experiences of loneliness. The participants in the study stated that they need elements of both voluntary and involuntary loneliness in their lives, but that the negative experiences of involuntary loneliness can often be experienced as alienation, as an isolating feeling, when it is experienced as permanent. Lastly, the participants in the study stated that social media is a tool that can both enhance and alleviate experiences of loneliness often depending on how they use it.

**Conclusion:** There is a duality to experiences of loneliness: being alone is not necessarily always negative but can also be experienced as positive. More research on social media is needed because of its influence on loneliness among youth and young adults; they need to be educated on how to safely use it to support their health and well-being.

122

## Educational transitions impact on young people's well-being: A systematic review

Amanda Sundqvist<sup>1</sup>, Jessica Hemberg<sup>1</sup>, Ottar Ness<sup>2</sup>, Pia Nyman-Kurkiala<sup>1</sup>

<sup>1</sup>Åbo Akademi University, Vaasa, Finland. <sup>2</sup>NTNU Norwegian University of Science and Technology, Trondheim, Norway

### Abstract (max 500 words)

Objective of the study: Transitions can be described as a psychological process during which individuals learn to adapt to change through inner reorientation, adaptation, and/or transformation. The aim was to explore how educational transitions during adolescence and emerging adulthood impact mental health and loneliness and whether mental ill-health and loneliness during such transitions can be alleviated.

Methodology: A systematic review was conducted. A total of 27 quantitative and qualitative articles were included. Articles were analyzed utilizing thematic analysis.

Results obtained: Transitions were associated with both positive and negative outcomes for young people. Various individual variables might impact how a transition is experienced, and social support might constitute a positive resource across transitions.

Conclusion: To alleviate negative outcomes for young people, targeted interventions should be developed and support made available and accessible, especially for vulnerable young people. Interventions should be developed whereby students can be prepared for and supported during transitions. Additionally, academic activities should be introduced through which school belonging and the formation of peer relationships and quality-based friendships can be promoted.

124

## Adolescents' and young adults' experiences of well-being, mental health and loneliness during the COVID-19 pandemic

Jessica Hemberg<sup>1</sup>, Amanda Sundqvist<sup>1</sup>, Yulia Korzhina<sup>1</sup>, Lillemor Östman<sup>2</sup>, Sofia Gylfe<sup>1</sup>, Frida Gädda<sup>1</sup>, Henrik Groundstroem<sup>1</sup>, Pia Nyman-Kurkiala<sup>1</sup>

<sup>1</sup>Åbo Akademi University, Vaasa, Finland. <sup>2</sup>Luleå Municipality, Luleå, Sweden

### Abstract (max 500 words)

Objective of the study: Large gaps exist in the literature on COVID-19 pandemic-related mental health outcomes and after-effects specific to adolescents and young adults. The aim of the study was to explore adolescents' and young adults' experiences of well-being, mental health and loneliness during the COVID-19 pandemic.

Methodology: A qualitative exploratory design with qualitative content analysis was used. A total of 23 participants (aged 19-27; 4 men and 19 women) were interviewed.

Results obtained: Four themes emerged: Changed social networks – fewer and closer contacts, Changed mental and physical health, Increased physical and social loneliness, Well-being, internal growth and need for support.

Conclusion: Adolescents' and young adults' experiences of well-being, health and loneliness are subtle and complex. Participants experienced changed social networks, mental and physical health and well-being. Additionally, internal growth, need for support and increased loneliness were seen. Clear information on how to seek help and support from professionals should be made available.

**125**

## **Health habits and experiences of stress and well-being during the COVID-19 pandemic: Young people's lived experiences**

Miia Hästbacka, Jessica Hemberg, Pia Nyman-Kurkiala

Åbo Akademi University, Vaasa, Finland

### **Abstract (max 500 words)**

Objective of the study: Young people's well-being and mental health as well as everyday lives have been put at risk owing to the social and societal restrictions during the COVID-19 pandemic. Many young people's health habits, stress and well-being may have been affected during the pandemic, and it is important to examine these in more detail from the young people's own perspectives. The purpose of the study was to explore young people's health habits, stress and well-being during the COVID-19 pandemic.

Methodology: A qualitative exploratory design was used. The dataset consisted of interviews with 13 adolescents and young adults (17-25 years) in Swedish-speaking Finland. The data analysis method consisted of qualitative content analysis.

Results obtained: The results showed two main themes and seven subthemes. The first main theme was Resilience from positive health habits, followed by three subthemes: Positive health habits as coping strategies for the promotion of well-being, Resilience through self-compassion and adaptation and Essential with a support network. The second main theme was Changed conditions and the need for better support, followed by four subthemes: Concern for others and lack of social interaction, Insufficient support, Stress and high demands, and The impact of distance learning and social media.

Conclusion: Adolescents and young adults lacked a better range of support during the COVID-19 pandemic, although most felt they had done relatively well without the support of anyone other than family and friends. The importance of the support network was emphasized and young people should have at least one person with whom they feel they can talk. Self-awareness and adaptation to the changing situation permeated the results and resilience was noted among the youth. Young people's need for support and suggestions for strategies to strengthen their well-being need to be taken into account and be addressed by society. Further research should focus on investigating professionals' views on how young people's stress could be reduced and how their well-being could be promoted.

**126**

### **Finland-Swedish students' experiences of social interaction, mental health and performance pressure during the COVID-19 pandemic**

Amanda Hyvönen<sup>1</sup>, Pia Nyman-kurkiala<sup>1</sup>, Jessica Hemberg<sup>2</sup>

<sup>1</sup>Åbo Akademi University, Vaasa, Finland. <sup>2</sup>Åbo Akademi University, Vasa, Finland

#### **Abstract (max 500 words)**

Objective of the study: Young adults' everyday existence and lives have been dramatically affected by the COVID-19 pandemic, and students have experienced limitations both in university studies and in social life, which has affected their well-being and health. The aim of the study is to explore Finland-Swedish young students' experiences of social interaction, health and performance requirements during the COVID-19 pandemic.

Methodology: A qualitative exploratory design was used. The dataset consisted of essays written by 43 young adult students (aged 18-28) at a university in Swedish-speaking Finland. The data analysis method consisted of qualitative content analysis.

Results obtained: The results showed four main categories: Continued health obstacles, self-reflection and vitality, Performance requirements as a constant destructive companion or source of self-compassion, New start with university studies, Balancing act between social interaction and loneliness.

Conclusion: Young people's experiences of high performance demands and stress in everyday life need to be addressed and supported by the university and society. Further research should focus on investigating which forms of support and psychosocial interventions should be developed in the opinion of young people, in order to adequately respond to their needs.



127

## Young people's experiences of distance learning during the COVID-19 pandemic – opportunities and limitations

Jessica Hemberg<sup>1</sup>, Yulia Korzhina<sup>1</sup>, Amanda Sundqvist<sup>1</sup>, Lillemor Östman<sup>2</sup>, henrik groundstroem<sup>1</sup>, Lisbet Nyström<sup>1</sup>, Pia Nyman-Kurkiala<sup>1</sup>

<sup>1</sup>Åbo Akademi University, Vaasa, Finland. <sup>2</sup>Luleå Municipality, Luleå, Sweden

### Abstract (max 500 words)

Objective of the study: Young people's lives and daily existence have been thoroughly affected by the COVID-19 pandemic, which has caused isolation and changed the psychosocial environment, including, the transfer of teaching from a traditional college or university environment to digital platforms and distance learning from home. The purpose of the study was to explore young people's experiences of distance learning, study motivation and their support needs during the COVID-19 pandemic.

Methodology: A qualitative design with qualitative content analysis was used. In total, 23 young people, aged 19-27; four men and 19 women, were interviewed.

Results obtained: Both enabling and limiting experiences of distance learning surfaced among young people during the COVID-19 pandemic. Six themes emerged: Remote and non-motivating distance learning; Challenging to find study motivation in the home environment; Inadequate or lack of communication with teachers; Well-being and efficiency through distance learning; Flexibility, support and consideration of student wishes; Experiences of study guidance.

Conclusion: Young people's experiences of distance learning during the COVID-19 pandemic were both limiting and enabling. Young people's studies should increasingly be designed and arranged in co-creation with the young people themselves, as well as in a flexible way that could enable them to choose study model, either distance or physical studies at the educational institution. Support measures and study guidance should be developed in an appropriate and easily accessible way.

141

## Motivational Responses to Emotional Infant Faces in Mothers and Non-Mothers

Hanneli Sinisalo<sup>1</sup>, Amanda C. Hahn<sup>2</sup>, Lisa M. DeBruine<sup>3</sup>, Benedict C. Jones<sup>4</sup>, Marian J. Bakermans-Kranenburg<sup>5</sup>, Mikko J. Peltola<sup>1</sup>

<sup>1</sup>Tampere University, Tampere, Finland. <sup>2</sup>Humboldt University, Arcata, USA. <sup>3</sup>University of Glasgow, Glasgow, United Kingdom. <sup>4</sup>University of Strathclyde, Glasgow, United Kingdom. <sup>5</sup>ISPA – Instituto Universitário, Lisbon, Portugal

**Abstract (max 500 words)**

**Objective:** Understanding how parents respond to their infants' emotional cues is essential for understanding the development of parent-infant relationships. Infant emotions are expressed through facial expressions and vocalizations to capture the caregiver's attention and motivate them to attend to the infant's needs. The aim of this study was to investigate whether first-time mothers and non-mothers differ in their motivational responses to emotional infant faces and whether these responses are associated with salivary estradiol, testosterone, or cortisol hormone levels.

**Methods:** We recruited 96 participants (42 non-mothers and 54 new mothers of 6-month-old infants) who were shown either a happy or a sad infant face on each trial and were asked to press keys to prolong or shorten the viewing time. This task was designed to evaluate the motivational approach-avoidance responses to infant emotions. Hormone samples were collected at the beginning of the laboratory visit by asking the participants to chew a Salivette® swab for one minute. The data were analyzed with linear mixed modeling both with and without the hormonal variables.

**Results:** Both groups viewed happy infant faces longer ( $p < .001$ ). When controlling for the hormonal levels, mothers had a relatively larger difference in viewing times between the two emotions than non-mothers ( $p = .002$ ): they viewed happy infant faces longer and sad infant faces shorter amount of time. Additionally, there was a main effect of testosterone; higher levels were related to more effort to shorten the viewing times of both emotions ( $p = .003$ ), meaning that participants with higher testosterone levels tended to view the emotional infant faces for shorter periods of time.

**Conclusion:** This study provides important insights on how new mothers and non-mothers respond to emotional infant faces and how their responses are related to hormonal levels. The results show that happy infant faces are more motivating than crying infant faces for both mothers and non-mothers, but there seems to be a larger difference in the effort to view happy versus crying infant faces in mothers when their hormonal levels are taken into consideration. This suggests that happy infant faces may be particularly motivating to new mothers. Furthermore, the association between testosterone levels and motivational responses to infant emotions indicates that testosterone may play a role in how parents respond to their infants' emotional cues.

**144****Investigating the Association Between Recollected Experiences of Care During Childhood and the Attentional Bias to Infant Faces in Parents and Non-Parents**

Micol Gemignani, Michele Giannotti, Simona De Falco

University of Trento, Rovereto, Italy

**Abstract (max 500 words)**

Whilst research has shown that the attentional bias to infant faces may predict the quality of later infant care, the antecedents of this attention process have been less established. In particular, empirical

research on the role of past experiences of care in modulating the attentional bias to infant faces is very limited. To extend previous results confined to parents, we examined the attentional bias to infant and adult faces in a mixed sample (N=201) of parents (N=99) and non-parents (N=102), and whether this varied in relation to parental status, sex, the quality of remembered experiences of care, and possible interactions between these factors. Behavioral indices of Reaction Times (RTs) and Accuracy were collected using a Go/No Go task, in which emotional infant and adult faces served as distractors. Past experiences of maternal and paternal care were collected using the Italian short-form version of the Parental Acceptance-Rejection (PARQ) scale. Overall, the results confirmed that infant faces induced greater attentional interference compared to adult faces, eliciting slower RTs. Controlling for the age of participants, a heightened attentional bias to all the types of faces was found in parents versus non-parents. Women were overall slower in the task performance than men, and allocated more attention toward infant versus adult faces. The attentional prioritization of infant faces varied in relation to the early experience of care with one's own mother; those individuals who experienced a more accepting maternal care were more engaged, in terms of attention, by infant faces. For the first time investigated in this study, parental status did not prove to modulate this interaction effect. Grounded in the Interpersonal Acceptance-Rejection Theory (IPARTheory), this study overall suggests that the experience of receiving care from one's own mother during childhood may regulate the attentional bias to infant cues in adults. Mental representations constructed from significant experiences of early maternal care can shape the prioritization of attention to infant faces independently of the actual experience of parenting, constituting a potential global process that regulates adult caregiving.

145

## Men's Empathy Towards Children's Emotions Across Transition to Fatherhood

Sonja Veistola<sup>1</sup>, Rike Pahnke<sup>2</sup>, Alexander Lischke<sup>3</sup>, Peter A. Bos<sup>4</sup>, Mikko J. Peltola<sup>1</sup>

<sup>1</sup>Tampere University, Tampere, Finland. <sup>2</sup>University of Rostock, Rostock, Germany. <sup>3</sup>University of Greifswald, Greifswald, Germany. <sup>4</sup>Leiden University, Leiden, Netherlands

### Abstract (max 500 words)

**Objective.** Empathy is fundamental to sensitive caregiving, which in turn predicts a multitude of developmental and health outcomes for children. In two preregistered online studies, we investigated whether childless men, expecting men, and fathers differ in affective and cognitive empathy towards children.

**Methods.** We first conducted an international online study with a cross-sectional design. To measure affective empathy, participants (N = 530) rated their compassion and positive affect towards pictures of children in positive and negative emotional contexts (Bos et al., 2021). We measured cognitive empathy with Reading the Mind in the Eyes of Children Test (RME-C-T), a task designed for measuring recognition of children's emotions from facial expressions depicting the area around the eyes (Pahnke et al., 2020). The task includes a basic and complex version. Our preregistered hypotheses were that fathers (n = 198) would exhibit highest affective empathy to child signals and better emotion recognition ability followed by expecting men (n = 129) while childless men (n = 203) would score the lowest on both.

Results. In line with our hypothesis, expecting men exhibited greater compassion and positive affect towards children's emotions than childless men. However, the difference between expecting men and fathers was not significant. Unlike we expected, cognitive empathy did not differ between childless and expecting men while fathers had lower emotion recognition accuracy of complex emotions than expecting men. We conducted exploratory analyses on differences between first-time fathers and more experienced fathers (i.e., those with two or more children) and found that experienced fathers reported less compassion towards children and were worse at recognizing children's emotions compared to first-time fathers. Hence, differences between expecting men and fathers in the first analysis might be driven by lower affective and cognitive empathy of more experienced fathers.

Conclusions. Expecting men might be more sensitive and attentive to child signals in preparation for fatherhood, and thus show more affective and cognitive empathy. Meanwhile fathers might become accustomed to childcare, and their reactions may taper off over time. Fathers of small infants might also experience more stress and cognitive load in early parenthood impacting their cognitive empathy. However, the group differences were small. In a follow-up study with currently ongoing online data collection (estimated N = 550), we repeat our exploratory analysis to confirm whether fathers' parity indeed affects their empathy with preregistered, confirmatory analyses. In addition, we will look more closely at father's stress and sleep quality to study whether they could explain the potential decline in empathy. These results will be presented at the conference together with the current data.

**146**

## **Facial Empathic Reactivity to Children's Emotions Across the Transition to Fatherhood**

Mikko J. Peltola<sup>1</sup>, Sonja Veistola<sup>1</sup>, Eeva Alatalo<sup>1</sup>, Peter A. Bos<sup>2</sup>

<sup>1</sup>Tampere University, Tampere, Finland. <sup>2</sup>Leiden University, Leiden, Netherlands

### **Abstract (max 500 words)**

There is an emerging interest in the neural, hormonal, and behavioral changes associated with the transition to parenthood in men. It has been speculated that, compared to mothers, in fathers the developing capacity for sensitive caregiving is to a greater extent dependent on experience and time spent with the child. In our research we are interested in whether men's empathy towards children's emotions differs as a function of parity, i.e., the number of children, by comparing men who are soon going to be fathers to first-time fathers and more experienced fathers with two or more children.

In this study we used facial electromyography (EMG) to measure rapid facial muscle reactions to stimuli depicting children in neutral, positive, and negative emotional contexts. Facial EMG responses to emotional stimuli mimicking the emotional valence of the stimulus occur rapidly and involuntarily, and their magnitude has been associated with empathic traits, therefore providing an ideal tool for measuring rapid empathic reactivity to children's emotions in men at different stages of parenthood. We will test whether facial empathic reactivity increases from the prenatal to postpartum period in first-time fathers, reflecting sensitization to the child's emotions during early fatherhood. Regarding the

impact of protracted experience of fatherhood in fathers with two or more children, the results will be informative on whether empathic reactivity increases or diminishes with greater experience of childcare.

The data collection is in the final stages and will be completed in February/March 2023. The sample consists of 109 participants: 35 first-time expecting men, 43 primiparous fathers, and 31 multiparous fathers. The expecting men's group consists of men whose partner is currently expecting their first child and the laboratory visits took place during the third trimester of the partner's pregnancy. Both groups of fathers visited the laboratory when their infant was 4-6 months of age, and the infant was either their first child (primiparous group) or they had at least one older child as well (multiparous group).

Facial EMG responses were measured while the participants were presented with pictures of young children in neutral, positive, and negative emotional contexts. Each stimulus was presented for 2 sec and after each stimulus the participants rated their compassion and positive affect in response to the stimulus. Facial responses were recorded with bipolar electrodes attached to the zygomaticus major and corrugator supercilii muscles that are activated during positive and negative affective reactions, respectively.

The EMG data will be analyzed during Spring and Summer 2023 and the results will be available at the time of the conference. The analyses will determine whether the facial responses to positive and negative child stimuli – indicative of affective empathic reactivity – are modulated by parity.

**165**

### **Teacher efficacy in inclusive practices: the role of needs satisfaction and mindfulness**

Francesca Liga<sup>1</sup>, Eliana De Salvo<sup>2</sup>, Francesca Cuzzocrea<sup>2</sup>, Maria Cristina Gugliandolo<sup>1</sup>, Sebastiano Costa<sup>3</sup>

<sup>1</sup>University of Messina, Messina, Italy. <sup>2</sup>University Magna Graecia of Catanzaro, Catanzaro, Italy.

<sup>3</sup>Università degli studi della Campania Luigi Vanvitelli, Caserta, Italy

#### **Abstract (max 500 words)**

**OBJECTIVES:** The advent of inclusion policies for students with disabilities has enabled students with special needs to receive education in the mainstream classroom; this has highlighted the need for teachers to receive adequate training on how to develop appropriate skills for diverse groups of students. In this regard, it is therefore essential to encourage research into the training of these teachers, with attention to what can be considered important variables. Consistent literature underlines the need to promote inclusive education in special educational needs teachers. For this reason, it is important to investigate which factors may facilitate the efficacy to implement inclusive practices in pre-service special education teachers. Recent studies found that mindfulness positively related to teachers' inclusive attitudes, while need satisfaction was found to be related to teaching styles and practices in special education. Grounded in SDT, the present study aims to investigate the short-term longitudinal

association between mindfulness, psychological basic needs satisfaction, and efficacy to implement inclusive practices in pre-service special education teachers.

**METHODOLOGY:** 558 pre-service special education teachers from 19 to 60 years ( $M = 37.93$ ;  $SD = 7.73$ ; 84% were female and 15% male) took part in the T1 and 176 participants from 19 to 60 years ( $M = 39.77$ ;  $SD = 7.70$ ; 87% were female and 13% male) completed a follow-up after 3 months. Participants were recruited from Active Training Internship courses, an annual course aimed at qualifying to teach in schools. Participants filled out the following questionnaires: Philadelphia Mindfulness Scale (PHLMS; Cardaciotto et al., 2008), Psychological Basic Needs Satisfaction and Frustration (PBNSF; Chen et al., 2015; Costa et al., 2018; Liga, et al., 2020), Teacher Efficacy Inclusive practices (TEIP; Sharma et al., 2012).

**RESULTS:** Estimation of the two cross-sectional models (the T1 with 558 participants and the T2 with 176 participants) showed that mindfulness was positively related to need satisfaction, which in turn was positively related to the efficacy to implement inclusive practices. Furthermore, mindfulness was also positively associated with the efficacy to implement inclusive practices. Finally, the results of the cross-lagged analysis showed that need satisfaction at T1 was positively associated with the efficacy to implement inclusive practices at T2, and the examination of the autoregressive paths showed significant stability of all the variables.

**CONCLUSION:** Results underline that psychological basic needs could have a relevant role in the efficacy to implement inclusive practices among special education teachers. Furthermore, the cross-sectional analysis showed that mindfulness was associated with higher need satisfaction, which, in turn, was related to higher efficacy to implement inclusive practices. The cross-lagged analysis confirmed the association between need satisfaction and efficacy to implement inclusive practices. Collectively, these results suggest that basic needs should be considered a key element to maintaining and promoting positive results in terms of self-efficacy and attitudes in those teachers who participate in pre-service preparation courses. Furthermore, these findings could provide a direction for the development of intervention programs for preservice special education teachers based on the SDT principles.

**166**

## **Dynamics between parent's essentialist beliefs and practices as parents and coparents**

Cindy Eira Nunes, Elli-Anastasia Lamprianidou, Stijn Van Petegem

Université Libre de Bruxelles, Bruxelles, Belgium

### **Abstract (max 500 words)**

Parents' beliefs about parenting roles and norms appear to influence how they behave and perceive themselves as parents (Meyer & Gelman, 2016). In this study, we aimed to better understand how adherence to certain social beliefs may shape parenting practices and family relationships. Specifically, we focused on parents' adherence to gender essentialism, which involves beliefs that women are

biologically better suited to parenting than men. We hypothesized that the adherence to these beliefs might influence mothers' and fathers' behaviors, as well as those of their partners. Therefore, we investigated the dynamics between parental adherence to essentialism and their own and their partners' parenting and coparenting practices.

This study was drawn from the SAFE-SORRY project, a broad project comprising several studies exploring contemporary parenting and its macro-contextual determinants. We used the first wave of a longitudinal study assessing parents of adolescents. Our sample currently consists of 93 dyads of parents around 50 years old ( $M = 48.4$ ,  $SD = 4.7$  for mothers;  $M = 50.2$ ,  $SD = 5.5$  for fathers). Their adolescent children were on average 16.5 years old ( $SD = 0.69$ ) and 55.5% were girls. For this study, we focused on six measures assessed for both mothers and fathers: parent's endorsement of essentialist beliefs, perceived coparenting support, and need-supportive parenting (autonomy support and responsiveness) and need-frustrating parenting (parental control and anxious overprotection).

We conducted actor-partner interdependence modeling (Kenny et al., 2006) to estimate the mutual associations between mothers' and fathers' essentialist beliefs on the one hand, and their perceived coparenting support and parenting practices on the other hand. Five models were conducted for coparenting and the four parenting practices separately.

Preliminary results showed significant associations between essentialist beliefs and parenting, as well as between essentialist beliefs and coparenting. We found several actor effects of father's adherence to essentialism. Specifically, it related to less autonomy support, less responsiveness, more parental control, and more overprotection. We also found statistically significant associations for mothers. Indeed, mothers' essentialist beliefs were associated positively to their own overprotective behaviors and negatively their report of coparenting support (i.e., actor effects). Only one significant partner effect was identified. It appeared that fathers' essentialist beliefs were positively associated with mothers' controlling parenting (i.e., partner effect).

In other words, fathers who adhered to essentialist beliefs about parenting appeared to adopt less need-supportive and more need-frustrating parenting (actor effect). They also had partners who were more controlling (partner effect). In addition, mother's essentialist beliefs were also associated with less perceived coparenting support (actor effect).

In conclusion, our results indicate that parents' representations of parenthood, and thus how they respond to social norms about gender, are related to the way in which they behave as parents and coparents. By extension, personal gender beliefs may influence not only parents' behaviors but also overall family dynamics. To broaden our findings, we will conduct the final analyses on an estimated sample of 250 dyads.

**169**

## **Maternal Guilt-Induction and Young Adults' Emotion Regulation: Cultural Variations and The Moderating Role of Maternal Warmth**

Gulsen Guldeste<sup>1</sup>, Athanasios Mouratidis<sup>2</sup>, Bart Soenens<sup>3</sup>, Andreas Heissel<sup>4</sup>, Jolene Van der Kaap-Deeder<sup>1</sup>

<sup>1</sup>Norwegian University of Science and Technology (NTNU), Trondheim, Norway. <sup>2</sup>National and Kapodistrian University of Athens, Athens, Greece. <sup>3</sup>Ghent University, Ghent, Belgium. <sup>4</sup>University of Potsdam, Postdam, Germany

### **Abstract (max 500 words)**

**OBJECTIVES.** The detrimental role of parental psychological control in offspring's emotion regulation has been well documented. However, much less is known about the role of parental guilt-induction (i.e., a relational form of psychological control) and specifically whether its effects are universal or culturally specific. The present research investigated cultural similarities and differences in the relations between maternal guilt-induction and young adults' emotion regulation, and the moderating role of maternal warmth in these relations.

**METHODOLOGY.** Participants were young adults, aged between 18-25, from Germany (N = 88; Mage = 22.94; 82% female), Greece (N = 161; Mage = 21.42; 80% female) and Turkey (N = 103; Mage = 20.91; 73% female). Through a cross-sectional online survey, participants rated their mothers' guilt-induction and warmth and reported on their emotion regulation (i.e., cognitive reappraisal, emotion suppression, emotion dysregulation, and integration).

**RESULTS.** Moderation analyses showed that maternal guilt-induction and warmth interacted in the prediction of emotion regulation strategies only in the Turkish subsample. Specifically, high maternal warmth buffered the detrimental effect of guilt-induction on Turkish participants' emotion suppression. On the other hand, when maternal warmth was low, guilt-induction was related to higher cognitive reappraisal and higher emotion integration in this subsample. For the German subsample, hierarchical regression analyses revealed that maternal guilt-induction related to higher emotion dysregulation, while warmth was related to higher cognitive reappraisal, lower emotion suppression and higher emotion integration. For the Greek subsample, maternal guilt-induction was associated with higher emotion suppression and dysregulation, while warmth was associated with higher cognitive reappraisal.

**CONCLUSION.** These findings suggest that the ways parenting practices relate to children's emotion regulation differ as a function of cultural context. The current study provides initial evidence extending our understanding of cultural differences in the effects of parental guilt-induction by suggesting parental warmth as an important mechanism.

**170**

### **How Should We Communicate with Adolescents About Climate Change? Exploring a Self-Determination Theory Approach**

Jenna Spitzer, Stathis Grapsas, Astrid M.G. Poorthuis, Sander Thomaes

Utrecht University, Utrecht, Netherlands



### Abstract (max 500 words)

Climate change fundamentally threatens the short- and long-term wellbeing of adolescents around the world (IPCC, 2022; UNCF, 2021). Socializing agents, policy makers, and institutions now face a critical task: communicating with young people about climate change to prepare them for – and to help them shape – the future. But how should we communicate with adolescents about climate change? Learning about climate change is an inherently emotional process (Ojala, 2013). Many adolescents worldwide feel helpless (50.9%) and powerless (57%) in its wake (Hickman et al., 2021). These emotional responses are central to adolescents' climate-related mental health and their willingness to engage in mitigation efforts (Crandon et al., 2022; Ojala, 2016). To understand how communication can support adolescents' positive development as they face the environmental crisis, we explored, in two experiments, an application of Self-Determination Theory (SDT; Ryan & Deci, 2017). Do communication styles that are more (or less) attuned to adolescents' basic psychological needs for competence, autonomy, and relatedness affect their emotional responses to information about climate change?

In Study 1, American adolescents ( $N = 141$ ;  $M_{age} = 16.43$ ,  $SD_{age} = 1.02$ ; 51.80% female; 71.60% Hispanic) were randomly assigned to a needs-aligned, needs-misaligned, or neutral control condition. In all conditions, participants read information about climate change (e.g., The United Nations has warned that we need to prevent the earth's climate from becoming more than 1.5 degrees Celsius hotter than it was in the 1800s). Participants in the control condition proceeded directly to a questionnaire. Participants in the needs-(mis)aligned conditions read a message before proceeding to the questionnaire (e.g., needs-aligned: Everyone can be environmentally friendly in their own, unique way vs. needs-misaligned: Everyone needs to start living in an environmentally friendly way). Adolescents who read the needs-aligned message reported less anxiety and fear compared adolescents who read the misaligned message (partial  $\eta^2 = .07$  and  $.05$ ).

In Study 2, American adolescents ( $N = 270$ ;  $M_{age} = 16.20$ ,  $SD_{age} = 0.95$ ; 55.60% female; 57.00% Hispanic) were randomly assigned to a needs-aligned, needs-misaligned, or neutral control condition. Study 2 built on Study 1 by integrating the needs-(mis)aligned messages into the informational text about climate change. Adolescents who read the needs-aligned message reported less anxiety compared to adolescents in the control condition, who only read the informational text (partial  $\eta^2 = .03$ ). Furthermore, adolescents who read the needs-misaligned message reported more enjoyment and pride compared to adolescents in the control condition (partial  $\eta^2 = .03$  and  $.04$ ), suggesting emotional disinterest or "tuning out" from the information about climate change.

Consistent with SDT, these studies illustrate how tending to adolescents' basic psychological needs when communicating about climate change can be emotionally consequential. Adolescents experience less anxiety when communication is attuned to their needs (Studies 1 and 2). Conversely, adolescents may experience more extreme negative emotions (Study 1) and emotionally disengage (Study 2) when communication is misaligned with their needs. These findings illustrate a novel approach to supporting adolescents' emotional well-being in the face of the environmental crisis.

177

## **Caring Babies? A longitudinal study on the ontogenetic growth of concern for others across the first two years of life**

Markus Paulus<sup>1</sup>, Tamara Becher<sup>1</sup>, Natalie Christner<sup>1</sup>, Marina Kammermeier<sup>1</sup>, Burkhard Gniewosz<sup>2</sup>, Carolina Pletti<sup>3</sup>

<sup>1</sup>Ludwig-Maximilians-Universität München, Munich, Germany. <sup>2</sup>Paris-Lodron-University, Salzburg, Austria. <sup>3</sup>University of Vienna, Vienna, Austria

### **Abstract (max 500 words)**

Concern for others plays a central role for human cooperation and is key in moral development. One form of other-oriented responding is empathic concern. Although its relevance is well established, theories disagree on the age of emergence and the factors supporting its early ontogeny. Whereas classical theories assume an emergence of true concern for others in the course of the second year of life (Hoffman, 2000), recent approaches propose that empathic concern is present early in the first year of life (Davidov et al., 2013). Despite the great theoretical interest in this question, empirical evidence is scarce. Most relevant, it would be important to examine to which extent children's reactions to sad others are specific for their sadness or a general response to any type of emotion. Moreover, theories disagree on how temperamental dispositions, caregiver-child-interactions and the emerging self-concept relate to early empathic concern.

The current study was designed to contribute to these debates by means of a longitudinal study ranging over the first two years of life. Infants' (N=127) reactions towards laughing and crying others were assessed longitudinally at 6, 10, 14, and 18 months. This allowed us to examine when a concerned response specifically towards sad others emerges. Measures of maternal sensitivity assessed by means of the emotional availability scales (Biringen, 2008), children's temperament (IBQ-R-VsF; Putnam et al., 2014), and self-recognition by means of mirror-self-recognition task were included. In order to investigate the developmental changes and dynamics of children's responses, we applied True Intra-individual Change (TIC) Models (Steyer et al., 2000), relying on neighbor models for manifest variables.

Overall, there were minor, yet inconsistent differences in children's responses to laughing and crying others in the first year of life, whereas clear and reliable differences emerged in the second year. Maternal sensitivity, negative emotionality and self-recognition were related to children's empathic concern within the second year.

These findings suggest that a general responsiveness to others emerges in the first year of life, whereas clear and reliable empathic responses develop in the second year of life. Moreover, our study highlights the impact of caregiver-child-relationship quality and the self-concept on empathy development. Overall, the study points to a gradual emergence of concern for others in human ontogeny.

178

## The great importance of meeting basic psychological needs in novel and challenging situations

Christiane Spiel, Barbara Schober, Marko Lüftenegger, Elisabeth Pelikan, Selma Korlat, Julia Holzer

University of Vienna, Vienna, Austria

### Abstract (max 500 words)

In the field of education, academic resilience is mostly defined as protective behavior when students meet adversities but achieve high academic outcomes. Self-determination theory (SDT) states that satisfaction of the basic psychological needs for competence, autonomy, and relatedness represent a universal requirement for the experience of well-being in terms of positive emotion, intrinsic motivation and active learning behavior, independent of cultural context, social class, or gender. Accordingly, experiencing basic psychological need satisfaction even when encountering difficulties allows for coping constructively, reengaging with challenging academic tasks, and in general developing everyday motivational resilience.

In our study, we aimed to identify whether experienced competence, autonomy, and relatedness are related to adolescents' key characteristics of learning behavior in a situation of unplanned, involuntary distance education. Concretely, we assumed that the satisfaction of the basic psychological needs relates to active learning behavior (i.e., engagement and persistence), and negatively relates to passive learning behavior (i.e., procrastination). Following SDT, we assumed that the relations are mediated via positive emotion and intrinsic learning motivation.

In view of the existing body of literature and SDT assumptions, the desideratum of this research is to investigate whether previous findings and core postulates of SDT remain valid during novel and challenging situations as e.g., the Covid-19 pandemic where school attendance was either fully suspended or drastically limited, and schools provided distance education via e-learning and distribution of teaching material. To further account for a possible universality of the findings, data were collected in altogether eight countries from Europe, Asia and North America, namely Austria, Cyprus, Finland, Germany, India, North Macedonia, Poland and the USA. The cross-country study was conceived by the research group in Austria. The presumed relations were examined separately for each of the countries and then summarized with respect to common findings and discrepancies. In accordance with SDT's claim for universality and a large body of studies accounting for its cross-cultural applicability, we expected to obtain comparable results across the countries of data collection with respect to the directions and effect sizes.

Data were collected via online questionnaires. The overall sample comprised 25,305 students (37.9% males, 61.5% females, 0.6% diverse). Their mean age was 14.86 years ( $SD = 2.43$ ,  $Mdn = 15.00$ , Range = 10–21). All students reported attending secondary schools.

Satisfaction of the basic need for competence was consistently found to relate to positive emotion and intrinsic learning motivation, and, in turn, active learning behavior in terms of engagement and persistence. This underlines the fundamental importance of students experiencing successes for

academic resilience. The study results further highlight the role of perceived relatedness for positive emotion. The high proportions of explained variance speak in favor of taking these central results into account, not only when designing distance education in times of COVID-19 but also to promote youth academic resilience in general. Therefore, we recommend including the need to meet basic psychological needs in teacher education.

179

## Individual differences in empathy in infancy as predictors of aggression in early childhood

Maayan Davidov<sup>1</sup>, Yael Paz<sup>1</sup>, Tal Orlitsky<sup>1</sup>, Maia Ram Berger<sup>1</sup>, Ronit Roth-Hanania<sup>2</sup>, Carolyn Zahn-Waxler<sup>3</sup>

<sup>1</sup>The Hebrew University of Jerusalem, Jerusalem, Israel. <sup>2</sup>Academic College Tel Aviv-Yaffo, Tel Aviv-Yaffo, Israel. <sup>3</sup>University of Wisconsin – Madison, Madison, USA

### Abstract (max 500 words)

Recent work has shown that early markers of empathy for others in distress can be reliably observed as early as 3 months of age, are moderately consistent across situations and age from 3 to 18 months, and predict subsequent prosocial behavior in toddlerhood (Davidov et al., 2021) and markers of social competence in early childhood (Paz et al., 2022). This presentation will address whether early individual differences in empathy assessed during infancy can predict subsequent aggressive behavior at preschool age. It includes two longitudinal samples. In Study 1 (N = 165) infants' empathic responses to three distress stimuli (mother, experimenter, video) were assessed at ages 3 and 6 months, and their aggressive behaviors were reported by mothers at 18 and 36 months, and by teachers at 36 months. Early empathy was a significant and consistent predictor of lower subsequent aggression in boys; the pattern for girls was less consistent. These findings (partly reported in Paz et al., 2021) are now being extended in a second, independent sample of infants. In Study 2 (N = 100) empathy was assessed at 3 and 6 months using two distress stimuli (experimenter, video), and children's aggression was reported at age 3-4 years using mother and teacher reports. Additionally, mothers and teachers also reported regarding children's callous-unemotional (CU) traits as well as their reactive and proactive aggression at preschool age. Results from this study will be ready to be presented at the time of the conference (all the data has been collected, and 75% of the coding has been completed; coding and analysis of the data will be completed within two months). The findings will indicate whether the results of the first study are replicated, that is, whether negative links between early empathy and subsequent aggression emerge, and whether they are stronger for boys, as in Study 1. Moreover, Study 2 will provide information regarding which specific forms of uncaring behavior are primarily predicted by low levels of early empathy. Based on theory and work with older children, we expect early empathy to be particularly predictive of subsequent CU traits and proactive (but not reactive) aggression. Similarities and differences between the results of the two studies will be discussed, and implications for theory and practice will be addressed.

180

## Trajectories of Posttraumatic Growth Among Early Adolescents during COVID-19 Pandemic: the Dynamic Role of Time-Varying Processes related to stress reactions and systems' life resources

Annalaura Nocentini, Lisa De Luca, Benedetta Taddei, Ersilia Menesini

University of Florence, Florence, Italy

### Abstract (max 500 words)

#### Objective

The present study aims to explore the longitudinal trajectories of Post Traumatic Growth (PTG) during the COVID-19 pandemic - June 2020 (T1), June 2021 (T2), June 2022 (T3) - using a dynamic approach able to evaluate the time-varying effects of the pandemic stress and systems' life resources (i.e., family and school) on the short-term variation of the growth, controlling for time-invariant effects of pre-pandemic resilience indicators (T0: January 2020).

#### Methodology

Participants are 190 early adolescents (54.70% females; Mage = 11.35 years, SD = 0.84) involved in a project started in 2019 aimed at reducing educational poverty in medium-low socioeconomic Italian schools. As regards the measures, resilience indicators were used as pre-pandemic predictors, PTG was measured through Posttraumatic Growth Inventory for Children-Revised (PTGI-C-R; Kilmer et al., 2009), and time-varying variables measured included pandemic stress reactions (IES-6; Thoresen et al., 2010) and systems' life satisfaction (MSLSS; Zappulla et al., 2014).

#### Results

LGCA showed a significant negative slope, suggesting a linear decrease in PTG over time. Pre-pandemic time-invariant predictor did not explain the interindividual variability of PTG trajectories. On the contrary, time-varying covariates resulted significantly associated with PTG trajectory, showing short-term effects on the curve depending on the timing of the pandemic. Notably, adolescents with higher levels of COVID-19 related stress, at each time, reported significantly higher PTG scores, with an effect that gradually decreased across the three waves. In parallel, systems' life resources and satisfaction were significantly associated with higher PTG at each wave.

#### Conclusions

Findings suggest that the average PTG decrease after 2 years of the pandemic is in accord with the view of PTG as a potential coping strategy (i.e., illusion) in response to highly stressful or threatening situations, instead of being a real growth. Besides, results support the role of time-varying variables in the explanation of the ongoing PTG development, suggesting a dynamic process over time. Stress and PTG coexist, showing how a certain level of stress may be crucial for experiencing PTG, particularly in the

first stages of adaptation. From a longitudinal perspective, systems' life satisfaction resulted to be progressively more and more relevant, showing the role of a contextual factor in triggering growth after a stressful event.

Findings will be discussed in terms of possible interventions to support personal growth during challenging situations.

**182**

## **Adolescents' Longitudinal School Engagement and Burnout Before and During COVID-19—The Role of Socio-Emotional Competencies**

Katariina Salmela-Aro, Katja Upadyaya, Lauri Hietajärvi

University of Helsinki, Helsinki, Finland

### **Abstract (max 500 words)**

School engagement and burnout have taken a prominent place in recent developmental psychological and educational research because they provide a good overview of students' academic and psychological functioning and because of their potential for predicting

poor academic achievement, student misbehavior and school dropout. This longitudinal study examined longitudinally the changes in both school engagement and burnout before and during the COVID-19 among early and middle adolescents and the role of resilience in these changes. According to the demands-resources model in school context, resources and reserves, such as socio-emotional skills, are related to high level of school engagement and low level of school burnout. The OECD framework has identified key socio-emotional

skills: The ability to be self-disciplined, persistent, and dedicate effort in achieving goals and completing tasks, such as grit, the ability to bounce back and resilience, such as academic buoyancy, the ability to engage with new ideas and generate novel ways to do or think, such as curiosity, and interpersonal skills, such as social competence.

This longitudinal study examined school engagement and burnout profiles among early and middle adolescents before and during COVID-19, and within-class latent change and stability in students' socio-emotional competences the profiles. was to examine what kinds of profiles of school engagement and burnout can be identified among early and middle adolescent students and the extent to which these profiles differ in academic buoyancy, grit, curiosity and interpersonal competencies.

The longitudinal data were collected before and during COVID-19 from 1381 5th to 6th, and 1374 7th to 8th grade students.

Using repeated measures latent profile analyses based on school engagement and burnout we identified five school-related well-being change profiles in both samples showing structural similarity (see Figure 1): normative (53% sample 1; 69% sample 2), moderate decreasing

(4%; 5%), high-decreasing (17%; 10%), low-increasing (6%;7%) and moderate-increasing (20%; 10%) groups. Regarding the interplay between socioemotional

competencies and resilience it seems that they develop somewhat in conjunction. The profiles with increasing school well-being showed simultaneous increase in intrapersonal socio-emotional competencies, such as in their resilience but showed less changes in interpersonal competencies. These results show the importance of the socio-emotional skills in pandemic,

and that social factors seem to be key components for engagement and burnout. Socio-emotional competences are relevant in protecting students exposed crisis situations, such as COVID-19 pandemic, to thrive.

**183**

## **Family and school cultural socialization: Associations with peer acceptance/rejection of adolescents through intercultural orientation**

Vassilis Pavlopoulos, Maria-Nefeli Dimopoulou, Frosso Motti

National and Kapodistrian University of Athens, Athens, Greece

### **Abstract (max 500 words)**

As key socialization agents, family and school contribute to the adjustment of children and youth by promoting skills that will help them become successful and productive adults. In modern plural societies of increasing diversity, such skills include the ability to navigate through and socialize with peers of different ethnic, cultural or religious backgrounds. Being accepted, and not being rejected, by peers is a developmental task for all youth. At the same time, having cross-ethnic friendships is an important acculturative task. The purpose of this study was, first, to explore the links of family and school cultural socialization practices with peer acceptance/rejection of Greek and immigrant adolescents by their classmates; second, to examine the mediating role of intercultural involvement; and third, to test for the moderating effect of immigrant status (immigrant-origin/Greek) in the above associations.

The sample consisted of 1,311 adolescents (aged 12.2-16.6 years, 54% girls, 41.6% of immigrant-origin) who were enrolled in 13 high schools in Athens, Greece. Participants filled the parents' section of the Parents and Peers Cultural Socialization Scale (Nelson et al., 2018) and the Classroom Cultural Diversity Climate Scale (Schachner et al., 2021) as proxies of cultural socialization practices in the contexts of family and school. Intercultural involvement was measured with Phinney's (1992) Other-Group Orientation Scale. Data on peer acceptance/rejection were collected using independent sociometric methodology. To explore the hypothesized associations, we tested a series of moderated mediation

models in SPSS with the PROCESS macro (Hayes, 2013) controlling for adolescents' gender, life events, and parental education.

We found that parents' and school cultural socialization practices were not directly related to either acceptance or rejection of native and immigrant-origin adolescents by their classmates. However, a number of indirect pathways from parents' and school cultural socialization to peer acceptance/rejection through other group orientation were revealed. In particular, other group orientation mediated the relationship of parents' preparation for bias/promotion of mistrust with peer acceptance and rejection of Greek-descent youth. Moreover, other-group orientation mediated the relationship of parental ethnic socialization with peer acceptance of all youth. With regards to cultural socialization practices in the school context, other group orientation mediated the relationship of classroom equality and inclusion with peer acceptance of immigrant-origin youth. Finally, other group orientation mediated the relationship of classroom cultural pluralism with peer acceptance of all participants and with peer rejection of immigrant-origin youth.

Overall, parents' and school cultural socialization practices were shown to be relevant for all adolescents, not only for those of immigrant origin, though via different pathways. Their links to peer acceptance/rejection were mostly indirect, rather than direct, through intercultural involvement. These findings have implications for interventions and policies targeted at promoting resilience in the school context for all youth and social inclusion.

**186**

## **Long-term Consequences of Victimization among Adolescents: a Longitudinal Irish Cohort Study**

Giulio D'Urso<sup>1</sup>, Jennifer Symonds<sup>2</sup>

<sup>1</sup>G. D'Annunzio University of Chieti and Pescara, Chieti, Italy. <sup>2</sup>University College Dublin, Dublin, Ireland

### **Abstract (max 500 words)**

This study investigates the long-term consequences of victimization from early adolescence to late adolescence and early adulthood in terms of emotional and behavioral problems, peer relationships, as well as smoking habits, and sleeping difficulties. The study also examines how these outcomes can become chronic in early adulthood, considering early victimization experience, gender, cognitive ability, and family social class. The total sample included 7,525 participants, across the ages of 13, 17, and 20, from the Child Cohort of the Growing Up in Ireland study (48.9 % male). Using path analysis modelling, we discovered that victimization was related to emotional problems and sleeping difficulties at age 17. Peer problems at age 13 was negatively correlated to developing close friendships at age 17. Emotional problems at age 13 correlated with emotional problems at age 17, just as behavioral problems at age 13 correlated with behavioral problems at age 17. Gender was correlated to close friendships, emotional problems, sleeping difficulties, and smoking at age 17. Moreover, smoking habits at age 17 predicted smoking habits at age 20, while sleeping difficulties and victimization at age 17 predicted sleeping difficulties at age 20. Victimization and emotional problems at age 17 predicted emotional well-being at



age 20. Behavioral problems and cognitive ability at age 17 predicted reactive aggression at age 20. Gender was correlated to close friendships, reactive aggression, emotional well-being, and sleeping difficulties at age 20. The study highlights not only the consequences of victimization and the persistence of some problems throughout early adulthood, but the need for implementing interventions in adolescence, not only anti-bullying, but also pro-sociality and prevention of atypical behaviors and management of emotions within the school context, to interrupt the persistence of dysfunctional behaviors.

**187**

## **Longitudinal Antecedents and Consequences of Ethnic, Cyber and Face2Face Victimization**

Petra Gradinger, Dagmar Strohmeier

University of Applied Sciences Upper Austria, Linz, Austria

### **Abstract (max 500 words)**

Peer victimization in school raise serious concerns for schools around the world and can take various forms, like face2face victimization, cyber victimization, or ethnic victimization. Ethnic victimization covers offensive, mean, or threatening actions devaluing, insulting, or harassing individuals because of their immigrant status, national origin, religion, or ethnicity. There is wide agreement that ethnic victimization creates negative environments that inhibit the positive development of minority youth via racism and segregation (Garcia Coll et al, 1996; Marks & Garcia Coll, 2018). Conceptually, ethnic victimization is a clearly distinguishable phenomenon compared with non-biased peer victimization, although these phenomena also share important characteristics and might even happen simultaneously. However, knowledge regarding the specific longitudinal antecedents and consequences of ethnic victimization while considering cyber and face2face victimization is scarce. Thus, it remains an open question whether ethnic victimization has specific longitudinal patterns with key intrapersonal and interpersonal factors or whether the same longitudinal patterns apply to all three victimization types. The main goal of the present study was to investigate six possible longitudinal antecedences and consequences of ethnic victimization while simultaneously considering cyber and face2face victimization. More specifically, it was examined (1) whether the three distinct types of victimization are longitudinally associated and (2) whether the same or different intra- and interpersonal variables are longitudinally associated with them. The present study utilized a 3-wave longitudinal study from data that was collected in Austria over a period of two years when adolescents were between 12 and 14 years old. The sample comprises 630 youth (50% boys, 12.52 years at wave 1, 7% first and 14% second generation immigrant) that were enrolled in 18 schools and 37 classes. Data were collected with online questionnaires and validated self-reports were used. Controlling for the nested data structure at class level, a series of cross lagged panel models were calculated that included ethnic, cyber and face2face victimization plus one intra- or interpersonal factor over three waves. So, we investigated each specific longitudinal pattern with the three types of victimization, while gender, first- and second-generation immigrant status were controlled for. The analyses showed that face2face victimization was most stable and ethnic victimization was least stable over two years. As expected, first- and second-generation

immigrants and students with another mother-tongue than German reported higher levels of ethnic victimization compared to non-immigrants and students who spoke German as mother tongue. Boys reported higher levels of all three types of victimization. Moreover, and as expected, face2face victimization longitudinally predicted cyber victimization, while these two victimization types were not longitudinally associated with ethnic victimization. There were unique longitudinal patterns between ethnic victimization with four of the intra- and interpersonal variables, while one variable showed the same longitudinal patterns for all three types of victimization and one variable had a unique longitudinal pattern with face2face victimization. The present study shows that ethnic victimization has more negative consequences compared to face2face and cyber victimization, because several vicious circles were detected. Thus, it is important to give ethnic victimization a special attention in general anti-bullying programmes.

**188**

## **Do Changes in Diurnal Cortisol Mediate the Longitudinal Associations Between Bullying Victimization and Depressive Symptoms in Adolescence?**

Tamara Lorenz, Nathalie Michels, Matteo Giletta

Ghent University, Ghent, Belgium

### **Abstract (max 500 words)**

During adolescence, experiences of bullying victimization can constitute a significant stressor that can threaten an individual's well-being and development. One of the most common and severe mental health problems linked to victimization experiences are depressive symptoms, which may last well into adulthood (Bowes et al., 2015; Copeland et al., 2013). To better understand the biological mechanisms underlying these associations, recent attention has focused on cortisol as a biomarker of stress, indexing hypothalamic-pituitary-adrenal (HPA) axis activity (Schacter, 2021). Findings regarding the role of diurnal cortisol are however mixed, with some pointing to elevated (e.g., Wilkinson & Goodyer, 2011), and others to blunted cortisol activity (e.g., Adam et al., 2017) in explaining the association between early life adversity and negative mental health outcomes. A major caveat of prior work is their reliance on single assessments of cortisol activity, which does not allow for an examination of whether adversity may predict changes in diurnal cortisol patterns over time. The current work will therefore use a longitudinal design to examine the extent to which a history of bullying victimization predicts depressive symptoms over time via longitudinal changes in diurnal cortisol. To this end, we will use data from 262 first-year secondary students in Belgium (Mage = 12.48; SD = .44; 42% female), collected as part of a broader, ongoing multi-wave project with repeated assessment occurring approximately every six months. During Wave 1 to 4 bullying victimization and depressive symptoms are assessed using an online questionnaire. During Wave 1 and 3, participants were asked to collect passive drool saliva samples five times during the day (at approximately 7:00, 7:30, 10:00, 16:00, and 20:00), for four consecutive days. The samples are used to extract different indices of diurnal cortisol activity, including the cortisol awakening response (CAR) and the diurnal slope. To investigate whether changes in diurnal cortisol may mediate the longitudinal associations between bullying victimization and depressive

symptoms, data are analyzed in a SEM framework to estimate latent growth curve models. Results of the analyses and their theoretical implications are presented.

189

## Are the Defenders Alright? The Longitudinal Effects of Defending Victims of Bullying on Social-Emotional Functioning

Jessica Trach, Tiina Turunen, Salmivalli Christina

University of Turku, Turku, Finland

### Abstract (max 500 words)

Defending victims of bullying (e.g., taking direct actions to stop the bully, or indirectly to comfort the victim) has been correlated with numerous positive traits in adolescence, including higher levels of empathy and social status compared to other participant roles (Ma et al., 2019). However, defenders have also been found to vary in their motivation and strategies for defending (Pronk et al., 2018; Reijntjes et al, 2016; Yun, 2019), suggesting that there may be different subtypes of youth who are more or less likely to engage in specific behaviours to defend their peers from bullying. Furthermore, little is known about the social and emotional characteristics associated with specific defender profiles in adolescence, or whether youth who engage in different forms of defending vary in their level of social-emotional functioning as adults. To address this gap in the literature, the current study utilized three waves of data from 15,740 adolescents (mean age = 14.4 years old, 49.6% female), as well as follow-up surveys collected from the same individuals 13 years later (n= 2404, 63.8% female) to examine the short and long-term effects of defending on social and emotional well-being from adolescence to early adulthood. As shown in Figure 1, latent profile analysis of defending behavior at T1 classified 10,678 youth into four different defender orientations in adolescence depending on a) the type of defending strategy reported by peers (e.g., direct vs. indirect defending) and b) social status (e.g., received nominations for liking and popularity). High-status defenders (popular and well-liked by classmates; 21.6%) were frequently nominated by peers as using both direct and indirect defending strategies to support victims, compared to low-status defenders (below average in likeability and popularity; 33.3%) who received fewer peer nominations for both types of defending. In contrast, high-status non-defenders (above average in liking and popularity; 20.5%), and low-status non-defenders (below average liking and popularity, 24.6%) were rarely, if ever, nominated as defending victims of bullying using either strategy. Multivariate ANOVAs revealed that low-status non-defenders were bullied more often than other defender subtypes according to both self- and peer-report, whereas popular non-defenders scored highest in both self- and peer-reported bullying. Significant group differences were also observed for beliefs about defending and social-emotional well-being during adolescence, generally favoring high-status defenders over non-defenders. However, among high-status youth defending was associated with more symptoms of anxiety than not defending, indicating that defending may have some detrimental impacts on well-being in adolescence. Follow-up longitudinal analyses in early adulthood found no significant differences in prosocial behavior or well-being across defender profiles. Longitudinal research on the short- and long-term effects of defending on well-being highlight the need for greater support for youth who defend, as well as important differences between the social experiences and cognitions of

defenders and non-defenders that can be used to improve anti-bullying interventions that seek to empower more youth to intervene when they witness bullying.

190

## Attention to faces and empathy across the first two years

Mikko J. Peltola<sup>1</sup>, Tal Orlitsky<sup>2</sup>, Jukka M. Leppänen<sup>3</sup>, Maayan Davidov<sup>2</sup>

<sup>1</sup>Tampere University, Tampere, Finland. <sup>2</sup>The Hebrew University of Jerusalem, Jerusalem, Israel.

<sup>3</sup>University of Turku, Turku, Finland

### Abstract (max 500 words)

Throughout the first year, infants show an increasing attentional bias to faces and particularly fearful facial expressions. These biases also show considerable variability across infants, but little is known whether individual differences in infants' attention biases to faces are related to broader domains of social and emotional development. The current study investigated whether attention to faces and facial emotions across the first two years is associated with the development of empathy to others' distress. Research on various facets of empathy-related traits in adults has shown that prosocial and altruistic tendencies are related to greater attention and sensitivity to fearful facial expressions, whereas callous and antisocial behaviors, on the other hand, have been associated with diminished responsiveness to fear and distress in others. Limited number of infant studies also indicate that infants' attentional responses to faces and fearful expressions may predict later prosocial behaviors and callous-unemotional traits. In this study, we wanted to investigate whether attention to faces and facial emotions in infancy is concurrently and longitudinally associated with a direct measure of empathy to others' distress.

In a longitudinal study (N = 134), attention to happy, sad and fearful faces, and phase-scrambled control stimuli was measured at 7 and 20 months with the overlap task, which is an eye-tracking paradigm measuring attention disengagement from centrally presented face stimuli to peripheral distractor stimuli. For the analyses, bias scores reflecting a face bias (looking time to all faces in comparison to control stimuli) and fear bias (looking time to fearful faces in comparison to happy and sad faces) were calculated. Empathy to distress (facial, vocal and bodily signs of concern and inquiry behavior) was assessed at 7 and 20 months with a naturalistic pain simulation procedure and video presentation of a distressed infant.

The results indicated that a stronger face bias at 7 months was associated with a greater empathic response to distress at 20 months ( $\beta = .32, p = .007$ ; Figure 1). No associations were observed between the face bias and concurrent empathy at 7 months or between the fear bias and empathy at either age.

In conclusion, these results provide the first evidence that an attentional preference to look at faces of other people is associated with expressions of affective and cognitive empathy towards others' distress during early development. A robust tendency to look at faces and to show empathic responses toward others may both reflect relatively high interest in other people (i.e., social motivation) and a predisposition to utilize facial information for social learning and sharing emotions.

191

## Infant face preference and left insula morphometry at 5 years – Neurobehavioral correlates of callous-unemotional traits?

Eeva-Leena Kataja<sup>1</sup>, Jetro J. Tuulari<sup>1,2</sup>, Elmo P. Pulli<sup>1</sup>, Eero Laakkonen<sup>1</sup>, Jukka M. Leppänen<sup>1</sup>, Saara Nolvi<sup>1</sup>, Harri Merisaari<sup>1,2</sup>, Tuomo Häikiö<sup>1</sup>

<sup>1</sup>University of Turku, Turku, Finland. <sup>2</sup>Turku University Hospital, Turku, Finland

### Abstract (max 500 words)

Callous-unemotional (CU) traits refer to a set of individual characteristics or behavioral tendencies with “limited prosocial emotions”. “CU-like behaviors” can be detected already during early development, and it is likely that unique underlying biological and psychological developmental mechanisms exist for variance in these behaviors. Low empathy, one key feature of CU behaviors already in childhood, may originate from the difficulty of an individual to orient to faces and possibly to the eyes of other individuals, hampering emotion processing. Recent studies have aimed to identify brain areas underlying CU traits in children and adolescents within normative populations. The insula is known for its role in social emotions influencing for instance the perception of other people’s feelings and bodily states, empathetic responses, and co-operation, and may be a neuroanatomical correlate for early individual variations in CU and face processing.

We examined a longitudinal sample of typically developing children (N=284, 46.1% female sex assigned at birth; all Caucasian) with data on disengagement from faces with neutral, happy and fearful expressions and non-face patterns (eye tracking at 8 months) and parent-reported emotional development and problem behavior at 2 (BITSEA), 4 (SDQ), and 5 years (CBCL). Neuroimaging (MRI) data on bilateral insula thickness were available for a subsample of children (N=56, 51.8% female sex assigned at birth). We created a developmental CU trait variable using Confirmatory Factor Analysis which showed invariance by sex. We then calculated a “face bias” index and a “fear bias” index from eye tracking data using formulae specified in previous literature and examined whether these bias scores at 8 months and insula thickness at 5 years were associated with CU factor scores. We found a weak negative correlation between 8-month face bias and CU score ( $r = -.115$ ,  $p = .052$ ) but not between fear bias and CU score ( $p = .586$ ). The correlation between face bias and CU was significant in boys ( $r = -.193$ ,  $p = .017$ ), but not girls ( $r = -.026$ ,  $p = .769$ ) (Figure 1). Five-year left but not right insula thickness predicted CU behavior among boys ( $r = .415$ ,  $p = .032$ ) but not girls ( $r = -.273$ ,  $p = .160$ ). A sex by left insula interaction was also detected ( $\beta = -9.941$ ,  $p = .017$ ) after controlling for maternal age, education, income, and gestational age at birth, child age at scanning and ponderal index as potential confounders. Finally, a weak negative correlation was detected between face bias and left insula thickness ( $r = -.329$ ,  $p = .094$ ) (Figure 2).

The results suggest that CU traits are discernible based on parent report in early childhood and show continuity from two years onwards. Our results also add to the evidence suggesting reduced face preference in infancy and anatomical variations in insula as potential neurobehavioral correlates of CU behaviors, but only in boys.

207

## **A variable- and person-centered approach to identity development around the transition to tertiary education: The importance for well-being**

Elisabeth L. de Moor<sup>1</sup>, Annabelle Christiaens<sup>2</sup>

<sup>1</sup>Tilburg University, Tilburg, Netherlands. <sup>2</sup>Utrecht University, Utrecht, Netherlands

### **Abstract (max 500 words)**

**Objective.** Educational identity refers to adolescents' values, interests, and commitments to their education and is important for predicting academic (e.g., higher performance; De Moor et al., 2019) and well-being outcomes (e.g., fewer internalizing problems; Crocetti et al., 2012). However, it has mostly been examined at a time when adolescents are stably in an education, whereas we may expect identity to become especially salient around periods of transition (Marcia, 1966; Waterman, 1982; Bosma & Kunnen, 2001). During adolescence, one such important transition is the school transition from secondary to tertiary school, which is characterized by changes in adolescents' physical and social context, but also by stress (e.g., Coughlan, 2015; MacDonald, 2017; Molloy, 2016) which may also result in an increase in mental health problems for some adolescents. Given the relevance for educational choices, we may also expect to see changes in educational identity before, during, and after the transition from secondary to tertiary education. However, exactly how identity changes around this period has remained largely unclear (although see Christiaens et al., 2022 for an exploration of this question).

**Methodology.** In the present study, we take a variable- and person-centered approach to educational identity development in the period around the transition from secondary to tertiary education. Additionally, we examine the importance of educational identity for psychological well-being. We will conduct several Latent Profile Analyses and Latent Transition Analyses in a sample of 215 late adolescents (Mage = 18, 75% female), to capture the development of commitment, exploration, and doubt processes and transitions between identity statuses across four biannual timepoints. In addition, we will assess how transitions between identity statuses over time may relate to academic functioning and psychological well-being.

**Expected results.** In line with the principle of maturation and previous findings on overall stability but change towards greater maturity (e.g., Christiaens et al., 2022; Meeus et al., 2010), we expect to find some but modest evidence for increased commitment and decreased exploration and doubt over time. In addition, we expect trajectories in the direction of maturity or of stable maturity to be associated with better academic and psychological well-being.

**Conclusion.** In sum, we hope this research will give us more insight into the general development of educational identity and interindividual differences in late adolescence. Additionally, this work will increase our knowledge of the importance of forming an identity for broader well-being during the period of the transition from secondary to tertiary education.

208

## Daily dynamics of educational and relational identity in emerging adulthood: understanding the role of everyday social media emotional experiences

Yannick Vincent, Lyda Lannegrand

University of Bordeaux, Bordeaux, France

### Abstract (max 500 words)

Background and objectives. Developing a professional career and a long-term romantic relationship are two major challenges in emerging adulthood. Recent research has questioned their place and contribution in overall identity development (Crocetti et al., 2012; Vosylis et al., 2017), but also the differences in identity configurations (i.e., identity statuses) between these domains (Luyckx et al., 2014). Because identity development (i.e., the macro level) is rooted in its real-time expression in proximal life contexts (i.e., the micro level), studying the day-to-day functioning of identity has become indispensable when trying to understand the changes that may take place over the long term. At the micro-level, emotional experiences from contexts important to the individual, like social media for emerging adults, are embedded in how individuals maintain and re-evaluate their commitments. Because of the closed nature of the educational domain and the open nature of the romantic relationships domain (Meeus, 1999), one question remains: does identity in these two domains also diverge in terms of everyday functioning?

Thus, this study aims at understanding 1) how the functioning of identity at a micro level differs between the educational and the romantic relationships domains in emerging adulthood and 2) how perceived conflict or agreement with commitments felt through emotional experiences impact identity functioning in these two life domains.

Methodology. Participants are emerging adult students aged from 18 to 29 (N = 78, 85.71% women). The study followed a twenty-one-day procedure. Individuals were asked to complete questionnaires regarding: their micro-level identity (i.e., commitment to fit, exploration of fit, and exploration of alternatives) measured by the RECS (van der Gaag et al., 2016); their use of social media each day (i.e., the extent to which they encountered domain related experiences and the importance of these experiences, Vincent & Lannegrand, 2022); and the perceived congruency between the outcomes of social media emotional experiences and the commitments made in both the educational and romantic relationships domains.

We conducted dynamic structural equation modeling (Asparouhov et al., 2018) to account for the nonlinear (Kunnen & van Geert, 2012) and non-ergodic (Molenaar & Campbell) characteristics of a developmental process like identity.

Results. The results showed that the daily functioning of educational identity reflected a strong attraction of individuals toward maintaining a stable identity state. On the contrary, identity in the romantic relationships domain was more easily changeable on a daily basis. Moreover, our results indicated that emotional experiences from social media were particularly more related to an everyday cycle of re-evaluation of romantic relationships commitments than educational commitments.

Conclusion. These different findings bring important knowledge for the understanding of identity as a complex dynamic system, particularly regarding its daily dynamic in major identity domains, as well as the role of contextualized emotional experiences on its functioning in real time.

**211**

## **Educational and interpersonal identity processes: Their longitudinal associations with adolescents' physical health, subjective, psychological, and social well-being.**

Francesca De Lise, Elisabetta Crocetti

University of Bologna, Bologna, Italy

### **Abstract (max 500 words)**

Background and objectives. Identity formation is a core developmental task of adolescence (Erikson, 1968). Identity development occurs in several domains as adolescents face the task of forming and consolidating commitments in various life contexts. Specifically, at this life stage two core domains, educational and interpersonal, are particularly important (Albarello et al., 2018). Growing evidence highlights that identity processes have important implications for adolescents' well-being (Crocetti, 2017). However, the longitudinal research on this is still fragmented and sparse. In fact, most research showed that identity processes affect mental health, with a focus on the reduction of negative symptomatology, such as anxiety and depression (e.g., Hatano, 2019; Berzonsky & Kinney, 2019), while the implications of personal identity formation for other components of positive well-being have been less investigated.

The current three-wave longitudinal study aims to fill this gap by studying the reciprocal associations between adolescents' identity processes in the educational and interpersonal domains and multiple indicators of positive well-being (i.e., physical health, subjective, psychological, and social well-being).

Methodology. Participants were 1,367 adolescents (Mage=15.73; 50% females) involved in the ongoing project IDENTITIES (G.A. 101002163). They completed questionnaires at three time-points in 2022 (T1: January, T2: May, T3: October), assessing their identity processes (Utrecht-Management of Identity Commitments Scale; Crocetti et al., 2008), physical health (General Health from the SF-36 Health Survey; Ware & Gandek, 1998), subjective, psychological, and social well-being (Mental Health Continuum Short-form; Keyes, 2005). Analyses were conducted in Mplus 8.6 (Muthén & Muthén, 1998-2017) to estimate reciprocal associations between identity processes and well-being.

Results. Results of cross-lagged panel models highlighted significant reciprocal associations between identity processes in both educational and interpersonal domains and physical health, subjective, psychological, and social well-being. Regarding physical health, interpersonal identity commitment was linked to increased levels of well-being, while physical health was associated with lower subsequent levels of interpersonal in-depth exploration. Regarding subjective, psychological, and social well-being,



commitment in both domains was found to be associated with higher levels of all dimensions of well-being. In turn, higher levels of subjective, psychological, and social well-being were linked to higher levels of commitment in both educational and interpersonal domains at subsequent time-point. Additionally, significant correlated changes were found between different identity processes in both domains and well-being dimensions, suggesting the intertwined nature of identity and well-being.

Conclusion. Personal identity processes in both educational and interpersonal domains are intertwined with multiple facets of well-being, suggesting a virtuous circle in which identity commitments play a key role in enhancing positive youth development.

**220**

## **Subjective well-being among unaccompanied refugee youth: highlights from fifteen years of research**

Brit Oppedal, Anne Kristine Solhaug

Norwegian Institute of Public Health, Oslo, Norway

### **Abstract (max 500 words)**

Unaccompanied refugee minors (URM), who as children fled their homelands to seek asylum in a foreign country without the company of an adult legal caretaker are described as being in a vulnerable situation. Many of them struggle with mental reactions to traumatic events experienced pre- and during migration, and to the daily hassles they face after being granted asylum and residence.

Despite experiencing high and stable levels of mental health problems, these are ambitious youth with strong agency and ability to succeed in their countries of resettlement. There is substantial over time social mobility among them. E.g., a vast majority of them (79%) are found to be either in employment or education four years after they have received residence, compared to 85% of the overall population in the same age-groups. Even with such findings about agency, ambitions, participation, and social mobility, there is a growing evidence-base that center on mental distress and disorders among them. Research that draws attention to their resources, such as their subjective sense of well-being (SWB), is lagging behind. This is unfortunate considering the accumulating knowledge about the positive functioning that results from SWB suggesting it may enable resilient outcomes in people exposed to past or ongoing adversities.

In the current presentation we address this research gap by summarizing published and unpublished findings from one population-based longitudinal study and one evaluation study involving URM,  $n = 918$  and 170 respectively, carried out by the Norwegian Institute of Public Health. More specifically we address the following research questions

1. How do URM describe their sense of wellbeing?
2. Which factors predict SWB among URM?

### 3. What are outcomes of SWB among URM?

The presentation is based on information from questionnaires that the participants responded to in small groups in a place familiar to them in their local communities around Norway, in addition to individual- and usergroup interviews.

Overall, the findings show the importance of context for URM's wellbeing, and the reciprocal relationship between SWB and factors representing both risk and protection for mental health problems. We underscore the need for more research on SWB among URY and other refugee youth. We further discuss the potential of SWB to foster resilient outcomes in young refugees and suggest that interventions developed to strengthen SWB among them should consider their transnational and multicultural realities and experiences.

**222**

## **The role of scholastic resources and risks for the life satisfaction of immigrant adolescents in Cyprus**

Olga Solomontos-Kountouri<sup>1</sup>, Dagmar Strohmeier<sup>2,3</sup>, Ioanna Maroulli<sup>1</sup>

<sup>1</sup>Theology School of the Church of Cyprus, Nicosia, Cyprus. <sup>2</sup>University of Applied Sciences Upper Austria, Linz, Austria. <sup>3</sup>University of Stavanger, Stavanger, Norway

### **Abstract (max 500 words)**

Adolescents with migration experiences constitute an increasing proportion of the population in many European countries including Cyprus. Schools are important developmental contexts that offer both resources and risks for the positive development of immigrant adolescents. Life satisfaction is one important indicator of positive development. In several European countries, immigrant adolescents show lower levels of life satisfaction compared to their non-immigrant counterparts. Educational research has identified scholastic resources (e.g., school climate, learning interest, scholastic self-efficacy) and risk factors (e.g., school-related psychosomatic symptoms, scholastic anxiety) that impacts on the levels life satisfaction. Furthermore, wider contextual risks such as the COVID-19 pandemic are likely to influence positive development as well.

Applying a positive youth developmental perspective, the present study had two goals. (1) To compare the levels of life satisfaction, scholastic resources, scholastic risks and contextual risks among immigrant and non-immigrant adolescents. (2) To examine whether the potential effect of immigrant status on life satisfaction is direct or whether the variances in scholastic resources, scholastic risks and contextual risks help to explain this association controlling for several demographic variables. Concurrent data were collected from 544 adolescents (47% girls; 38% immigrants, 13-15 years, M=14.3 years, SD = 0.95) attending grade 7, 8 and 9 (gymnasium) in Cyprus with validated self-report measures.

To examine the first research goal, a 2x3 MANOVA was performed with gender and immigrant status as the independent variables and all study variables as dependent variables. The analyses revealed

interesting complexities. Immigrant adolescents reported lower levels of life satisfaction compared to non-immigrants. Immigrant adolescents reported higher levels of learning interest, but also higher levels of scholastic anxiety compared to non-immigrant adolescents. Immigrant adolescents also reported more stressful life events and financial strains compared to non-immigrant adolescents.

To examine the second research goal, the associations between demographic variables, scholastic resources, scholastic risks, and contextual risks were tested with five concurrent structural equation models using Mplus 8.4. Controlling for gender and age, immigrant adolescents had lower levels of life satisfaction compared to non-immigrants. When entering the scholastic resources in the model, higher levels of school climate, learning interest and scholastic self-efficacy significantly predicted higher levels of life satisfaction. When entering the scholastic risks, higher levels of scholastic anxiety predicted lower levels of life satisfaction. When entering the contextual risks, fewer stressful life events, lower levels of financial strain, but higher levels of perceived coronavirus threat predicted higher levels of life satisfaction. In the full model, higher levels of school climate, learning interest and scholastic self-efficacy but lower levels of financial strain significantly predicted higher levels of life satisfaction. The total indirect effect from being an immigrant to lower life satisfaction was substantial and stressful life events was the specific indirect effect that was able to explain the association between immigrant status and life satisfaction. Thus, it is necessary that schools do not overlook the stressful life events of immigrants and that teachers are sensitive towards possible traumata of immigrant adolescents.

**225**

## **Do minority and majority youth differ in their family roles? A longitudinal, person-oriented approach**

Lara Aumann, [Peter F. Titzmann](#)

Leibniz University Hannover, Hannover, Germany

### **Abstract (max 500 words)**

Supporting families is a normative and frequently examined behavior among children and youth. However, some youth provide more support for their families than expected given their age and typical role in families, a phenomenon that is known as role redistribution or parentification or more generally family support. However, although this support changes over the course of adolescence, current research lacks a developmental perspective on this behavior and predominantly considered average levels (and not change) of family support. Moreover, studies on family support are limited by focusing on particular, vulnerable groups (particular minorities), on risks for family life, and on links to youth maladjustment. The aim of this study was to address these limitations in a longitudinal, person-oriented study on family support using a diverse sample including minority and majority adolescents in Germany. In a first step, we identified subgroups of family support-trajectories based on longitudinal assessments of two components of family support – instrumental and emotional support using latent profile analyses. Four family support trajectories were expected based on theories of family processes. In a second step, we expected membership in these groups to be associated with outcomes of well-being

(self-efficacy, family climate), because adolescents' support for parents has been shown to affect individual psychosocial development and family dynamics.

Data comprised a 2-wave-longitudinal sample of 932 adolescents from seven schools in Germany with diverse cultural and societal backgrounds (64% belonging to ethnic minorities, 48% female, mean age=13.4, mean length of residence of minority adolescents=6.2 years). As expected, latent profile analyses suggested four family support-trajectory-subgroups: A low increasing subgroup (Subgroup 1), a medium stable subgroup (Subgroup 2), a high emotional-medium instrumental support subgroup (Subgroup 3), and a high decreasing subgroup (Subgroup 4). In Subgroup 4, minority adolescents were overrepresented and majority youth were underrepresented whereas no such distribution differences were found in all other groups. This indicates that there is a particular fraction in the minority population that shows elevated levels of family support. Multivariate repeated measure ANCOVAs showed that members of family support subgroups reported different levels of self-efficacy and family climate. These differences were, however, not moderated by minority status. Hence, members of each subgroups reported similar levels in the outcome independent of the minority background. The results underscore the value of a developmental perspective on family support, as significant interindividual differences in intraindividual change of family support were evident. Moreover, the analyses show that some adolescents (Subgroup 3) reported contradictory trajectories in emotional and instrumental family support. On a broader level, all four subgroups were found in minority and majority youth (albeit with different cell frequencies in Subgroup 4) and subgroup membership was associated with similar outcome levels in majority and minority youth. This finding underscores the potential of person-oriented approaches to go beyond minority-majority group comparisons, as they reflect nowadays societies better and are focused on a particular behavior instead of predefined ethnic boundaries.

**227**

## **Defenders of ethnic victimization: Understanding the roles of individual and contextual factors on adolescents' responses to ethnic victimization incidents**

Pinar Bilir-Öztürk<sup>1</sup>, Sevgi Bayram-Özdemir<sup>1</sup>, Dagmar Strohmeier<sup>2,3</sup>, Metin Özdemir<sup>1</sup>

<sup>1</sup>Örebro University, Örebro, Sweden. <sup>2</sup>University of Applied Sciences Upper Austria, Linz, Austria.

<sup>3</sup>University of Stavanger, Stavanger, Norway

### **Abstract (max 500 words)**

Adolescents may witness victimization incidents targeting their classmates' ethnic background in diverse school settings. They vary from one another regarding how they act in such situations. Some youth may take actions to defend the victim whereas others may choose to stay passive (Salmivalli, 1996). The action taken by defenders gives an implicit message to perpetrators about the unacceptability of their behaviors and has the possibility to influence social dynamics of inter-ethnic interactions. Available studies (except a few; e.g., Garandea et al., 2022; Reijntjes et al., 2016; Yun, 2020) often have considered defenders as relatively uniform groups assuming that they show little variation on how they respond to peer victimization. However, not all defenders adopt similar strategies. Thus, having a comprehensive understanding about adolescents' defending behaviors is crucial to develop effective

strategies to intervene with ethnicity-based victimization in schools. In the present study, we first examined whether there are different constellations of adolescents who display different defending behaviors. Next, we integrated arguments from several theoretical frameworks (e.g., social identity theory; Tajfel & Turner, 1986; social capital theory; Putnam, 1995; social-ecological model of peer victimization; Hong & Espelage, 2012) to examine whether adolescents' intergroup attitudes, socio-cognitive skills and tendencies (i.e., perspective taking skills, prosocial behaviors), interpersonal relationship (i.e., peer acceptance), and their perception of class social climate might explain the heterogeneity in defending behaviors. The sample consists of 937 adolescents residing in Sweden (Mage=13.11, SD=.40; 45% females).

Hierarchical cluster analysis revealed four distinct subgroups of adolescents based on their reports on defending behaviors: (1) hybrid defender (high levels of engagement in both comforting the victim and confronting the bully), (2) victim-oriented defender (high levels of engagement in comforting the victim and average levels of engagement in confronting the bully), (3) bully-oriented defender (high levels of engagement in confronting the bully and low levels of engagement in comforting the victim), and (4) non-defender (low levels of engagement in both comforting the victim and confronting the bully). The results of one-way ANOVAs showed that hybrid defenders reported highest levels of positive attitudes toward immigrants, prosocial behaviors and perspective taking skills and followed by victim-oriented defenders, bully-oriented defenders, and non-defenders respectively. Further, hybrid defenders were more likely to report positive inter-ethnic contact norms in class (e.g., being inclusive, respecting each other, cooperating in class activities) compared to both victim-oriented and bully-oriented defenders, and non-defenders respectively. No significant difference was found across victim-oriented and bully-oriented defenders regarding their perceptions of positive inter-ethnic contact norms in class. Lastly, the groups didn't significantly differ from each other on peer acceptance. Together, these findings highlights that not all defenders adopt similar strategies when they witness and respond to ethnic victimization incidents. Adolescents' views about immigrants, their socio-cognitive skills, and their perceptions of inter-ethnic class climate explain the heterogeneity in defending behaviors. Interestingly, adolescents' status in peer relationship does not seem to differentiate defenders versus non-defenders as well as adolescents with defending behavior patterns. Findings have possible implications for antibullying interventions which focus on adolescents' defending responses in ethnic victimization.

**234**

### **Longitudinal associations between science efficacy, STEM identity and scientist career interest in girls in the context of informal science learning**

Mengya Zhao<sup>1</sup>, Emine Ozturk<sup>2</sup>, Fidelia Law<sup>1</sup>, Angelina Joy<sup>2</sup>, Mark Winterbottom<sup>3</sup>, Kelly Lynn Mulvey<sup>2</sup>, Adam Hartstone-Rose<sup>2</sup>, Adam Rutland<sup>1</sup>

<sup>1</sup>University of Exeter, Exeter, United Kingdom. <sup>2</sup>North Carolina State University, Raleigh, USA. <sup>3</sup>University of Cambridge, Cambridge, United Kingdom

**Abstract (max 500 words)**

**Objective of the study.** Within formal science learning settings, girls often do not feel a sense of belonging to subjects related to Science, Technology, Engineering and Math (STEM). For example, female students in secondary schools linked math, chemistry and physics with masculinity (Makarova et al., 2019). This may explain the gender gap in the STEM workforce. Thus, it is important to identify factors which can facilitate girls' career interests in STEM. However, research has not explored the potential pathways towards scientist career interest among girls within informal science learning contexts. The current study extends Social Cognitive Career Theory (SCCT; Lent et al., 2000) by also synthesising it with Social Identity Theory (Tajfel & Turner, 1986), and examines the longitudinal associations between science efficacy, STEM identity, and scientist career interest among girls from six STEM youth programs at informal science learning sites in the UK and the US over a period of two years.

**Methodology.** The current research used a longitudinal design and controlled the autoregressive effects of the variables to examine the factors related to scientist career interest in girls, see Figure 1. There are four time points, timepoint 1 (T1; i.e., at the beginning of the program), T2 (i.e., 3 months), T3 (i.e., 12 months) and T4 (24 months). Science efficacy was assessed at T1, T3 and T4, assessed by five items from previous research (Wang & Eccles, 2013). STEM identity and scientist career interest were assessed at T2, T3 and T4. STEM identity assessed the compatibility between participants and STEM from previous research (McDonald et al., 2019). One item assessed scientist career interest (i.e., "Do you think that you will be a scientist when you choose a career"). The sample size included 308 girls (M age = 15.22, SD age = 1.66, 43.5% of the girls come from the UK and 57.2% of girls from minority ethnic groups).

**Results.** The model fit of the structural equation model (SEM) was good:  $\chi^2(209) = 272.13$ ,  $p = .002$ , CFI = .96, TLI = .95, RMSEA = .03, 95% C.I. [.02, .04], SRMR = .06. The SEM demonstrated that, over the 2-year time (from T1 to T4), science efficacy consistently predicts STEM identity and scientist career interest, and similarly, STEM identity consistently predicts science efficacy, see Figure 2. Only scientist career interest at T3 predicts science efficacy at T4. Further Chi-square difference tests revealed that despite the bidirectional associations of variables, the coefficients of efficacy predicting STEM identity and scientist career interest are significantly bigger compared to the other two variables predicting science efficacy from T3 to T4. Mediation analysis supported a significant pathway from STEM identity at T2 to scientist career interest at T4 via T3 science efficacy ( $\beta = .08$ , S.E. = .04,  $p = .037$ ).

**Conclusion.** The findings highlight that science efficacy and STEM identity are critical factors for girls to develop their scientist career interest. STEM youth programs at informal science learning sites are recommended to develop their training and practice around cultivating young people's science efficacy and STEM identity.

240

## **Sure I can code (but do I want to?). Why boys' and girls' programming beliefs differ and the effects of mandatory programming education**

Una Tellhed, Fredrik Björklund, Kalle Kallio Strand

Lund University, Lund, Sweden

## Abstract (max 500 words)

In an increasingly digitalized society, competence, and engagement in digital skills, like programming, needs to increase (Nordic Council of Ministers, 2021). However, computer science has the lowest enrollment of women in higher education, and the IT sector is strongly dominated by men (UNESCO, 2017). Women's lower interest in tech-focused educations has been related to gender differences in self-efficacy (i.e. competence beliefs; e.g. Tellhed et al., 2017). Drawing on Eccles's expectancy value theory (EVT; Eccles, 1987, 1994) and the stereotypes, motivation, and outcomes model (STEMO; Master & Meltzoff, 2020), this relates to gender stereotypes associating technology with men (Tellhed et al., 2023). To ensure that both men and women benefit from and contribute to the technological advancements, we need to further understand how this gender difference in self-efficacy develops and may be influenced.

Several countries have recently introduced mandatory programming in school to strengthen future digital competence in the population (Uzunboyly et al., 2017). In this study, we investigated how this reform affects self-efficacy and interest in programming, in a sample of middle school students in Sweden (Grade 6, N = 373). Drawing on social cognitive theory, we also tested four predictors of gender differences in self-efficacy (Bandura, 1997).

Data was collected at the start of the school year, directly after the education (mainly consisting of block programming) and the end of the school year. Boys had higher self-efficacy and interest than girls at all three timepoints. Self-efficacy for programming increased slightly for both boys and girls after the programming education. The gender difference was completely mediated by three of Bandura's (1997) proposed sources of self-efficacy: Boys rated higher previous mastery experience, social persuasion (encouragement) and vicarious experiences (role-models) than girls.

Unexpectedly, as opposed to girls with Swedish background, girls with foreign background did not differ from the boys in programming self-efficacy in this study. This might relate to the gender-equality paradox, which entails that psychological gender differences surprisingly appear larger in more gender-equal countries, like Sweden (Stoet & Geary, 2018). This paradox was recently hypothesized to relate to cross-country variance in gender stereotype strength (Breda et al., 2020).

Further, drawing on STEMO and social cognitive career theory (Lent et al., 1994), increasing self-efficacy should increase interest in programming. However, unexpectedly, the children were less interested in programming after taking part in their school's programming education. This may relate to teachers assigned to teach programming feeling insecure in education methods and reporting a lack of teaching material (Official reports of the Swedish Government, 2021). The decrease in interest points to the importance of evaluating societal interventions intended to increase interest in technology.

It is promising that taking a few programming classes in school increases children's programming self-efficacy, but to also raise interest, measures appear needed to make the lessons more fun. The results also suggest that to reduce gender differences in programming self-efficacy, society should increase opportunities for girls in computer science, encourage girls more and make sure there are role models of all genders in the tech-sector.

243

## Adolescents' Interest and Engagement in Math: The Role of Gender-STEM Identity Compatibility

Fidelia Law<sup>1</sup>, Adam Hoffman<sup>2</sup>, Mengya Zhao<sup>1</sup>, Emine Ozturk<sup>3</sup>, Angelina Joy<sup>3</sup>, Luke McGuire<sup>1</sup>, Channing Mathews<sup>4</sup>, Mark Winterbottom<sup>5</sup>

<sup>1</sup>University of Exeter, Exeter, United Kingdom. <sup>2</sup>Cornell University, Ithaca, USA. <sup>3</sup>North Carolina State University, Raleigh, USA. <sup>4</sup>University of Virginia, Virginia, USA. <sup>5</sup>University of Cambridge, Cambridge, United Kingdom

### Abstract (max 500 words)

#### Objectives of the study

Adolescence is an important developmental period when youth are making choices that will impact their desire and ability to pursue STEM careers. Women are underrepresented in STEM, which may be associated with a perceived incompatibility between gender and STEM identity. It is important to examine whether this, as well as gender stereotype flexibility is related to the development of an adolescent's interest and engagement in math. Additionally, having growth mindset beliefs that ability in math is malleable could also be key to adolescent's participation in STEM fields. The current study used a longitudinal design to examine and predict the change in adolescents' interest and engagement in math over time. The study also investigates the role of gender stereotypes flexibility, growth mindset, gender-STEM identity compatibility in predicting such change over time.

#### Methodology

Latent growth curve modelling (LGCM) in the structural equation modelling framework was used to assess adolescents' interest and engagement in math over two years. Participants were 416 ethnicity diverse adolescents (289 female, 125 male; Mage=15.08, SD=1.80) recruited from six informal STEM learning sites in the U.S. and the U.K. where they participated in STEM teen programs. Participants responded to the survey at three timepoints: at the start of the program (n = 416), a year later (n = 236), and two years later (n = 206). The survey measures math engagement (Wang et al., 2016), math interest (Eccles et al., 2016), math growth mindset (Dweck, 2017) and gender-STEM identity compatibility measure asking participants' inclusion of their gender and STEM identity (London et al., 2011).

#### Results

Good model fit was obtained in the estimation of the unconditional LGCMs for math interest and engagement. In both models, the slope factor was significant, and interest and engagement declined over time (binterest slope=-0.41 p=0.002, bengagement slope=-0.12, p=0.001). Analyses exploring gender differences in the intercepts and slopes of the unconditional models revealed gender differences for the intercept and slope of math interest (see Table 1). Girls reported lower interest and declined at greater rates than boys. No gender differences found for math engagement (p>0.05). The conditional LGCMs estimates for interest and engagement fit the data well. Results show that gender-STEM identity



was positively related to the slope factor for interest and engagement in math, respectively (See Table 2 and 3). We also found math interest a significant predictor of engagement slope. Lastly, we did not find gender stereotype and growth mindsets significantly predict the slope of interest or engagement.

## Conclusion

Our results suggest that a stronger sense of gender-STEM identity was found to buffer youth from the trend of declining interest and engagement over time. This is especially important for females who are underrepresented in most STEM fields. As researchers and educators, it is important to recognise the value of fostering beliefs that being a female is compatible with identifying as someone who does STEM. The results of this study have implications for promoting youth's STEM participation and addressing the existing gender gaps in STEM.

244

## The Role of Parental Psychological Control in Children's Curiosity and Academic Self-Concept

Limor Goldner, Miri Scharf

University of Haifa, Haifa, Israel

### Abstract (max 500 words)

The objective of the study: The study examines the contribution of parents' psychological control (PPC) to elementary school-age children's curiosity (both interest- and deprivation-type) and academic self-concept.

Methodology: 159 Israeli elementary school-age children, their mothers, and their fathers participated in a cross-sectional study. Parents completed the Epistemic Curiosity (EC; Piotrowski et al., 2014) and the Parental Psychological Control (DAPCS; Soenens et al., 2010) scales. The children completed the Academic self-concept subscale from the Pictorial Scale of Perceived Competence and Social Acceptance for Young Children (PSPCSA; Harter & Pike, 1984), the Intellect/Openness subscale from the Big Five Questionnaire for Children (BFQ-C; Barbaranelli et al., 2003), and the Parental Psychological Control scale for children (DAPCS; Soenens et al., 2010). The analyses of the study included a series of MANOVA and hierarchical multiple regression analyses (UHMRA).

Obtained Results: The results revealed negative associations between parents' dependency- and achievement-oriented psychological control and children's curiosity and academic concept. Fathers reported higher levels of achievement-oriented PPC than mothers, and mothers' PPC negatively contributed to children's perceived openness.

Conclusions: The results shed light on the role of PPC in undermining children's curiosity and academic self-concept. They highlight the importance of clear boundaries between parents and children as

facilitating children's learning and the potential damage of parents' intrusive, manipulating, and pressuring behaviors for excellence.

**247**

## **Does psychological control during adolescence predict Young Adults' Psychosocial Adaption?**

Miri Scharf<sup>1</sup>, Shmuel Shulman<sup>2,3</sup>

<sup>1</sup>University of Haifa, Haifa, Israel. <sup>2</sup>Bar Ilan University, Ramat-Gan, Israel. <sup>3</sup>College of Management Academic Studiesent, Rishon LeTsiyon, Israel

### **Abstract (max 500 words)**

The aim of the study was to examine longitudinally the associations between psychological control within parent-child relationships during adolescence, and young adulthood self-silencing, loneliness, interpersonal challenges, and well-being. Healthy and autonomy promoting parent-adolescent relationships promote better future interpersonal competencies and well-being, while inhibiting autonomy can result in feelings of distress and poorer adaptation. Further, individuals might 'silence certain feelings, thoughts, and actions' to maintain close relationships with others and to reveal difficulties in their close relationships. In this study we assessed psychological control (PC) using observations tapping explicit behaviors reflecting conscious and less conscious aspects, and through questionnaires examining inadequate parent-adolescent relationships. These two ways assess distinct facets of individuals' representations, and each provides a unique window to examine representations of close relationships and their future implications (Mayselless & Scharf, 2007).

In the present study, 120 late adolescent females and their parents were followed longitudinally. The first assessment took place during their high school senior year. At this time, adolescents and their parents participated in observed revealed differences discussions to learn about inhibiting autonomy (over-personalizing the disagreement and pressuring the other to agree), in their relationship. The Revealed differences family interaction task (Allen et al., 1994) was used to observe the quality of the relationship of daughters with father and mother separately. Each dyad discussed a family issue on which they disagreed. Adolescents and parents were left alone to discuss the topic for 10 minutes. Adolescents also completed questionnaires regarding parental psychological control (Inadequate Boundaries Questionnaire, IBQ; Mayselless & Scharf, 2007).

Fifteen (15) years later, at age 32, 80 females completed questionnaires regarding personal and interpersonal characteristics that assess distress and well-being: The Self-Silencing Questionnaire (Jack, 1991), Loneliness (Russell et al., 1980), Depression (Beck, 1996), The Mental Health Inventory (MHI; Veit & Ware, 1983), in addition to the Work-Family Conflict (Netemeyer et al., 1996) and Jealousy in romantic relationships (Gomillion et al., 2014).

Preliminary data analysis reveals that adolescents' inhibiting autonomy behaviors toward their mothers are associated with self-silencing, distress, loneliness and jealousy in romantic relationships.

Adolescents' perceptions regarding mothers' PC is associated with depression. Adolescents' and fathers' pressuring behaviors are associated with self-silencing, and fathers' controlling behavior is also associated with poor well-being. Finally, adolescents' perception regarding fathers' PC is associated with work-family conflict, depression, and jealousy in romantic relationships.

Adolescents' behaviors and perceptions during adolescence are the forerunners of young adulthood social functioning and adjustment, and identifying at risk adolescents might help prevent future problems. The study demonstrates the important role of fathers (especially in this study that focused on females) in promoting social development. The findings attest to the significance of the adolescence behaviors and representations in predicting future adaptation. The prediction over 15 years is impressive. The findings should be replicated, and should be examined in diverse family-oriented cultures to learn more about the implications of representations and behaviors on young adults' adaptations in various arenas and various close relationships.

249

## Identification of promotive and protective factors for arithmetic skills

Maria Psyridou<sup>1</sup>, Tuire Koponen<sup>2</sup>, Minna Torppa<sup>3</sup>, Rebecca Bull<sup>4</sup>, Marja-Kristiina Lerkkanen<sup>3</sup>

<sup>1</sup>Department of Psychology, University of Jyväskylä, Jyväskylä, Finland. <sup>2</sup>Department of Education, University of Jyväskylä, Jyväskylä, Finland. <sup>3</sup>Department of Teacher Education, University of Jyväskylä, Jyväskylä, Finland. <sup>4</sup>Macquarie School of Education, Macquarie University, Sydney, Australia

### Abstract (max 500 words)

#### Objective

While progress has been made on why some individuals have increased risk for math difficulties much less work has focused on the identification of resilience mechanisms. To contribute to this emerging research area, the present study aims to examine whether stronger skills in specific domains (cognitive skills, motivation, parental factors) serve as promotive and/or protective factors in children at risk of arithmetic difficulties because of weaker arithmetic skills in Grade 1.

#### Methodology

The present study was part of the First Steps Study, a Finnish longitudinal study that includes data from approximately 2,000 children from kindergarten (age 6) to Grade 6 (age 12). The cognitive skills examined were phonological awareness, letter knowledge, word reading, counting, number concepts, spatial relations, RAN, vocabulary, listening comprehension and Raven. The motivational factors that were tested were self-concept for math, task value for math, and persistence in math homework. The parent-related factors included parental math difficulties, teaching math at home, and support in math homework.

#### Results

Our results indicated linear associations between counting, spatial relations, RAN, Raven, self-concept, task value, persistence in homework, and parental math difficulties with arithmetic skills in Grade 6 while controlling for arithmetic skills in Grade 1. Thus, these factors serve as promotive. Regarding the protective factors, number concepts, oral language (vocabulary and listening comprehension), and Raven were identified as protective factors, that is individuals with lower arithmetic skills in Grade 1 benefit more from better skills in number concepts, oral language and Raven than individuals with better arithmetic skills in Grade 1. Significant interaction was also found between parental support in math homework and arithmetic skills in Grade 1 (the risk factor), but it was not consistent with the classical protective factor model (i.e., individuals with lower arithmetic skills in Grade 1 benefited less from more parental support in math homework).

## Conclusion

The study provides a framework for resilience research for arithmetic and highlights the need for continued resilience research, with the goal of uncovering promotive and protective factors that may reside. Identification of protective factors could enhance interventions with the goal of promoting more efficient gap-closing effects between children at high and low risk for arithmetic difficulties.

## 250

### **Boys don't benefit, and girls still suffer: The role of gender stereotypes of math and physics in academic self-efficacy among Chinese middle school students**

Shoubao Gao<sup>1</sup>, Yu Ming<sup>1</sup>, Xiao Wang<sup>1</sup>, Yitong Tu<sup>1</sup>, Feiyue Wang<sup>2</sup>, Mengya Zhao<sup>3</sup>, Mei Tian<sup>1</sup>, Peng Wang<sup>1</sup>

<sup>1</sup>Shandong Normal University, Jinan, China. <sup>2</sup>St. Paul University Philippines, Tuguegarao, Philippines.

<sup>3</sup>University of Exeter, Exeter, United Kingdom

#### **Abstract (max 500 words)**

**Objective:** Adolescence is a critical period for STEM engagement as research highlighted that adolescents experienced decreased self-efficacy in STEM-related subjects (Wigfield et al, 2015). Women are underrepresented in STEM fields and also show gender differences during their teenage years (Master, 2020). Thus, it is important to understand how other factors influence self-efficacy in middle school to intervene in the drop of STEM career interests, especially for girls. According to Stereotypes, Motivation, and Outcomes developmental model (STEMO; Master, 2020), gender stereotypes can serve as a key factor in influencing STEM engagement via self-efficacy. However, little research examined the association between gender stereotypes and academic self-efficacy and the potential gender differences in the association. Therefore, this study aims to explore the effects of gender stereotypes of math and physics on academic self-efficacy in math and physics among middle school students, as well as the moderation role of gender.

**Method:** This study is a survey study using a cross-sectional design. 629 Chinese adolescents (M age = 14.38; SD age = .67) were recruited from a local middle school. 48.24% of the sample are girls (n=203).

**Results:** (1) T-test revealed that, compared to boys, girls had significantly lower scores of physics academic self-efficacy and math academic self-efficacy; However, girls hold fewer gender stereotypes of physics and math than boys. (2) As for correlation, gender stereotype of math was negatively correlated with math academic self-efficacy; Similarly, gender stereotype of physics was negatively correlated with physics academic self-efficacy. (3) Moderation analysis revealed that gender played a moderation role in the relationship between gender stereotypes and academic self-efficacy in math and physics. For girls, gender stereotypes of math and physics were negatively associated with academic self-efficacy of math and physics, however, for boys, gender stereotypes had no significant effect on academic self-efficacy, no matter for math or physics.

**Conclusions:** This study enriches the research on the associations between gender stereotypes and self-efficacy in specific subjects (i.e., math and physics) in Chinese middle school students. The study highlights that, compared to boys, gender stereotypes are barriers for girls to have high self-efficacy in math and physics, which may affect girls' engagement in STEM fields and their academic and career choices in the future. Future interventions may focus on intervening in the negative effect of gender stereotypes on self-efficacy in girls in early adolescence in order to reduce the gender gap in STEM workforce

251

### **Parental dependency and achievement-oriented control, self-concept and depressive symptoms. A longitudinal investigation in middle childhood**

Alexandru S. Zancu<sup>1</sup>, Travis K. Nair<sup>2</sup>, Laura E. Brumariu<sup>2</sup>, Loredana R. Diaconu-Gherasim<sup>1</sup>

<sup>1</sup>Alexandru Ioan Cuza University, Iasi, Romania. <sup>2</sup>Adelphi University, New York, USA

#### **Abstract (max 500 words)**

**Objectives:** Childhood depression signals risk for social and emotional difficulties and comorbidity with other symptomatology and risk behaviors (Amendola et al., 2022). Theorists proposed that maladaptive parenting that promotes a sense of inadequacy, including helplessness and lower self-concept, is likely to contribute to childhood depression (e.g., Abela & Hankin, 2008). Meta-analytic evidence shows that, generally, parental psychological control is associated with depression (Yap & Jorm, 2015). It is less clear, however, which dimensions of psychological control are associated with depression and which mechanisms explain these relations. This study aimed to 1) evaluate two key dimensions of psychological control (dependency-orientated and achievement-orientated) with depression in middle childhood, during the transition from elementary to middle school, a relatively stressful time for many children (Jindal-Snape et al., 2020); and b) to evaluate whether children's self-concept explains these relations.

**Methodology:** Five-hundred sixty-one children (Mage = 10.98, 54.3% girls) rated their parents' levels of parental dependency-orientated and achievement-orientated control (DAPCS; Scharf et al., 2016) and their own depressive symptoms (CES-DC; Weissman et al., 1980) in the second semester of 4th grade (the end of primary school, Time 1), academic and global self-concepts (Harter, 1982) in the first

semester of 5th grade (beginning of the middle school, Time 2) and depressive symptoms again in the second semester of 5th grade (Time 3).

Results: Parental dependency control at Time 1 was significantly associated with both academic self-concept ( $r = -.23, p < .001$ ) and global self-concept ( $r = -.27, p < .001$ ) at Time 2, and depression at Time 3 ( $r = .23, p < .001$ ). Similarly, parental achievement control was significantly related to academic ( $r = -.14, p = .001$ ) and global self-concept ( $r = -.16, p < .001$ ), as well as depression ( $r = .13, p = .002$ ). Children's academic self-concept ( $r = -.44, p < .001$ ) and global self-concept ( $r = -.54, p < .001$ ) at Time 2 were negatively associated with their depressive symptoms at Time 3. Path analysis, controlling for depressive symptoms and relevant demographics at Time 1, indicated good model fit,  $\chi^2(11) = 114.92, p < .001$ ; NFI=.92; CFI=.92, RMSEA=.13. Path results were similar to those from correlational analyses, and children's global self-concept at Time 2 mediated the relation between parental dependency-orientated control (Time 1) and depressive symptoms (Time 3).

Conclusion: This study advanced the literature by identifying specific parental psychological control aspects that are likely to influence children's depressive symptoms. Children experiencing parental pressure regarding meeting parental academic standards before transitioning to middle school had greater depressive symptoms in 5th grade. Thus, children may benefit from parents minimizing their achievement-related control. Children reporting high parental pressure to keep them within close relatedness see themselves in a more negative way which is likely to further create a propensity for greater depression. These findings point out the importance of taking in account children's self-concept and parental psychological control when working with middle schoolers with greater depressive symptoms.

**252**

### **'Is it you or me?' Parental psychological control and interpersonal relationships - the moderating role of gender and temperament**

Nitzan Scharf<sup>1</sup>, Guy Enosh<sup>2</sup>

<sup>1</sup>Ben-Gurion University of the Negev, Beer-Sheva, Israel. <sup>2</sup>Univerisity of Haifa, Haifa, Israel

#### **Abstract (max 500 words)**

As adolescents move into young adulthood they face the task of moving away from the parental nest, adopting adult roles, and forming meaningful close relationships (Arnett ,2015). Their ability to thrive and succeed in this developmental transition may relate to their personal characteristics, and how their parents react to their growing independence (Fahertyet al., 2020).

Psychologically controlling parents use intrusive and manipulative strategies to assume power over their children, and are associated with a range of adverse psychosocial outcomes (Barber et al., 2012). One such strategy is guilt induction. Some researchers suggest that parental guilt induction might facilitate the development of children's morality and concern for others (Rote et al., 2022). However, guilt induction interferes with children's attempts for autonomy and separation, and is associated with

symptoms of ill-being (Donatelli et al., 2007). Although individuals might conform to the external pressures when they perceive values and behaviors as coerced, they might be left with feelings of hostility and resistance.

Belsky and colleagues (2022) suggested that the degree to which parental behaviors will affect children's adjustment is related to individual differences between children, and the interaction between these individual differences and parental practices. This study examined how personal characteristic (temperament and gender) affect the relationship between parental guilt induction and emerging adults' psychosocial functioning.

Method: 248 young adults aged 20-36 participated in the study. Measures included the DAPCS: Dependency-oriented psychological control and achievement-oriented psychological control scale (Kins et al., 2009), and the MGI: The Maladaptive Guilt-Induction Measure (Donatelli et al., 2007), as well as a behavioral focused guilt induction measure that was developed for the current study. Temperament was assessed using the ATQ-SV: Adult Temperament Questionnaire-short version (Evan & Rothbart, 2007). Relationships with parents and romantic partners (N=185) were assessed using the NRI: The Network of Relationships Inventory (Furman & Buhrmester, 1992), and wellbeing was assessed using the MHI: The Mental Health Inventory (Veit & Ware, 1983).

Results and conclusion: Both temperament and gender were found to moderate between parental practices and psychosocial functioning. Results show that among women, compared to men, higher levels of parental guilt induction are associated with significantly lower levels of closeness and higher levels of antagonism to parents. For individuals with higher levels of negative effect, even lower levels of maternal guilt induction associated with high levels of antagonism towards both parents and romantic partners, whereas for individuals with lower levels of negative effect, only higher levels of parental guilt induction associated with poor relationships.

Parents continue to play a major role in their adult children's lives. Results suggest that clinicians should support young adults cope with parental difficulties related to their growing autonomy and self-sufficiency. They can encourage young adults to continue to express their genuine needs for closeness, support and separateness, as their relationships with their parents change. This may facilitate a successful transition into adulthood.

**253**

## **Maternal Substance Use and Child Attachment: A Meta-Analysis and Systematic Review**

Noora Hyysalo<sup>1</sup>, Marissa Gastelle<sup>2</sup>, Marjo Flykt<sup>1,3</sup>

<sup>1</sup>Faculty of Social Sciences / Psychology, Tampere University, Tampere, Finland. <sup>2</sup>Department of Psychological Sciences, Kent State University, Kent, OH, USA. <sup>3</sup>Department of Psychology and Logopedics, Faculty of Medicine, University of Helsinki, Helsinki, Finland

**Abstract (max 500 words)**

## Objective

Maternal substance use poses a risk to children's socioemotional development and has frequently been associated with insecure and disorganized attachment in children. Caregivers' unresponsive, rejective, and inconsistent behavior are thought to underlie insecure attachment in children. Regarding the development of disorganized attachment, empirical evidence is not clear, but it is suggested that the caregiver is simultaneously both a source of distress and the only potential source of comfort. Such caregiving patterns are common among substance-using parents. However, there currently exists no comprehensive quantitative summary about the association of maternal substance use with child attachment. Moreover, the mechanisms underlying attachment in children of substance-using mothers remain unclear. Therefore, we performed a meta-analysis to evaluate the association of maternal substance use with child attachment and systematically reviewed factors that mediate or moderate this association. We focused on children under school age because children's attachment relationships may be affected by starting school.

## Methodology

We registered the study protocol in PROSPERO (registration number #CRD42019138218) and followed the PRISMA Statement in reporting this study. We conducted a systematic database search of quantitative English language studies that focused on maternal substance use and child attachment. Children were below six years of age. We found 11 studies ( $N = 1841$ ) that met the inclusion criteria. These studies were included in the meta-analysis of attachment security. Out of these studies, seven ( $N = 1589$ ) also explored disorganized attachment and were thus included in the meta-analysis of attachment disorganization. Finally, the included 11 studies were systematically reviewed for moderating and mediating factors between maternal substance use and child attachment. All materials, including the protocol, data, and scripts are at <https://osf.io/ukv2c/>.

## Results

The results showed that maternal substance use was negatively associated with children's secure attachment with a small effect size,  $r = -.10$ ,  $p = .018$ ,  $k = 11$ . The association between maternal substance use and children's disorganized attachment was a similar size, yet not significant,  $r = .15$ ,  $p = .101$ ,  $k = 7$ . Regarding moderating and mediating factors, studies were scarce,  $k = 6$ . Nevertheless, we found that teratogenic (polysubstance exposure) and sociological (public assistance and parity) factors might moderate the association between maternal substance and children's insecure attachment. Most important was a cumulation of teratogenic and maternal functioning risks that mediated the path from maternal prenatal alcohol use to children's attachment insecurity.

## Conclusion

Our findings suggest that young children exposed to maternal substance use have an increased risk for insecure attachment compared to children not exposed to maternal substance use. However, despite the similar effect size, we found no support for the association between maternal substance use and children's disorganized attachment. In general, the literature was scarce, and the studies varied in risk of bias which introduced uncertainties in our findings. Specifically, our findings on moderating and mediating factors show a clear need to improve our understanding of the underlying mechanisms of attachment in high-risk children.



254

## Children's Facial Emotion Recognition and Parenting Styles - A Person-Oriented Study

Petra Laamanen<sup>1</sup>, Noona Kiuru<sup>2</sup>, Olli Kiviruusu<sup>3</sup>, Stephen Nowicki<sup>4</sup>, Jallu Lindblom<sup>1</sup>

<sup>1</sup>Faculty of Social Sciences / Psychology, Tampere University, Tampere, Finland. <sup>2</sup>Department of Psychology, University of Jyväskylä, Jyväskylä, Finland. <sup>3</sup>Department of Public Health and Welfare, Finnish Institute for Health and Welfare, Helsinki, Finland. <sup>4</sup>Emory University, Atlanta, USA

### Abstract (max 500 words)

#### Objective

Facial emotion recognition (FER) is a crucial element in children's social interaction. Difficulties in understanding others' feelings (e.g., seeing anger when not displayed) associate with various social and mental health problems. FER accuracy and emotion-specific biases are expected to be shaped within the context of interpersonal experiences, such as parenting. However, empirical findings on this topic are mixed. First, some studies suggest that negative parenting practices, such as low warmth or harshness towards a child, are related to children's poor recognition of negative emotions. Second, parents' beliefs that emotions are problematic or dangerous associate with children's high FER accuracy, which may result from parents masking their emotions. Third, adverse family experiences, such as maltreatment, may increase the ability to recognize specific emotions, such as anger, or even lead to emotion-specific biases. The ambiguity of these research findings may result from assuming a linear relationship between parenting and FER. In other words, most studies have assumed that parenting has an unequivocal "dose-dependent" effect on children's FER development. However, from the adaptationist perspective, it is possible that children develop more complex FER patterns that help them to cope within their family environment. For example, children who are exposed to parental hostility might become very accurate in recognizing anger while having difficulties in recognizing other emotions. The person-oriented approach allows distinguishing such homogeneous groups, which might provide more insight on how different parenting styles might relate to children's FER. Therefore, in the current study, we identify whether emotion-specific FER patterns can be distinguished in middle childhood. Moreover, we analyze whether and how these FER patterns associate with mother's parenting styles.

#### Methodology

The sample of first, second, and third graders (N = 2874) was collected as a part of a Finnish school intervention study (Together at School; Björklund et al., 2014). Children's FER (i.e., accuracy and biases for angry, fearful, happy, and sad expressions) was assessed using a facial expression recognition subtask of Diagnostic Assessment of Non-Verbal Accuracy (Nowicki & Duke, 1994). Mother's parenting style (i.e., warmth, behavioral control, and psychological control) was assessed with self-report questionnaires using a 5-point Likert scale (Aunola & Nurmi, 2004; Barber, 1996; Roberts et al., 1984). We will apply a latent class analysis to identify unique patterns of FER based on the four distinct emotions. Furthermore, we will use logistic regression to predict children's class membership using the mother's parenting styles.

## Results

Due to the lack of previous research, we propose no specific hypotheses regarding the latent classes. Yet, in addition to identifying high- and low-accuracy groups, we expect to find groups with emotion-specific patterns. Regarding the associations between FER and parenting practices, we expect that positive parenting styles (i.e., warmth and behavioral control) increase the probability of belonging to the high-accuracy group.

## Conclusion

Our study provides a novel approach for capturing differences in children's FER and its relation to parenting practices. Identifying unique FER patterns might offer new insights into how the proximal socioemotional environment influences children's social cognition and clarify the ambiguities in previous research findings.

256

## Does Attachment and Effortful Control Interact to Shape Emotion Regulation in Late Adolescence

Jallu Lindblom<sup>1</sup>, Jaakko Tammilehto<sup>1</sup>, Guy Bosmans<sup>2</sup>, Marjo Flykt<sup>1,3</sup>, Mervi Vänskä<sup>1</sup>, Raija-Leena Punamäki<sup>1</sup>

<sup>1</sup>Faculty of Social Sciences / Psychology, Tampere University, Tampere, Finland. <sup>2</sup>Clinical Psychology, KU Leuven, Leuven, Belgium. <sup>3</sup>Department of Psychology and Logopedics, Faculty of Medicine, University of Helsinki, Helsinki, Finland

### Abstract (max 500 words)

#### Objective

Research indicates that attachment experiences lead to individual differences in emotion regulation (ER). This likely reflects one's strategic beliefs about the nature of emotions and about the optimal way to manage them. In adult literature, it has been suggested that attachment security associates with constructive ER, such as reappraisal; attachment anxiety with hyperactivation strategies, such as rumination; and attachment avoidance with deactivation strategies, such as suppression. However, empirical research has provided ambiguous findings, indicating, for example, no association between avoidant attachment and suppression (e.g., Tammilehto et al., 2022). One plausible explanation for the ambiguous results may relate to the overemphasis of research on social determinants, dismissing the role of more cognitive self-regulation. Therefore, in the current study, we test whether effortful control moderates the effects of adolescent attachment on ER strategies. Based on previous research (Lindblom & Bosmans, 2022), we expect that high effortful control helps to implement secure-based attachment ER. Thus, we hypothesize that this combination associates with the high use of reappraisal and low use of rumination. Furthermore, we expect that low effortful control heightens the effect of insecure

attachment on ER. Thus, we hypothesize that low effortful control heightens the associations between attachment anxiety and rumination, and between attachment avoidance and suppression.

### Methodology

Finnish participants (N = 449) filled out questionnaires at the age of 17–19 years. Participants' attachment anxiety and avoidance in relation to their mother, father, romantic partner, and friend were measured using Experiences in Close Relationships–Relationship Structures (Fraley et al., 2011). The average score for each attachment dimension was used. Effortful control was measured using The Amsterdam Executive Function Inventory (Van der Elst et al., 2012). A total score of attention, self-control, and planning was used. Finally, usage of suppression and reappraisal were measured using Emotion Regulation Questionnaire (Gross & John, 2003) and rumination using Cognitive Emotion Regulation Questionnaire (Garnefski et al., 2001).

### Results

The results will be presented at the conference. The analyses will be run using path analysis in Mplus. We expect small to moderate correlations between the attachment variables, ER strategies, and effortful control. Yet, the focus will be on the interaction effects between the attachment variables (avoidance and anxiety) and effortful control in predicting the ER strategies.

### Conclusion

Overall, our study provides new information about the multiplicative effect of attachment and effortful control on ER. This is theoretically important, as it increases knowledge about how the attachment system and more cognitive self-regulation systems interact in adulthood. Moreover, from a clinical perspective, the knowledge can help to screen and identify risk factors for emotional well-being and help to develop new kinds of cognitive and social-emotional interventions.

**258**

## **Perceived Childhood Parenting and Effortful Control Predict Daily Emotion Regulation**

Jaakko Tammilehto<sup>1</sup>, Marjo Flykt<sup>1,2</sup>, Kirsi Peltonen<sup>3</sup>, Peter Kuppens<sup>4</sup>, Guy Bosmans<sup>5</sup>, Jallu Lindblom<sup>1</sup>

<sup>1</sup>Faculty of Social Sciences / Psychology, Tampere University, Tampere, Finland. <sup>2</sup>Department of Psychology and Logopedics, Faculty of Medicine, University of Helsinki, Helsinki, Finland. <sup>3</sup>INVEST Research Flagship Center, Turku, Finland. <sup>4</sup>Faculty of Psychology and Educational Sciences, KU Leuven, Leuven, Belgium. <sup>5</sup>Clinical Psychology, KU Leuven, Leuven, Belgium

### **Abstract (max 500 words)**

Objective

Emotion regulation (ER) is a goal-directed process in which people select and implement various strategies to modify their emotions. In ER selection, the person chooses a strategy they appraise as the most suitable considering one's goals. In ER implementation, the person executes the selected strategy to influence one's emotions. While the selection and implementation processes are the cornerstones of ER, little is known about their developmental antecedents. Research on perceived parenting styles suggests that the dimensions of warmth, rejection, and overcontrol characterize offspring's childhood memories, representations, and experiences of their parents. These styles have been linked to how offspring regulate emotions. In turn, effortful control of activation, attention, and inhibition is considered the temperamental cognitive prerequisite for goal-driven ER. Parenting can also shape effortful control, alluding that effortful control may be one mechanism between parenting and ER. However, research has used the one-occasional global self-reports of ER, precluding the nuanced examination of the ER processes. In this study, we used ecological momentary assessment (EMA) to model the selection and implementation of ER, including reappraisal, suppression, and rumination. We examined how retrospectively perceived parenting styles and effortful control predict ER selection and the effectiveness of ER implementation in adult offspring. We hypothesized parental warmth, rejection, and overcontrol to predict ER selection and the effectiveness of ER implementation and effortful control to mediate these effects.

## Methodology

The participants ( $N=122$ ,  $M_{\text{age}}=26.4$ ; 88.5% women) first answered the My Memories of Upbringing Questionnaire regarding their parents' parenting styles and the Adult Temperament Questionnaire regarding their own effortful control. Two weeks later, they completed EMA questionnaires sent to their smartphones seven times daily for a week (4638 observations). In each questionnaire, the participants reported their use of reappraisal, suppression, and rumination since the previous questionnaire and current negative and positive emotions. We analyzed the data with dynamic structural equation models. Our primary analyses focused on parental warmth, rejection, and overcontrol in terms of combined fathering and mothering. Our secondary analyses explored the separate effects of fathering and mothering styles. All scripts and data are at <https://osf.io/r93sw/>.

## Results

Parental warmth predicted less suppression and rumination, and parental overcontrol greater suppression. However, parenting styles did not predict the effectiveness of ER implementation, and no support was found for the mediating role of effortful control between parenting and ER. Regarding the secondary analyses, paternal overcontrol predicted greater suppression, rumination, and reappraisal, paternal warmth less rumination, and maternal warmth less suppression. However, neither fathering nor mothering styles predicted the effectiveness of ER implementation.

## Conclusion

Overall, our findings suggest that perceived parenting styles may guide how people select rather than implement ER, and these links may be largely independent of their effortful control. Specifically, representations, memories, and experiences of one's parents as warm may guide the offspring to calmly observe and utilize their emotions without the strong urge to intervene in them. In contrast, the representations, memories, and experiences of one's father as overcontrolling can heighten the offspring's need to be in control of emotions, leading to emotion over-regulation.

281

## Does teachers' (emotion) talk mediate young children's gains in emotion knowledge?

Oliver Hormann, Katharina Voltmer, Maria von Salisch

Leuphana University, Lüneburg, Germany

### Abstract (max 500 words)

Children's emotion knowledge is tied to their developing language skills and forecasts their social and academic success in school. In the Feeling Thinking Talking (FTT) intervention kindergarten teachers were taught Language Support Strategies (LSS) in combination with strategies of emotion talk. The evaluation confirmed that teacher-led FTT intervention not only served to further children's language skills but also to promote long-term emotion knowledge. However, little is known about behaviors that translate teachers' gains in the FTT training into "their" children's progress in emotion knowledge. We investigate the potential mediating effects of four features of teacher-child conversations.

275 three-to-five-year-old children (38% dual language learners (DLL)) from 29 German Kindergarten groups were allocated to intervention (IG) or control group (CG). They were tested at three time points with the Adaptive Test of Emotion Knowledge for three-to-nine-year-olds. Teacher-child interactions were videotaped at T1 and at T2. Videotapes were coded for the number of turns within thematically contingent sequences of teacher-child-talk as an indicator of dialogue quality and for teachers' use of three LSS: input strategies (e.g. parallel talk), output strategies (questions), and modelling and correction strategies (e.g. expansions, recasts).

After a multiple imputation procedure, a multilevel mediation model was constructed with children's emotion knowledge on level 1 and teachers' assignment to IG or CG and their interaction quality on level 2. Children's age, gender, DLL-status, and behavioral self-regulation at T1 were controlled. The analysis was limited to the pre-post data for which a small but, immediately after intervention, nonsignificant total effect on children's growth in emotion knowledge ( $t = 0.68$ ;  $p = .495$ ) was observed.

Because the four interaction qualities represent independent routes of transmission, a parallel multiple mediator model was run (Hayes 2018). The a-path includes both initial and mediator variables at the group level. The b-paths, which represent the impact of the mediators on the individual outcome under control of the direct effect of the treatment, are analyzed with multilevel models. The analysis revealed that IG teachers increased their use of output ( $t = 2.41$ ,  $p = .029$ ) and input strategies ( $t = 3.47$ ,  $p = .003$ ) and the quality of dialogues ( $t = 2.48$ ,  $p = .027$ ) after participating in the FTT training. At T2, only teachers' input strategies accelerated children's progress in emotion knowledge ( $t = 2.08$ ,  $p = .037$ ) thereby transmitting the effect of the training (95% CI of the mediated effect doesn't include zero). Teachers' increased use of input strategies may have validated children's words and encouraged them to talk which in turn contributed to their gains in emotion knowledge. How important the quality of (emotion) talk is, is further underlined by the finding that children in groups of teachers who were able to sustain longer dialogues with them (at T1) made more progress in their emotion knowledge ( $t = 2.02$ ,  $p = .044$ ).

The discussion focuses on the contribution of particular facets of teacher-child conversations as mechanisms for the intertwined acquisition of language and emotion knowledge.

**283**

## **Functions of language in children's use of cognitive emotion regulation strategies**

Nadia Khammous<sup>1</sup>, Berit Streubel<sup>2</sup>, Henrik Saalbach<sup>2</sup>, Catherine Gunzenhauser<sup>1</sup>

<sup>1</sup>Ludwigsburg University of Education, Ludwigsburg, Germany. <sup>2</sup>Leipzig University, Leipzig, Germany

### **Abstract (max 500 words)**

**Objective of the study:** This study examines the planning function of language in the emotional self-regulation process of children. Theoretical approaches suggest that language ability supports children's implementation of cognitive emotion regulation strategies by helping them to represent emotion concepts and emotion knowledge (Cole et al., 2010). Latest work (Griffiths et al., 2021) shows in a longitudinal study that early language skills predict the later use of cognitive emotion regulation strategies, suggesting that language promotes the development of cognitive emotion regulation. The present study will be the first to investigate the influence of individual differences in general and emotion-specific language skills on children's ability to implement effective cognitive reappraisal using an experimental paradigm.

**Methodology:** Participants are primary school children (native German speakers) aged 8 – 10 years. To date, 30 children have been tested. The final sample (completed prior to the conference) will include 60 children. General language competencies and emotion-specific vocabulary are assessed using standardized tests. In the experimental paradigm, cognitive emotion regulation performance is measured via a picture presentation paradigm (cp. Strauss et al., 2016). In the paradigm, children are asked to self-rate their current emotional state using the Self-Assessment Manikin (SAM; Bradley & Lang, 1994) after the presentation of a picture. Children are randomly assigned to three groups: (1) reappraisal – distraction, (2) distraction – reappraisal and (3) passive control. All groups watch three sets of age-appropriate negative stimuli taken from a subset of the International Affective Pictures System (IAPS; McManis et al., 2001). Children of groups (1) and (2) watch the first set of pictures passively (baseline). Then they are asked to use cognitive reappraisal and distraction to down-regulate negative emotion induced by the pictures of the second and third sets. In order to check for successful strategy implementation, children are asked to verbalize their thoughts. Children in the control group watch all three sets passively. Additionally, specific physiological data (e.g. heart rate variability and facial expression) are recorded as an objective indicator for successful regulation of negative emotions.

**Expected findings:** We hypothesize that children with better general and emotion-specific language skills will (a) reveal more cognitive reappraisals and (b) regulate negative emotion more efficiently compared to children with less developed language skills. The number of cognitive reappraisals generated in the two experimental groups will be regressed on children's language skills, using group membership as a covariate. Changes in children's self-reported emotion and physiological arousal will be analyzed using

repeated measurement ANOVA comparing baseline and reappraisal condition in the experimental groups and the respective stimulus blocks in the passive control group. Language skills will be used as a covariate.

Conclusion: The present research will substantially contribute to studying the relation between language and cognitive emotion regulation and its underlying mechanism by examining the effects of general and emotion-specific language skills on implementation of cognitive emotion regulation strategies.

**286**

## **The role of emotion-specific language skills on the regulation of facial emotion expression in pre-schoolers**

Berit Streubel<sup>1</sup>, Catherine Gunzenhauser<sup>2</sup>, Nadia Khammous<sup>2</sup>, Henrik Saalbach<sup>1</sup>

<sup>1</sup>Leipzig University, Leipzig, Germany. <sup>2</sup>Ludwigsburg University of Education, Ludwigsburg, Germany

### **Abstract (max 500 words)**

Previous findings indicate that children's emotional competences and their language skills are closely related. Theoretical approaches suggest that language as a means of cognitive representation supports children's emotion regulation by helping them to mentally store and access emotional concepts including related causes, reactions and appropriate regulation strategies. While previous research supporting this theoretical account primarily focused on general language skills, our prior research revealed that domain-specific (i.e., emotion-related) rather than general vocabulary relates to pre-schoolers' conceptual knowledge about emotional self-regulation (Streubel et al., 2020). But what about children's actual ability to regulate emotions? To what extent is it also associated to children's (emotion-specific) language skills? The present study, thus, investigates the role of emotion-specific language skills on pre-schoolers' self-regulatory abilities, more specifically, their ability to regulate facial emotion expression.

Four- to six-year-old pre-schoolers (N = 286) participated in the Balloons Game, a frustration-inducing computer game (Bar-Haim et al., 2011). Their task was to pop as many balloons of a certain color as possible in order to win. Children complete two rounds of the game with 8 trials each. While in the first round the children played without additional instructions, in the second round they were asked not to let on whether they were winning or losing. In some trials of the game, the computer mouse was manipulated so that no balloons could be popped, causing the children to lose the game. While playing the Balloons Game children were videotaped and the FaceReader software was used to analyze changes in facial expressions. To assess children's emotion-specific vocabulary we used the Children's Emotion Vocabulary Vignettes Test (Streubel et al., 2020) consisting of 20 short illustrated scenarios, describing specific emotions by depicting a child protagonist in a typical emotion-eliciting situation. The vignettes feature six basic emotions (e.g., joy, anger, fear) and 14 complex emotions (e.g., pride, guilt). Children were asked to name the feeling of the vignette's protagonist child to determine their expressive emotion-specific vocabulary.

Preliminary analyses indicate that children were more successful in suppressing positive than negative facial expression. However, children's emotion-specific vocabulary seems to be positively related only to their ability to suppress negative expressions. Thus, children with a larger emotion vocabulary show a greater decrease in negative expressions during the second round of the Balloons Game. Further analyses will examine the importance of emotion-specific language skills in more detail determining whether the active use of different emotion words alone (i.e., the mere size of emotion vocabulary) or, in addition, the adult-like usage of emotion words (i.e., the depth of emotion vocabulary reflecting deeper understanding of emotion concepts) supports children's emotional self-regulation abilities.

Our findings will contribute to theory development on the relation between language and the development of emotion competence by emphasizing the importance of emotion-specific language skills. With regard to practice, these findings might help to develop means of supporting the development of pre-schoolers' emotional self-regulation abilities.

**289**

## **Reading fluency growth curve trajectories from grade 2 to age 23 and the effects of parental and child factors**

Daria Khanolainen<sup>1</sup>, Maria Psyridou<sup>2</sup>, Kenneth Eklund<sup>2</sup>, Tuija Aro<sup>2</sup>, Minna Torppa<sup>1</sup>

<sup>1</sup>Department of Teacher Education, University of Jyväskylä, Jyväskylä, Finland. <sup>2</sup>Department of Psychology, University of Jyväskylä, Jyväskylä, Finland

### **Abstract (max 500 words)**

#### Objective

Reading fluency forms the foundation of strong literacy skills needed for academic success. Previous longitudinal research revealed relatively high inter-individual stability of reading fluency but also indicated that reading fluency difficulties can both resolve over time and emerge in adolescence. However, it remains to be seen what predicts if a child takes on a resolving trajectory or not in their reading fluency development. The objective of this study is twofold: 1) to gain new insight into reading fluency development by analysing its long-term trajectories from childhood to adulthood, and 2) to identify what parental and/or child factors predict these trajectories.

#### Methodology

The study drew on a longitudinal data set collected in Finland that included children's reading fluency assessments, their self-reports, and parental questionnaires. Approximately 200 families took part in the study. The data set has a prospective FR sample (half of the parents in the sample had dyslexia and the remaining half did not) and children were followed from Grade 2 (age 8) to age 23. To achieve our research objective, we constructed a latent growth curve model, in which the slope indicates the developmental rate from Grade 2 to age 23 while the intercept indicates the reading fluency outcome at age 23. Once the optimal baseline growth curve model was established, it was then expanded to include



predictors: parental factors, the home literacy environment, children's cognitive skills, their socio-emotional and motivational scores.

## Results and Conclusion

Our analysis revealed significant variation in not only the intercepts (adult outcomes) but also in the slopes (developmental rates) suggesting that the individual rank order in skill is not fixed and can be significantly improved not only in childhood and adolescence but also potentially in adulthood. Furthermore, we saw that parental dyslexia were a significant negative predictor of reading fluency at age 23. We also found that the specific type of parental dyslexia was predictive of children's rates of reading fluency development – those who had parents with resolving difficulties were more likely to follow a resolving trajectory themselves while those who had parents with persistent difficulties were more likely to also demonstrate persistent difficulties. Another finding was that more of mothers' depression symptoms were weakly related to lower reading fluency when children were at school. Importantly, higher maternal psychological distress did not predict lower adult outcomes suggesting that this parental characteristic could be acting only as a temporary setback for children's reading fluency. Children's RAN measured in kindergarten was also a significant predictor of both the developmental rate of reading fluency and the adult outcome. Children's task avoidance and reading motivation were two more significant factors. An important insight that our study additionally provided is that neither lower task avoidance nor higher reading motivation predicted a steeper developmental slope thus suggesting that neither of these characteristics contributed to resolving reading difficulties. Further analysis is to be conducted and conclusions to be drawn before the conference.

290

## Parents' genetic and environmental influences on children's educational outcomes

Elsje van Bergen

Department of Biological Psychology, Vrije Universiteit Amsterdam, Amsterdam, Netherlands

### Abstract (max 500 words)

#### Objective

How well children learn to read, write, and do math is a strong predictor of adult life outcomes that we care about. Hence, parents and academics like to know how parents can best support children's cognitive development. Research on how parents nurture children's learning at home is subsumed under the term 'home-learning environment', or specifically for reading and math, home-literacy and home-numeracy environment. The home-learning environment includes activities like teaching letters, shared reading, and playing numeracy games, and more distal factors like parental socio-economic status and parental mental health.

Research has demonstrated associations between the home-learning environment and children's academic skills. However, these are typically interpreted as causal associations, while we know from behavioural-genetic research that traits in parents and children are correlated not only for environmental reasons, but also for genetic reasons. Thus, the environments that parents provide are intertwined with the genes that they provide. If this is not taken into account, it can lead to erroneous conclusions on which experiences at home have a causal impact.

### Methodology

I will discuss several designs from the field of behavioural genetics that allow studying the environmental effect of parents' traits and behaviour, while controlling for the effect of transmitted genes. However, these have rarely been applied to the home-learning environment, because they require very specific and very large samples of families. I will argue that in some cases a more feasible alternative design is the familial control design, in which parental skills (e.g., their reading ability) are regressed out before testing the impact of the home-learning environment on children's (reading) skills. If none of these designs is feasible, it is important to acknowledge which conclusions can and cannot be drawn.

### Results

I will show findings from several recent studies in Dutch, British, and Norwegian samples on the genetic and environmental influences of parents' behaviours and traits on children's educationally-relevant traits. The designs that we used include the familial control design (using parental reading skills as a covariate), the children-of-twins design (analysing traits in adult twins and their offspring), and the genetic nurture design (employing measured DNA in parents and offspring). In general, environmental effects are smaller than genetic effects.

### Conclusion

In studying the effects of the home (learning) environment, it is crucial to take genetic effects into account. Research that does so is challenging and therefore scarce. To set up genetically-sensitive research to test the effect of the home (learning) environment, we need collaborations among academics in education, psychology, and genetics.

**292**

## **An Importance of a Multilevel Approach to assess Classroom Peer Dynamics: Reliability and Validity of the Classroom Peer Context Questionnaire**

Jingu Kim<sup>1,2</sup>, Yvonne van den Berg<sup>2</sup>, Antonious H.N Cillessen<sup>2</sup>

<sup>1</sup>Busan National University of Education, Busan, Korea, Republic of. <sup>2</sup>Radboud University, Nijmegen, Netherlands

**Abstract (max 500 words)**

Despite the importance of peer context, most empirical research focuses on the consequences for individuals' functioning rather than the group. For instance, previous research indicated that social-emotional climate fosters positive social development (Rucinski et al., 2018), school adjustment (Buyse et al., 2009), and social acceptance (Madill et al., 2014) at the individual level. However, peer context may influence beyond the level of the individual. Peer contexts may influence other aspects of classroom social context such as the extent to which certain behaviour is normative within the group (social norms; Dijkstra & Gest, 2015), and may affect friendship interactions (social networks; Veenstra et al., 2018). Unfortunately, most works on classroom peer contexts are limited to a specific level of complexity, such as individual level, and few studies considered individual and group-level composition of the classroom peer contexts. In this study, we validated the classroom peer context questionnaire (CPCQ) at the individual and classroom levels. The structural association between CPCQ and other classroom peer contexts was investigated using multi-level analysis examined the structural association between CPCQ and classroom social contexts, including friendship structure and bullying/victimisation descriptive norms. By doing so, we aim to prove the constructive validity of CPCQ as a systematic measure of peer contexts and unique associations among classroom peer contexts, social networks, and norms. Participants were 9,316 third to sixth grade students (50.8% boys; Mage = 10.53; SDage = 1.46) from 441 classrooms (grades 4-10) and 147 schools participated in the study (response rate 97.5%). We began with exploratory factor analysis (EFA) and the multi-level CFAs were also conducted to investigate the reliability and consistent factor structure across student and class levels. To examine the construct validity at classroom level, we looked at the structural association with three aspects of social network (e.g density, antipathy, and status hierarchy) and the descriptive norms for bullying and victimization.

According to multi-level confirmatory factor analysis, CPCQ indicated good reliability and validity both at the student and classroom levels. Specifically, reliability and factor loadings of CPCQ tended to be higher at the classroom level than student level. Moreover, antipathy was predicted by all classroom-level dimensions of the CPCQ. That is, generally, higher levels of conflict and isolation in classrooms were associated with more antipathy, whereas higher levels of comfort, cooperation, and cohesion in classrooms were associated with less antipathy. Finally, all dimensions of CPCQ had statistically significant associations with bullying and victimization both at student and classroom levels. Comfort, cooperation, and cohesion negatively predicted bullying and victimization and this effect is consistent across student and classroom levels. Moreover, conflict and isolation were positively associated with bullying and victimization across levels. A stronger association of structural relationship at student-level associations were also found in these models. These findings suggest that CPCQ can be used as a rigorous and systematic measure to measure peer context that accounts for the level of complexity in the classrooms.

295

## **Do Children Striving for Social Dominance Goals Exhibit Aggressive Behavior in Response to Victimization: The Role of Classroom Status Hierarchy**

Bin Pan, Linqin Ji, Wenxin Zhang

Shandong Normal University, Shandong, China

### **Abstract (max 500 words)**

#### 1) Objective of the study

When children are victimized by their peers, they might cope with the situation in different ways. Children's social goals are assumed to predict their responses to peer victimization. Children who are striving for social dominance goals tend to exhibit aggressive behavior to regain status and respect. Moreover, classroom status hierarchy, reflecting the distribution of power and dominance in the classroom, is an important classroom marker which might explain the variations between classrooms in the victimization-aggression association. In hierarchical classrooms, aggressive behavior is regarded as an effective strategy in response to peer victimization, as it is highly rewarded in form of popularity. Thus, the social dominance-aspiring children in a classroom with a clear hierarchy might be more likely to engage in aggression when faced with peer victimization.

#### 2) Methodology

The sample of this dissertation was 1,869 children attending grade 5 (n = 503, 47.7% girls, Mage = 11.25 years, SD = 0.42), grade 6 (n = 410, 39.5% girls, Mage = 12.27 years, SD = 0.38), grade 7 (n = 498, 50.0% girls, Mage = 13.28 years, SD = 0.35), and grade 8 (n = 458, 45.6% girls, Mage = 14.12 years, SD = 0.40) from 51 classes in 4 primary schools in Jinan and Tai'an. Data were collected in the spring semester of 2018. Social dominance goals were measured by self-report. Popularity, bullying, and victimization were assessed via peer nominations. The standard deviation of the proportion score of popularity was computed within each classroom to reflect the classroom status hierarchy. Data analyses were conducted through a multi-level structural equation model.

#### 3) Results obtained or expected

Social dominance goals and classroom status hierarchy moderated the association between victimization and physical and relational aggression. First, although peer victimization was associated with physical aggression, the victimization-physical aggression was stronger for children with higher social dominance goals in the classroom with a clear hierarchy than their counterparts. Second, peer victimization was associated with relational aggression for children in the classroom with a clear hierarchy. However, the victimization-physical aggression was stronger for children with higher social dominance goals than those with lower social dominance goals in the classroom with a clear hierarchy.

#### 4) Conclusion

These findings indicated the classroom status hierarchy and social dominance goals could explain variations in children's reactions to peer victimization.

296

### **Does the KiVa Anti-Bullying Program Affect the Popularity of Bullying Perpetrators in the Classroom?**

Claire F. Garandeau<sup>1</sup>, Sarah T. Malamut<sup>1</sup>, Tessa A. M. Lansu<sup>2</sup>, Lydia Laninga- Wijnen<sup>1</sup>, Gijs Huitsing<sup>3</sup>, Christina Salmivalli<sup>1</sup>, Rene Veenstra<sup>3</sup>

<sup>1</sup>University of Turku, Turku, Finland. <sup>2</sup>Radboud University, Nijmegen, Netherlands. <sup>3</sup>University of Groningen, Groningen, Netherlands

### **Abstract (max 500 words)**

There is a consensus among bullying researchers that one of the greatest challenges in reducing the behavior lies in the fact that it can be rewarding for perpetrators' popularity among peers. Those who engage in bullying tend to be disliked by many of their peers but are also likely to enjoy high levels of perceived popularity (De Bruyn et al., 2010). Indeed, popular perpetrators have been found to be less responsive to anti-bullying interventions than less popular bullies (Garandeau et al., 2014). As popularity is something that bullying perpetrators are more motivated than others to obtain (Garandeau & Lansu, 2019) and bullying leads to gains in popularity, reducing the status rewards of bullying behavior should be a key objective of intervention efforts. However, tests of effectiveness of anti-bullying programs generally focus on the main effects of the program on bullying or victimization, but do not consider the potential of the program to decrease perpetrators' popularity.

The present study uses two waves of data collected in primary schools for the evaluation of the KiVa anti-bullying program in the Netherlands. We will test the effects of the program on the classroom correlation between bullying and perceived popularity after one year of program implementation, controlling for the baseline correlation between these two variables and for the concurrent prevalence of bullying behavior in the classroom. We hypothesized that KiVa would have a negative effect on the classroom bullying-popularity after one year of implementation.

The sample includes 4383 students at pre-test (49% girls; M age = 8.7 years) belonging to 245 classrooms. Both bullying behavior and perceived popularity were measured with peer nominations. Bullying was assessed from the victims' perspective. Participants were first asked whether they were victimized (by classmates, children from other classrooms or both); if they reported that they had been victimized by classmates, they were asked to report who had initiated the bullying from a roster of their classmates. Perceived popularity was assessed by asking participants to nominate the classmates who are the most popular in their classrooms.

Analyses will be path analyses in which the classroom was the unit of analysis.

**298**

### **Effects of the Strength of Classroom Status Hierarchy on Bullying**

Sarah T. Malamut<sup>1</sup>, Achiel Fenneman<sup>2</sup>, Claire F. Garandeau<sup>1</sup>

<sup>1</sup>University of Turku, Turku, Finland. <sup>2</sup>University of Vienna, Vienna, Austria

**Abstract (max 500 words)**

Characteristics of the classroom context have important implications for the extent to which youth engage in various behaviors, including bullying. For example, a high level of classroom status hierarchy (the degree to which popularity is unequally distributed in a classroom) may increase bullying (Garandeau et al., 2014). According to the “balance of power” perspective, there may be more aggression in highly hierarchical classrooms, where popularity is a limited resource that youth are inclined to compete for.

Much of the previous research on status hierarchies have used the standard deviation (SD) of popularity within classrooms to operationalize strength of status hierarchy. However, additional consideration is needed for how status hierarchy is operationalized. For example, in other disciplines, the Gini coefficient is frequently used to measure inequality or distribution of a construct (e.g., income inequality). This operationalization, however, has yet to be applied to status hierarchy and could produce a different pattern of effects. In addition to the strength of the hierarchy, the shape of the hierarchy also provides essential information (e.g., Laninga-Wijnen et al., 2019). Specifically, the configuration of the status hierarchy could differ among two classrooms that both have a high standard deviation of popularity. For example, a classroom with many popular individuals and a few unpopular individuals or an equal number of popular and unpopular individuals would both have a high standard deviation of popularity.

The current study will replicate previous research examining the concurrent and longitudinal association between strength of status hierarchy and bullying in the classroom, and extend past research in two ways. First, it will consider two indicators of hierarchy strength (Gini coefficient and SD), while controlling for the shape of the status hierarchy. Second, it will consider that the association between status hierarchy and bullying may be curvilinear.

Peer nominations of bullying and popularity were collected among 3,470 Finnish youth (grades 4-9; age range: 10-15 years). Two indicators of strength of hierarchy will be used to disentangle distribution and inequality of popularity: the Gini coefficient and the standard deviation (SD) of popularity within classrooms. Shape of hierarchy will be operationalized by subtracting the classroom popularity median score from the mean. Multilevel analyses will be conducted separately for each type of strength of hierarchy, controlling for shape of hierarchy, grade level, classroom size and average classroom level of popularity.

309

## The effect of the Interactive Ultrasound Intervention on prenatal attachment among women with minor depressive symptoms

Sari Ahlqvist-Björkroth, Henrika Pulliainen, Iida Hilska, Riikka Korja, Eeva Ekholm

University of Turku, Turku, Finland

### Abstract (max 500 words)

Objective of the study: Perinatal depression, especially minor depression, is common during pregnancy and is likely to continue into the postpartum period. Perinatal depressive symptoms can distort a woman's attachment during pregnancy. Ultrasound examinations have shown to have a beneficial impact on maternal-fetal attachment in low-risk pregnancies. Especially, three-dimensional (3D) and four-dimensional (4D) ultrasounds can enhance mental images about the fetus and increase bonding. The aim of this study is to evaluate the effect of an interactive ultrasound intervention on prenatal attachment of mildly depressed women.

Methodology: The study was a controlled randomized trial. Altogether, 100 women scoring 10-15 on Edinburgh Prenatal Depression Scale (EPDS) and with a singleton pregnancy were recruited using a web-based questionnaire at the beginning of the second trimester. Half of them were randomized to the intervention group and another half to the control group. The maternal attachment was assessed using both the Working Model of the Child Interview (WMCI) and the Maternal Antenatal Attachment Scale (MAAS) before (M=25 gestational weeks) and after (M=34 gestational weeks) the intervention. Three intervention sessions were conducted in between these measurement time points. The focus of the intervention was to observe the behavior of the fetus collaboratively with the mother from the 4D-ultrasound picture.

Results obtained or expected: The preliminary results from 36 women showed no statistically significant effect on the classification of attachment representations as balanced, disengaged, and distorted. In the intervention group, the classification of attachment in 38% of women had moved from unbalanced to balanced classification when compared before and after intervention, whereas in the control group, there was no change in the classification. The intervention did not either have a significant effect on the total score of antenatal attachment ( $p = .45$ ). The intervention group, however, had 4.15 points higher attachment score after intervention than-before intervention ( $p = .002$ ). In comparison, the control group had an increase of 2.00 points during the same time ( $p = .05$ ). Depression scores decreased in both intervention and control groups statistically significantly after the intervention ( $p < .000$ ).

Conclusion: Ultrasound is widely used during pregnancy. The interactive approach could be a feasible tool to support maternal attachment as part of routine screenings and maternity clinic visits. However, our preliminary results did not show a significant effect of the intervention on maternal attachment. The decrease in depressive symptoms in both intervention and control groups might explain why we did not find the effect. The results from the whole data with better statistical power will be presented and discussed in the symposium.

311

## Effects of an Attachment-based Intervention on Parental Secure Base Script Knowledge: A Randomized Controlled Trial

Annemieke Witte<sup>1,2</sup>, Jana Runze<sup>1,2</sup>, Marinus Van IJzendoorn<sup>2,3,4</sup>, Marian Bakermans-Kranenburg<sup>2,5,6</sup>

<sup>1</sup>VU Amsterdam, Amsterdam, Netherlands. <sup>2</sup>Leiden Consortium on Individual Development, Leiden, Netherlands. <sup>3</sup>Erasmus University Rotterdam, Rotterdam, Netherlands. <sup>4</sup>UCL, London, United Kingdom. <sup>5</sup>University Institute of Psychological, Social and Life Sciences, Lisbon, Portugal. <sup>6</sup>The New School for Social Research, New York, USA

### Abstract (max 500 words)

Drawing on the concept of internal working models of attachment (IWM: Bowlby, 1982), scholars proposed that early experiences with caregivers are internalized into a cognitive script, also referred to as the secure base script (Waters & Waters, 2006). The secure base script represents a temporal-causal schema for seeking and receiving support from attachment figures during times of need (Waters & Waters, 2006; Waters & Waters, 2021). Secure base scripts are relatively stable over time (Vaughn et al., 2006; Waters & Roisman, 2017; Waters et al., 2021; Waters et al., 2022) but have the flexibility to adjust when new attachment-related information is encountered (Bosmans et al., 2020; Bosmans et al., 2022; Cuyvers et al., 2022; see also Waters et al., 2019). This provides opportunities to investigate whether attachment-based parenting interventions are effective in enhancing secure base script knowledge. In the present randomized controlled study, we investigate for the first time whether the Video Feedback Intervention to Promote Positive Parenting and Sensitive Discipline (VIPP-SD; Juffer et al., 2017) is effective in improving secure base script knowledge. We hypothesized that secure base script knowledge of parents who receive the VIPP-SD will increase more from pre-test to post-test as compared to the secure base script knowledge of parents in the control condition. The sample includes 493 parents who participated in The Leiden Consortium on Individual Development (L-CID; Crone et al., 2020), an experimental cohort-sequential study with six yearly visits. Parents' knowledge of the secure base script was measured at pre- and post-test with the Attachment Script Assessment (ASA; Waters & Waters, 2006). We are currently working on a preregistration of the study, and we look forward to presenting the first study outcomes at the European Conference on Developmental Psychology in Finland.

313

## How Do Adolescents' Defending Behaviors in Response to Ethnic Victimization Change Overtime?

Sevgi Bayram Özdemir, Metin Özdemir

Center for Lifespan Development Research, Örebro University, Örebro, Sweden



### Abstract (max 500 words)

Youth of immigrant background are at risk of experiencing negative treatment due to their social identity or group membership. These negative experiences have devastating consequences such as: decrease in immigrant youths' self-esteem over time, increased risk of academic failure (Bayram Özdemir & Stattin, 2014), and heightened psychological maladjustment (Benner & Graham, 2013). Children and adolescents vary from one another regarding how they act when they witness ethnic victimization incidents at schools (Bayram Özdemir et al., 2022; Gönültaş & Mulvey, 2020). The developmental inter-group approach (Palmer & Abbott, 2017) highlights that adolescents' social group affiliation, intergroup relations, and social-cognitive skills may promote or hinder their assertive and prosocial responses. Despite a growing body of research examining adolescents' bystander behaviors in response to ethnic victimization incidents, they are mostly cross-sectional which limits our ability to explain whether and how adolescents' bystander behaviors change over time, and the factors might contribute to this change. To address this gap in knowledge, we examined how adolescents' defending behaviors (i.e., comforting the victim, confronting the bully, and seeking help from adults in school) changed over time, and the extent to which adolescents' gender and immigrant background, their attitudes towards immigrants, their perspective taking skills, and their perceived inter-ethnic class climate explained the change pattern.

The sample for the current study was taken from a 3-year longitudinal study that included students who were at grade 7 (age 13) during the first year of the study. Among the participating adolescents, students who had data on defending behaviors at T1 were included. The analytic sample for the present study included 962 students ( $M_{age} = 13.1$ ,  $SD = 0.41$ , 54% girls).

A latent growth curve model was estimated to examine how adolescents' defending behaviors in response to ethnic victimization incidents changed over time during adolescence (from 13 – 15 years). A growth model was fitted, where the shape of change was defined as linear. The model fitted the data well,  $\chi^2(1) = 3.36$ ,  $p = .07$ ,  $CFI = .99$ ,  $RMSEA = 0.05$ ,  $SRMR = 0.015$ . The mean of the slope was negative and statistically significant ( $M_{slope} = -0.15$ ,  $z = -8.40$ ,  $p < .001$ ), indicating that the adolescents, on average, decreased in their intentions to defend their ethnically victimized classmates over time. The results also showed that male adolescents showed greater decline in their defending behaviors compared to female adolescents. Adolescents with high positive attitudes towards immigrants, and adolescents who perceived their class context as inclusive, tolerant, and cooperative showed lower decline in their defending behaviors over time. Even though adolescents with high perspective taking skills reported higher levels of defending behaviors at T1, perspective taking skills did not significantly predict the changes in defending behaviors over time. Together, the findings suggest that promoting positive attitudes towards diversity and creating positive inter-ethnic climate in schools have the potential in fostering adolescents' prosocial and assertive interventions in bias-based hostile behaviors.

316

**Schoolwork pressure, family structure, internet use and obesity as national-level drivers of time trends in adolescent psychological symptoms between 2002 and 2018 across Europe**

Gonneke Stevens

Utrecht University, Utrecht, Netherlands

### **Abstract (max 500 words)**

**Objective.** In recent years, there has been widespread societal concern about the mental health of adolescents. Indeed, several studies conducted in the United States and several European countries found an increase in such problems since the beginning of the 21st century. Although some internationally comparative studies indicate that time trends in adolescent mental health problems vary considerably across countries, little is known about the national-level processes associated with these diverse time trends. Therefore, using data from the Health Behaviour in School-aged Children (HBSC) study from 2002-2018 across 43 countries, the objective of this study was to investigate whether changes in country-level schoolwork pressure, family structure, internet use, and adolescent obesity across 2002-2018 explained changes in country-level psychological complaints in 13- and 15-year-old boys and girls in the same period of time.

**Methodology.** The main data source for the present study was the (HBSC) study, including nationally-representative repeated individual-level cross-sectional data from 680,269 adolescents from the European region and North America collected in 2002, 2006, 2010, 2014 and 2018 (ncountries = 43, 51.04% girl, 48.72% 15-year-olds). HBSC data were supplemented with data from the Programme for International Students Assessment (PISA), World Health Organization (WHO)'s Global Health Observatory and World Bank. To answer the research questions, three-level logistic regression modeling were conducted, with individuals nested within country-years, which were nested within countries.

**Results.** Within the study period, the percentage of adolescents with high levels of psychological complaints increased, more strongly among girls than boys (boys: 14% in 2002 and 18% in 2018; girls: 24% in 2002 and 34% in 2018). In the same period, national-level schoolwork pressure, average time spent on internet, and obesity were generally rising, while proportions of adolescents living with both parents were generally declining. Findings showed that within countries, increases in proportions of adolescents reporting high schoolwork pressure, in proportions of adolescents with obesity, and in average time spent on internet use were independently associated with increases in proportions of adolescents reporting high psychological complaints. The associations between these trends appeared in both girls' and boys' samples. However, increases in proportions of adolescents with obesity and schoolwork pressure within countries were more strongly related to increases in proportions of high psychological complaints among girls than among boys. Decreases in proportions of boys and girls living with both parents were also associated with increases in proportions of boys and girls with psychological problems, but these associations disappeared when controlling for trends in schoolwork pressure, obesity, and internet use.

**Conclusion.** The results indicate that more attention is warranted for the mental health problems of adolescents, particularly that of girls. Also, results suggest that not only processes on the individual level, but also on the national level are able to influence the level of mental health problems among adolescents.

317

## Cross-national trends in adolescent mental health problems before and after COVID-19: gender and age differences

Alina Cosma

Trinity College, Dublin, Ireland

### Abstract (max 500 words)

**Objective:** Prior to the COVID-19 pandemic, consistent evidence indicated an increase in adolescent mental health problems. Across these studies, girls and older adolescents reported the least favourable outcomes. Furthermore, there seems to be wide cross-national variations in these time trends. Nowadays, there is widespread societal concern that the COVID-19 pandemic has led to an increase in mental health problems among adolescents. However, there is limited evidence that uses representative cross-national samples to quantify this. The aims of this paper are to: i) explore trends in adolescent mental health from 2010 to 2022 in using representative data from 30+ European Countries; ii) investigate how the age and gender gap in adolescent mental health has changed from 2010 onwards; iii) examine cross-national differences in changes in mental health before (2018) and during/after the COVID-19 pandemic (2022); iv) investigate whether the changes in adolescent mental health are associated with specific national level measures.

**Methodology:** This study will use data from the HBSC European region data collected in 2010, 2014, 2018 and 2022 from representative samples of adolescents aged 11-, 13-, and 15-year olds. As countries have just finalised their 2022 data collection, we can only assume that we will have data available from about 30 countries (Napprox= 700,000+ individuals). The main outcome of interest: high levels psychological complaints ( $\geq$  80th percentile) and high levels somatic complaints ( $\geq$  80th percentile); predictors: survey year: 2010; 2014; 2018; 2022; moderators: age and gender (female vs male); control: family affluence, GDP and GINI.

**Analysis plan:** 1) By country, we plan to present figures with observed changes in mental health problems over time, where we highlight changes in mental health between 2018 and 2022 relative to earlier changes in mental health; 2) We plan to run a series of logistic regressions (on pooled data and for each country). Step 1: we test time trends in high somatic and psychological symptoms from 2010 to 2018. Based on this we can estimate the expected increase from 2018 to 2022. Step 2: we test time trends from 2010 to 2022 and compare these values with predicted values from Step 1; 3) Multilevel random effect regression analysis to test cross-national variation in trends and whether these variations relate to national-level policies (e.g. school closures) against COVID-19.

**(Anticipated) Results:** Provisional descriptive analysis confirm that there has been a linear increase in adolescent mental health problems across most the countries included in the HBSC study. Even in countries where we had already seen some steady increases in recent years, these are much more marked since 2018. Gender gap has increased considerably between 2018 to 2022, with girls reporting higher levels of problems.

Conclusion: These results will contribute to the understanding on the cross-national variation in gender and age effects of the pandemic years on adolescent mental health. Finally, we will be able to test whether specific national level measures (ie, total length of school closures; total length of lockdowns) are associated with the changes in adolescent mental health (2018 to 2022).

**318**

## **Explaining the dramatic decline in mental health among girls in the Netherlands between 2017 and 2021: The role of schoolwork pressure and positive social relations**

Margreet De Looze

University of Utrecht, Utrecht, Netherlands

### **Abstract (max 500 words)**

**Objective:** In the past few years, especially since the covid pandemic, serious concerns have been raised about young people's mental health. At the conclusion of this presentation, participants will have insight in national trends in the mental health of young people in the Netherlands in the past twenty years, with a special focus on the period 2017-2021. As girls typically report lower mental health than boys, and as the covid pandemic may have affected boys and girls differently, we provide insight into whether these trends in mental health differ for boys and girls. Furthermore, we examine whether the trends in adolescent mental health can be explained by trends in two important predictors of mental health: schoolwork pressure and positive social relations with parents, friends, peers, and teachers.

**Methodology:** Time trends in adolescent mental health (life satisfaction; psychosomatic complaints; emotional problems; hyperactivity problems; behavioural problems) were analyzed by means of regression analyses, using four-yearly nationally representative data from 11- to 15-year olds in the Health Behaviour in School-aged Children (HBSC) study. Interaction analyses tested whether these trends over time differed between boys and girls. Subsequently, trends in schoolwork pressure and positive social relations with parents, friends, peers, and teachers were examined, and they were added as predictors of the trends in mental health.

**Results:** Between 2009 and 2017, mental health (slightly) declined among adolescent boys and girls. Between 2017 and 2021, however, a dramatic decline in mental health took place among adolescents, in particular among girls. Their life satisfaction was never as low as in 2021; 70% of the girls indicated regularly experiencing psychosomatic complaints and almost half of them reported emotional problems. Also, hyperactivity and behavioural problems among girls increased to such an extent that in 2021, girls equally often reported behavioural problems and more often reported hyperactivity problems, as compared to boys. Among boys, mental health also declined, but to a lesser extent. The decline in adolescent mental health was related to a substantial increase in experienced schoolwork pressure (especially among girls) and a decline in positive social relations (only among girls).

Conclusions: The already existing decline in mental health and the increase in schoolwork pressure have intensified between 2017 and 2021, probably partly due to the COVID-19 pandemic and related lockdown measures. Girls appear to have suffered more from this than boys. Potentially, girls, who already reported higher levels of schoolwork pressure to begin with, experienced a further rise in schoolwork pressure when schools temporarily closed and their schoolwork started lagging behind. This may have led to increases in emotional problems, but also in increased hyperactivity problems and behavioural problems. The slightly less positive social relations with teachers and peers may reflect an effect of the school closures as well, which in turn also contributed to a lower mental health. Implications for policy and practice are discussed.

**319**

### **Post COVID-19 perspectives on time trends in adolescent violence: the association with cross-national differences in COVID-related policy and perceived COVID impact**

Sophie Walsh

Bar Ilan University, Ramat Gan, Israel

#### **Abstract (max 500 words)**

Objective.

Up until 2018, time trends have shown a decrease in levels of adolescent violence (bullying, cyberbullying and fighting). However, the COVID-19 pandemic and the related policy measures which impacted on young people, such as school closures, levels of isolation and mask wearing, as well as increased levels of screen use for learning and communication raise questions as to how these may have impacted on young people's levels of violence on and off the internet. Based on ecological models suggesting that young people's well-being is impacted on by both proximal and distal measures, as well as a General Aggression Model which suggests that young people's violence levels will be related to both person and situational factors, we explore the extent to which decreases in violence levels continue to decrease through the COVID period, and to what extent levels of violence can be seen to be related to person (gender, age, individual perceived COVID impact) as well as country level differences (cross-national differences in school closures and stringency policies as well as country level differences in perceived COVID impact).

Methodology.

The study used data from five cycles of the Health behaviors in School-aged Children (HBSC) cross-national survey, from 2005/6-2021/2. In the 2021/22 survey, we have to date been able to include over 30 countries including over 200,000 adolescent boys and girls. Five individual-level outcome variables were 60-90 day bullying and cyberbullying (perpetration and victimisation) and 12-month fighting (each dichotomously coded). On a country level, the stringency index and the levels of school closures over

the past year from <https://ourworldindata.org/covid-school-workplace-closures#school-closures> were merged with the HBSC data. In addition an aggregated country-level perceived COVID-19 impact measure was created. Weighted Poisson regressions estimated the relative risk of each form of violence associated with current or cumulative school closures, stringency and perceived COVID impact with controls for the fixed effects of time, age and SES, and country and school as a random effect.

#### Results.

Results show gender differences in time trends, such that boys report a continued decrease in levels of violence through to 2021-22, while for girls a decrease has been slowed or stopped, in the case of physical fighting and bullying victimization. In addition, while limited effect was shown for an association between country-level policies (school closures and stringency), significant associations were found for both genders between perceived levels of COVID impact and all violence measures.

#### Conclusion.

Results suggest that levels of adolescent violence over the COVID period may have been less affected per se by distal policy, such as school closures and stringent policies, but rather by the way that the COVID-19 pandemic was experienced, individually and collectively by the young person and those around them. Results also suggest that results of the COVID-19 pandemic may be different for boys and girls and also that policy recommendations should focus on how policy directions may “trickle down” to young people, such that greater emphasis can be placed on helping young people cope with how they perceive the pandemic.

## 321

### **Do early community-based parenting interventions improve maternal mental health, parenting efficacy, and infant regulation?**

Marjo Flykt<sup>1,2</sup>, Susanne Kinnunen<sup>1</sup>, Markku Kilpeläinen<sup>1</sup>, Riikka Korja<sup>3</sup>, Jallu Lindblom<sup>2</sup>, Raija-Leena Punamäki<sup>2</sup>

<sup>1</sup>University of Helsinki, Helsinki, Finland. <sup>2</sup>Tampere University, Tampere, Finland. <sup>3</sup>University of Turku, Turku, Finland

#### **Abstract (max 500 words)**

##### Objective of the study

Perinatal mental health problems may be harmful for child development and early parenting. Many parenting interventions are developed and validated in highly selective environments, whereas less is known about intervention effectiveness in unselected, naturalistic community samples. Parental self-efficacy refers to parental beliefs regarding their ability to perform competently and effectively in parenting. Self-efficacy is known to be important for parenting, parental well-being, and child

development, and is thus often targeted in parenting interventions. Infant self-regulation starts to develop early and is affected by both innate factors as well as the co-regulatory relationship with the caregivers. Infant long-term regulatory difficulties, including sleep problems, excessive crying, and inflexibility with changes, may form a risk for both infant development as well as parenting and parental well-being.

In this study, we examine whether maternal mental health symptoms (anxiety, depression) and her self-efficacy and infant regulatory problems change in three different types of naturalistic interventions (practical help, short-term psychological services, and intensive therapeutic support), as compared to control families. We further examine whether changes in these areas are associated with each other.

### Methodology

The intervention groups comprised 171 mothers (expectant or having a baby younger than 12 months), receiving parenting interventions (practical support n=49, short-term psychological services n=38, intensive therapeutic support n=85) in community-based clinics in Southern Finland. Control group comprised 86 mothers from the same area. Parenting efficacy was measured with Maternal Self-Efficacy Scale, infant regulation with Baby Pediatric Symptom Checklist, depression with Edinburgh Postnatal Depression Scale and anxiety with Overall Anxiety Severity and Impairment Scale at three time-points: pre- and post-intervention and after 6 months.

### Results obtained or expected

Analyses conducted with longitudinal linear mixed models showed that only in the intensive therapy group, maternal self-efficacy increased, and infant sleep problems decreased from pre- to post-intervention more than in the control group. Both also improved significantly in the practical help-group, but the change did not differ from controls. Infant crying decreased and infant inflexibility increased over time similarly in both intervention and control groups. All intervention groups showed higher baseline levels of depression and anxiety than controls (the mean level being in the clinical range). In all interventions, maternal depression decreased more than in the control group from pre- to post-intervention, and in therapeutic and psychological support groups also maternal anxiety decreased more than in the control group. The associations between change in maternal mental health, self-efficacy and child regulation will be presented at the conference. We hypothesize that positive changes in all areas are associated with each other.

### Conclusion

The study results indicate that real-life naturalistic interventions may be effective in improving maternal mental health, parenting and infant sleep problems, and especially more intensive therapeutic support may be helpful over a broad array of outcome areas. The results parallel previous findings obtained in parent-infant psychotherapy and other early evidence-based parenting interventions. We also discuss aspects that should be taken into account when conducting and interpreting research in naturalistic clinical settings.

322

## VIPP-SD is effective in reducing hair cortisol levels and conduct problems in school-aged children

Jana Runze<sup>1,2</sup>, Irene Pappa<sup>1,2</sup>, Marinus Van IJzendoorn<sup>2,3,4</sup>, Marian Bakermans-Kranenburg<sup>2,5,6</sup>

<sup>1</sup>VU Amsterdam, Amsterdam, Netherlands. <sup>2</sup>Leiden Consortium on Individual Development, Leiden, Netherlands. <sup>3</sup>Erasmus University Rotterdam, Rotterdam, Netherlands. <sup>4</sup>UCL, London, United Kingdom. <sup>5</sup>University Institute of Psychological, Social and Life Sciences, Lisbon, Portugal. <sup>6</sup>The New School for Social Research, New York, USA

### Abstract (max 500 words)

Meta-analytical evidence has shown that the Video-feedback Intervention to promote Positive Parenting (VIPP-SD) is effective in enhancing parental sensitivity and sensitive discipline (Juffer et al., 2017; Van IJzendoorn et al., 2021). By improving parental sensitivity and discipline, the intervention may also affect children's neuroendocrine and behavioral development, in particular their cortisol levels and conduct problems. Previous research found effects of an attachment-based parenting intervention (Attachment and Biobehavioral Catch-up) on children's neurobiology: 4-6-year-old children who were involved with child protective services showed more typical diurnal salivary cortisol levels than the control group when their parents were in the intervention group (Bernard et al., 2015). In a similar vein, VIPP-SD has been found to decrease salivary cortisol levels in children with the DRD4-7 repeat allele (Bakermans-Kranenburg et al., 2008). However, hair cortisol concentrations (HCC) may provide a more stable and robust measure of cortisol as an indicator of chronic stress. As far as we know, only one (small) RCT on 39 parents and their children (between 4 months and 5 years old) found an effect of a parenting intervention on child HCC (Poehlmann-Tynan et al., 2020). Effects on the neuroendocrine system may in turn be related to child behavior. The most recent and largest RCT of the VIPP-SD also showed a significant effect on child conduct problems (O'Farrelly et al., 2021). In the current pre-registered randomized controlled trial, we applied multilevel structural equation models to examine the effects of VIPP-SD on child HCC and conduct problems in two cohorts of families with twins. The early childhood cohort consisted of 202 families with preschool-aged twin pairs ( $n = 404$  children,  $M_{age} = 4.34$ ,  $SD = 0.61$ ). The middle childhood cohort consisted of 257 families with school-aged twin pairs ( $n = 514$  children,  $M_{age} = 8.94$ ,  $SD = 0.67$ ). We found that after the VIPP-SD intervention, cortisol levels decreased in the intervention group but not in the control group, although this was only significant in families who received all five intervention sessions (81%). Moreover, we found that the intervention was effective in decreasing conduct problems in the intent-to-treat group as well as in the families who received all five intervention sessions. These novel findings in a large twin sample show that a brief video-feedback intervention aiming at parental sensitivity and sensitive discipline can be effective in decreasing an index of chronic stress in children as well as their conduct problems. Future research should investigate whether these beneficial effects endure in the long-term, for example into adolescence when stress and problematic behavior may increase.



325

## Perceived Group Norms Influence Youth Bystander Responses towards Social Exclusion of Immigrant Peers

Seçil Gönültaş<sup>1</sup>, Ayşe Şule Yüksel<sup>2</sup>, Sally B. Palmer<sup>2</sup>, Luke McGuire<sup>2</sup>, Melanie Killen<sup>3</sup>, Adam Rutland<sup>2</sup>

<sup>1</sup>Bilkent University, Ankara, Turkey. <sup>2</sup>University of Exeter, Exeter, United Kingdom. <sup>3</sup>University of Maryland, Maryland, USA

### Abstract (max 500 words)

Immigrant children and adolescents are at a higher risk of experiencing intergroup peer exclusion in many societies, including the United Kingdom (Gönültaş & Mulvey, 2019; Jones & Rutland, 2018). Peer exclusion based on one's group membership has been shown to be particularly detrimental to the psychological well-being of immigrant children and adolescents (Rivas-Drake et al., 2014). One way to reduce intergroup peer exclusion is by promoting prosocial bystander responses such as challenging the excluder or defending the excluded peer (Palmer & Abbott, 2018). However, little is known about the social and cognitive factors that impede children's and adolescents' motivation to engage in prosocial bystander responses in the context of immigrant social exclusion. Thus, we examined three possible factors (1) perceiving supportive peer group norms about bystander challenging, (2) bystanders' self-efficacy (i.e., beliefs about ability to challenge the social exclusion of peers), (3) immigrant nationality (i.e., what nation the immigrant comes from). The study specifically manipulated the nationality of the immigrant peer being excluded choosing targets that varied in the degree of stigma associated with the group e.g., low = Australian versus high = Turkish) and measured the bystander self-efficacy as a possible mediator of the relation between perceived peer group norm and bystanders' prosocial responses. British children and adolescents (N= 329, Mage=12.32, 189 girls, age 8-16) were asked to rate how supportive their peer group would be for challenging the social exclusion of the immigrant peer. Then, participants were asked to evaluate six different potential prosocial bystander responses that varied from more to less support for the immigrant peer (e.g., Tell the group you do want [Newcomer] to join). Participants' bystander self-efficacy was assessed through a self-report measure. The mediation analysis was conducted to examine whether the relationship between perceived group norm about challenging and prosocial bystander responses would be mediated by self-efficacy. Results showed that perceived peer group norms were related to prosocial bystander responses to social exclusion of immigrant peers through bystander self-efficacy regardless of the group membership of the immigrant. More specifically, the findings showed that participants who think that their group would be supportive of them if they challenged the exclusion of immigrant peers were more likely to report higher bystander self-efficacy, which in turn was related to higher prosocial bystander responses to immigrant social exclusion. That this finding was generalized across both high and low stigmatized groups indicates that group norms are powerful sources of influence on adolescents' bystander reactions. The present study provides a novel insight to the social and cognitive factors that facilitate the likelihood of engaging in prosocial bystander responses towards the social exclusion of immigrants from different nationalities. By focusing on the underlying factors involved in bystander reactions among non-immigrant children and adolescents when an immigrant child is excluded by an ingroup peer the current study provides implications for anti-bullying intervention programs aimed at reducing prejudice and discrimination.

327

## Reciprocal relations between child's social engagement to faces and parent-child interaction at 8, 30 and 60 months

Aino Luotola<sup>1</sup>, Riikka Korja<sup>1</sup>, Jukka Leppänen<sup>1</sup>, Akie Yada<sup>2</sup>, Hetti Lahtela<sup>1</sup>, Eeva Holmberg<sup>1</sup>, Elisabeth Nordenswan<sup>1</sup>, Eeva Eskola<sup>1</sup>, Saara Nolvi<sup>1</sup>

<sup>1</sup>University of Turku, Turku, Finland. <sup>2</sup>University of Jyväskylä, Jyväskylä, Finland

### Abstract (max 500 words)

#### Objective of the study

Prioritized attention to faces over non-face objects is a key aspect of human visual behavior and can be viewed as an early marker of social engagement. Individual differences in attention to faces in infancy predict spontaneous prosocial behaviors in toddlerhood and preschool years (Bedford et al., 2015; Grossmann et al., 2018; Peltola et al., 2018). Still, little is known about factors that lead to these individual differences in engagement with faces and social environment. The tendency to orient to faces is thought to support bonding with caregivers, therefore having relevant connection to parent-child interaction. The aim of this study was to examine the reciprocal relations between mother-child interaction and child social engagement (i.e., attention towards faces in an eye-tracking experiment) from infancy to toddlerhood and preschool-age.

#### Methodology

##### Participants

This study is part of multidisciplinary longitudinal FinnBrain Birth Cohort Study (Karlsson et al., 2018). Participants of this study are 738 mother-child dyads.

##### Methods

We used Emotional Availability Scales (Biringen, 2008) to examine parent-child interaction quality and eye tracking to examine attention dwell time for neutral, happy, and fearful faces under distraction (i.e., presentation of a salient lateral stimulus; Peltola et al., 2008) at 8, 30 and 60 months. We formed one EA factor combining maternal sensitivity, structuring, non-intrusiveness and non-hostility assessments and one face factor based on observed dwell times for each face condition.

#### Results

A cross-lagged panel model analysis showed a higher level of maternal EA at 8 months was negatively associated with face factor at 8 and 60 months ( $\beta = -.026$ ,  $p = .004$ ;  $\beta = -.333$ ,  $p = .038$ ), whereas face factor at 8 months was positively associated with maternal EA at 30 months ( $\beta = .191$ ,  $p = .027$ ). Results also indicated higher level of maternal EA at 30 months was positively associated with face factor at 60 months, but association was not statistically significant ( $\beta = 0.236$ ,  $p = .105$ ).

## Conclusions

Our findings give support for longitudinal and reciprocal associations between mother-child interaction and child's social engagement in early to mid-childhood. While our recent cross-sectional study (Eskola et al., n.d.) found a link between maternal hostility and social-emotional attention in infancy, the current study found this association to remain until preschool age. In addition, we found individual differences in infant's social engagement to predict mother's interaction behaviors during toddlerhood, a potentially novel finding that may reflect the influence of infants on their parents.

329

## Peer group norms affect adolescents' bystander social cognitions

Adam Rutland<sup>1</sup>, Seçil Gönültaş<sup>2</sup>, Eirini K. Argyri<sup>1</sup>, Ayşe Şule Yüksel<sup>1</sup>, Sally B. Palmer<sup>1</sup>, Luke McGuire<sup>1</sup>, Melanie Killen<sup>3</sup>

<sup>1</sup>University of Exeter, Exeter, United Kingdom. <sup>2</sup>Bilkent University, Ankara, Turkey. <sup>3</sup>University of Maryland, Maryland, USA

### Abstract (max 500 words)

Immigrant children and adolescents are at risk of experiencing social exclusion in school settings and bystanders can limit such exclusion by challenging the excluder. Peer group norms can affect adolescents' attitudes and behaviors about the inclusion and exclusion of minoritized outgroup including immigrants. The social reasoning developmental approach (SRD, Killen & Rutland, 2011; Killen et al., 2013) to intergroup social exclusion also contends that group norms shared among ingroup peers are important in terms of who to include and exclude in an intergroup context (Killen & Rutland, 2011). Yet, we have limited knowledge about how peer group norms of inclusion and exclusion can shape children's and adolescents' social cognitions regarding peers who challenge bullying. In the current study, we examined whether ingroup and outgroup peer norms of inclusion and exclusion influenced British youth's individual evaluations of a bystander challenger, group evaluation of a challenger, and their perceived group support for their challenging.

The current study examined 209 British early adolescents' (Mage=11.67, SD=1.64) and 224 late adolescents' (Mage=16.73, SD=.87) evaluations of challenger of social exclusion and responses as bystanders of immigrant social exclusion. Participants were randomly assigned to the experimental conditions in which ingroup and outgroup peer norms were either inclusive or exclusive. Subsequently, they read a story in which one British peer excluded a Turkish immigrant peer while another British peer challenged the exclusion (i.e., bystander challenger). Participants rated their individual and peer group evaluation of the challenger. Further, they were also asked to evaluate how likely their peer group would be supportive of them if they challenged the exclusion of the Turkish immigrant.

Results showed that late adolescents, compared to early adolescents, were more likely to perceive that their peer group would evaluate a bystander challenger more positively when it held an inclusive ingroup norm compared to an exclusive ingroup norm. Similarly, late adolescents perceived higher

support from their peer group for their inclusive tendencies when the outgroup held an inclusive norm compared to an exclusive norm. Late adolescents were more likely to attribute group dynamics, prejudice and equal rights when reasoning about their peer groups and their own evaluations of a challenger peer compared to early adolescents. Further, inclusive ingroup norms were indirectly associated with higher direct bystander challenging of an immigrant social exclusion through perceived group support.

Overall, the findings of this study suggest that from early to late adolescence group norms are increasingly related to adolescents' perceptions of how their peer group would evaluate a bystander challenger and how much they will support intergroup exclusion of immigrants. Thus, interventions aimed at reducing bullying and exclusion of immigrants amongst adolescents should focus on encouraging inclusive rather than exclusive peer group norms. Into adolescence, such inclusive peer norms may encourage individuals to expect that their peer group would be welcoming towards behavior that challenges the bullying of immigrants. The findings suggest that inclusive peer group norms should be encouraged in the school context. This is especially important considering the global concerns around negative attitudes towards immigrants.

**332**

## **The impact of empathy and relationships on defending behavior in bullying**

Marina Camodeca<sup>1</sup>, Valentina Levantini<sup>2</sup>, Carmen Gelati<sup>3</sup>

<sup>1</sup>University of Udine, Udine, Italy. <sup>2</sup>IRCCS Stella Maris, Calambrone, Pisa, Italy. <sup>3</sup>University of Milano-Bicocca, Milan, Italy

### **Abstract (max 500 words)**

**Introduction and aims** - Interventions on bullying often aim at empowering bystanders to defend victims of bullying (Salmivalli, 2023). Defender children and adolescents usually display social, moral, and emotional competence, and understand others' minds and feelings (Gini, 2006). Although empathy has been found to be associated with helping behavior (Rieffe & Camodeca, 2016; Zuch et al., 2019; Imuta et al., 2022), it seems relevant to investigate which factors may interact with it to contribute to defending behavior in bullying situations. Thus, the present work aims at investigating whether interpersonal factors (namely social preference and student-teacher relationships) may interact with empathy in the association with defending behavior. We expect that high empathy, social preference, and a close relationship with the teacher strengthen each other to impact defending behavior, and that, when one or more conditions are weak, empathy fails in impacting defending behavior.

**Method** - The sample comprised 249 middle-school students (47.80% males) aged 11-14 years who received peer nominations on defending behavior (Pozzoli et al., 2012) and social preference (Coie et al., 1982). Self-reports were used to assess empathy (Caprara et al., 2001) and positive relationships with the teachers (Tobia & Marzocchi, 2015).

Results- Findings highlight a positive association between empathy and defending behavior for average ( $b = .030, p < .001, 95\% \text{ C.I.} = .014, .046$ ) and high ( $b = .050, p < .001, 95\% \text{ C.I.} = .028, .073$ ) levels of social preference and for average ( $b = .029, p = .001, 95\% \text{ C.I.} = .013, .045$ ) and high ( $b = .049, p < .001, 95\% \text{ C.I.} = .027, .071$ ) levels of positive student-teacher relationship. The association between empathy and defending behavior was not significant for low levels of social preference ( $b = .010, p = .410, 95\% \text{ C.I.} = -.013, .032$ ) or positive student-teacher relationship ( $b = .008, p = .488, 95\% \text{ C.I.} = -.015, .032$ ).

Conclusions - The results of this work indicate that, although empathy is, per se, associated with defending behavior, its role weakens in the absence of at least one protective factor. Thus, being liked by peers and experiencing a positive relationship with teachers are necessary to prompt empathic youths to defend their peers. Results are discussed in light of the importance of considering individual and interpersonal factors to understand defending in bullying situations and to develop intervention programs.

**335**

### **Mother-infant interaction and maternal postnatal psychological distress associate with toddler's negative emotional reactivity and overall social-emotional development**

Hetti Lahtela<sup>1</sup>, Saara Nolvi<sup>1</sup>, Marjo Flykt<sup>2,3</sup>, Eeva-Leena Kataja<sup>1</sup>, Eeva Eskola<sup>1,4</sup>, Juho Pelto<sup>1</sup>, David Bridgett<sup>5</sup>, Hasse Karlsson<sup>1,4</sup>, Linnea Karlsson<sup>1,4</sup>

<sup>1</sup>University of Turku, Turku, Finland. <sup>2</sup>University of Helsinki, Helsinki, Finland. <sup>3</sup>Tampere University, Tampere, Finland. <sup>4</sup>Turku University Hospital, Turku, Finland. <sup>5</sup>Northern Illinois University, Illinois, USA

#### **Abstract (max 500 words)**

##### **Objective of the study**

Children's social-emotional development predicts their adaptive functioning in different situations, such as academic achievement. Poor quality of mother-infant interaction and pre- and postnatal maternal distress are risk factors for compromised child negative emotional reactivity as well as overall social-emotional development. Yet, the independent roles of mother-infant interaction and maternal psychological distress on child's social-emotional development remain unclear.

The objective of the study was to assess the associations between mother-infant interaction, maternal psychological distress and child's negative emotional reactivity and social-emotional development in toddlerhood.

##### **Methodology**

This study is a substudy of a large FinnBrain Birth Cohort Study. Mother-child interaction was assessed using the Emotional Availability scale (EAS, Biringen Z., 2008) when infants were eight months old. Only

the adult scales (sensitivity, structuring, nonintrusiveness and nonhostility) were used. Child's negative emotional reactivity was assessed with the Early Childhood Behavior Questionnaire (ECBQ; Putnam et al., 2006). Child's social-emotional development was measured using the Brief Infant-Toddler Social and Emotional Assessment (BITSEA, Briggs-Gowan et al., 2004).

## Results

We found that after controlling for prenatal distress and the covariates, maternal sensitivity ( $\beta = -0.08$ ,  $p = .024^*$ ) and maternal structuring ( $\beta = -0.07$ ,  $p = .021^*$ ) at 8 months associated negatively with child's negative emotional reactivity at two years whereas maternal postnatal psychological distress was positively associated with children's negative reactivity ( $\beta = 0.24$ ,  $p = .000^{**}$ ).

Regarding child's social-emotional development we found that higher maternal sensitivity associated with child's better social-emotional competence at two years ( $\beta = 0.21$ ,  $p = .011^*$ ). Higher maternal structuring at eight months of child age associated with less social-emotional problems in children at two years ( $\beta = -0.20$ ,  $p = .007^{**}$ ). Also here, maternal psychological distress associated with child's social-emotional development at two years ( $\beta = 0.50$ ,  $p = <.001^{**}$ ).

## Conclusion

Interventions aimed to reduce child's social-emotional problems should both concentrate to enhance different areas of maternal emotional availability as well as to reduce maternal psychological distress.

336

## Associations of mother-infant interaction in free- and semi-structured play and parental reflective functioning

Saara Salo<sup>1</sup>, Eveliina Mykkänen<sup>2</sup>, Mervi Vänskä<sup>2</sup>, Jani Käpylä<sup>2</sup>, Sari Peltonen<sup>2</sup>

<sup>1</sup>University of Helsinki, Helsinki, Finland. <sup>2</sup>Tampere University, Tampere, Finland

### Abstract (max 500 words)

#### Objective of the study:

The mother-infant interaction has typically formed into a specific relational style by the end of the first half year of the infant's life. It comprises both emotional elements as well as the mother's capability of structuring the infant's play and behavior towards new skills. It is also suggested that the enacted behavioral-affective relationship is closely related to mother's reflective functioning (PRF), referring to the internal capability of understanding the child's mental states and hold the infant's experience in mind. The significance of emotional relationship is evident in free-play situations from early on but it may later become equally important in semi-structured situation, which highlight how the mothers' are able to hold their child in mind while performing short tasks and how they are able guide and teach their children new skills. Previous research has already shown associations between free-play based

observations of Emotional Availability (EA) and PRF, while less research has been done to assess the quality of mother-infant interaction in both free-play and semi-structured situations, and what are the associations with PRF as assessed through both situations.

Therefore, the present study analyses how mother-infant relationship is associated between free-play and semi-structured situations, and how they are related to maternal reflective functioning. We also examine the role of maternal postnatal depressive mood and infant health in the association.

**Methodology:** Participants of the study were 60 voluntary mothers with 6-month-old infants, taking part of the Machine understanding of mother-infant interaction -study in Tampere University, Finland. The mother-infant dyads visited university laboratory, where a 12-minute free-play interaction and approx. 10 min semi-structured interaction were recorded with multimodal sensors including video. The mothers also filled in a short electronic questionnaire. Free-play situation was assessed by Emotional Availability Scales (EAS), and semi-structured interaction protocol called the Marschak Interaction Method (MIM) was analyzed by Dyadic Emotional Interaction Scales (DEIS) by two independent trained raters for each system. Maternal reflective functioning, postnatal depression, and infant health were self-reported by the mother. The statistical analyses will be conducted by SPSS version 27.

**Expected results:** Results of the analyses will be presented at the European Conference on Developmental Psychology (ECDP) 2023. We hypothesize to find associations between both free-and semi-structured based play observation methods, and we expect both to be associated with maternal reflective functioning and level of postnatal depressive symptoms and infant health.

**Conclusion:** Goal is to understand more about the associations between mother-infant interaction and reflective functioning as seen through different observation situations and assessment methods. The results will help in understanding the links between different interaction assessments approaches which may be particularly important in the second half of the first year due to new developmental demands in the mother-child relationship.

**342**

## **Preventing and counteracting ethnic bullying at school: effects of the NoTrap! +Ethnic program**

Maria Chiara Basilici, Benedeta Emanuela Palladino, Maria Chiara Taiti, Federica Stefanelli, Ersilia Menesini

University of Florence, Florence, Italy

### **Abstract (max 500 words)**

Globalization and worldwide waves of migration have led to an increase in ethnically mixed classrooms around the world (IOM International Organization for Migration, 2022). Since race, nationality, or skin colour are the second most common reasons for being bullied at school (UNESCO, 2019), students with

immigrant background are at higher risk of victimization. Despite that, there is a lack of evidence-based interventions to prevent and counteract ethnic bullying (Xu et al., 2020).

While one possibility is to design programs specifically targeting ethnic bullying, a more parsimonious, cost-effectiveness approach might test whether already validated anti-bullying programs, are also effective in at-risk sub-populations. However, anti-bullying programs aimed at contrasting traditional bullying victimization seem to be little or not at all effective in reducing ethnic bullying victimization (e.g., Bauer et al., 2007). A recent study (Zambuto et al., 2022) found that NoTrap! Program, an evidence-based peer-led intervention (Palladino et al., 2016), is effective in decreasing ethnic victimization only when at least a student with an immigrant background is involved in the program as a peer educator.

Therefore, the aim of the present study is to develop a new additional component (+Ethnic) and analyze its effects on ethnic bullying, based on the NoTrap! program. New activities focusing on ethnic bullying and its underlying mechanisms (e.g., xenophobia vs tolerance among ethnic groups) have been added to each module of the NoTrap! Program (e.g., class awareness, training for peer educators, class peer-led activities, and teachers' training).

1960 adolescents ( $M=15.17$ ;  $SD=.56$ ), nested in 23 schools, were involved in the quasi-experimental trial: 31 control classes ( $N=679$ ; 17.3% students with immigrant background) and 63 experimental classes ( $N=1281$ ). Within the last group, we identified two conditions: 28 classes who participated in the NoTrap! Standard program (Experimental A;  $N=602$ ; 20.3% students with immigrant background) and 35 classes who joined the NoTrap! +Ethnic program (Experimental B;  $N=679$ ; 19.8% students with immigrant background). Data were assessed both before (T1, pre-test) and after (T2, post-test) the program implementation. Statistical analyses will test whether the experimental conditions (Control Group, Experimental A, and Experimental B) influenced bullying, ethnic bullying and their correlates and defending behavior. Multilevel analysis will be used to take into account the nested nature of the data.

Findings from the present study can make a significant contribution to the scientific literature by providing a specific program to prevent and counter ethnic bullying victimization. Therefore, the implementation of the NoTrap! + Ethnic Program offers to the schools the opportunity to choose and participate in the intervention that best suits their problems and needs.

**352**

## **The Interplay between Family and Class Context in Promoting Defending Behaviors among Early Adolescents in Diverse School Settings**

Sevgi Bayram Özdemir, Pinar Bilir-Öztürk, Metin Özdemir

Center for Lifespan Development Research, Örebro University, Örebro, Sweden

**Abstract (max 500 words)**



School is one of the key settings where youth with diverse ethnic, cultural, and religious background can meet and form positive relationship. However, increasing polarized political climate poses a risk for the formation of harmonious interactions between youth of different ethnic origins. For instance, a recent report from Sweden showed that 48% of 5th grade students had either seen or heard something racist in their school at least once or even multiple times (Rädda Barnen, 2021). Children and adolescents vary from one another regarding how they act in such incidents (Bayram Özdemir et al., 2022). The social-ecological model of peer victimization (Hong & Espelage, 2012) and previous empirical evidence highlights that the social environment in which adolescents are embedded (e.g., family context; Knox et al., 2022 or school setting; Bayram Özdemir et al., 2022) can foster or inhibit their responses to victimization incidents. Relying on the basic assumptions of this model, our first research question was to examine the extent to which early adolescents' parenting context (i.e., parents' openness to diversity) is related to their defending behaviors. Our second question was to examine whether the possible effects of parenting context on adolescents' defending behaviors vary depending on their class climate (i.e., positive inter-ethnic contact norms in class and teachers' non-tolerance of ethnic victimization).

The sample included 1065 adolescents residing in Sweden ( $M_{age}=13.12$ ,  $SD=.42$ ; 55% males). Multilevel modeling at two analytic levels was conducted. At the individual level, the results showed that female adolescents, adolescents with high levels of positive attitudes toward immigrants, and adolescents with parents valuing diversity were more likely to defend their ethnically victimized classmates. Perceived positive inter-ethnic contact norms in class moderated the link between parents' openness to diversity and adolescents' defending behaviors. Adolescents from families with low openness to diversity were more likely to defend their immigrant peers if they perceived that students in their classes were open to diverse views and respected each other's cultural values. Teachers' non-tolerative approach to ethnic victimization also moderated the link between parents' openness to diversity and adolescents' defending behaviors such that adolescents from families with low openness to diversity had greater intentions to defend their ethnically victimized classmates when teachers set clear expectations concerning the non-tolerance of ethnic victimization. At the classroom level, high levels of the positive inter-ethnic contact norms in class and high levels of teacher's non-tolerance approach to ethnic victimization were positively associated with adolescents' defending behaviors. Together, the findings highlight that both family and school contexts contribute to adolescents' responses to ethnic victimization incidents. Importantly, adolescents from less tolerant families seem to benefit more from a class context where diverse views and values are appreciated and respected, and prejudiced behaviors are not tolerated.

**355**

### **What Matters Most? – The Role of the General Mother-Child Relationship Versus Emotion-Specific Parenting Practices for (Pre-)Adolescents' Emotion Regulation and Psychosocial Adjustment**

Jana-Elisa Rueth<sup>1</sup>, Hannah Arens<sup>2</sup>, Arnold Lohaus<sup>1</sup>

<sup>1</sup>Bielefeld University, Bielefeld, Germany. <sup>2</sup>n.a., n.a., Germany

**Abstract (max 500 words)**

Emotional competencies, such as emotion regulation (ER) skills, are considered important for healthy development in childhood and adolescence. Previous research has consistently found that a less frequent use of dysfunctional (e.g., suppression), and a more frequent use of functional ER strategies (e.g., reappraisal) is associated with better psychosocial adjustment (e.g., less internalizing and externalizing problems). In addition, it has been proposed that various aspects of the family context affect the development of emotional competencies and ER in particular: The Tripartite Model (Morris et al., 2007) suggests that—among others—emotion-specific parenting practices (e.g., reactions to emotions) and the emotional climate of the family (e.g., the parent-child relationship) are important. This study aims to simultaneously investigate the roles of (1) maternal reactions to the expression of anger, assessed by (a) suppressive-punitive reactions and (b) reward, as well as of (2) the general mother-child relationship, measured by (a) negative interactions and (b) closeness, for ER and psychosocial adjustment. We further analyzed whether emotion-specific parenting practices—compared to the more general mother-child relationship—show higher associations. Additionally, (3) the mediating role of functional and dysfunctional ER strategies for associations of the family context with internalizing and externalizing problems and (4) the moderating role of children’s gender were examined. Self-report questionnaire data of  $N=427$  (pre-)adolescents aged 10 to 15 years ( $M = 12.23$ ,  $SD = 1.27$ ; 59% female) were analyzed. Results of model comparisons within multi-group path analysis did not indicate a significant moderation by gender ( $p = .24$ ), and therefore, results of one single-group path analysis are reported in the following. The model fit the data well,  $\chi^2(2) = 0.65$ ,  $p = .72$ , CFI = 1.00, RMSEA = .00, 90% CI [.00,.07], SRMR = .01. While no significant associations of suppressive-punitive reactions (1a) with any other variable were found, negative interactions between mothers and children (2a) were positively related to dysfunctional ER and externalizing problems. Furthermore, more maternal reward (1b) was associated with more functional ER and less internalizing problems. Similarly, higher scores of general closeness (2b) were associated with functional ER, but surprisingly also with more (instead of less) internalizing problems. Comparisons of the role of emotion-specific maternal parenting practices versus the more general mother-child relationship showed that general closeness between mothers and their children (2b) was more important for functional ER than maternal reward (1b;  $p = .01$ ). With regard to (3) the mediating role of ER, functional strategies fully mediated associations of positive parenting qualities (closeness and reward) with externalizing problems, while dysfunctional strategies mediated the relation of negative interactions with externalizing problems (full mediation) and internalizing problems (partial mediation). Overall, the results largely support the assumptions of the Tripartite Model, especially with regard to the mediating role of ER. The findings illustrate the importance of both, specific emotion socialization as well as the general mother-child relationship, and suggest that closeness might be more important for functional ER than maternal reward of anger expression. This should be considered in the development and implementation of parent training programs.

**357**

### **The “Tuning in to Kids” Parenting Program’s Impact on the Emotional Socialization of Children with High Negative Affectivity**

Katja Katarzyna Berg<sup>1,2</sup>, Catherine Gunzenhauser<sup>1,2</sup>

<sup>1</sup>University of Freiburg, Freiburg im Breisgau, Germany. <sup>2</sup>University of Education Ludwigsburg, Ludwigsburg, Germany

### **Abstract (max 500 words)**

The temperament trait negative affectivity (NA) in children shows correlations with various difficulties in socio-emotional competence (Yap et al., 2011; Zentner, 2019). At the same time, there is evidence that children with high levels of NA are particularly affected by parenting behaviors across their development (Belsky et al., 2007). Therefore, the present study aimed to examine the effect of the parenting program “Tuning in to Kids” (TiK; Havighurst et al., 2010) on parenting behaviors, parent-child relationship, and children’s problem behaviors in children with high trait NA. TiK promotes parenting strategies for emotion socialization by teaching principles of behavioral therapy and the parenting style of emotion coaching.

Participants were 90 German-speaking parents ( $M(\text{age}) = 37.55$  years,  $SD = 3.73$ , 97.6 % female) and one child per family ( $M(\text{age}) = 6.50$  years at Time 1,  $SD = 0.39$ , 53% female; child NA scores in the short form CBQ-36 (Putnam & Rothbart, 2006; Rothbart et al., 2001) above the mean + 1 SD of a comparison sample from the National Educational Panel Study). Child problem behaviors (SDQ; Goodman, 2005), emotion-related attitudes, and parenting behaviors (DEAPQ; Reichle, & Franiek, 2009; CCNES; Danter, 2014; Fabes et al., 1990; EAC; Magai & O’Neal, 1997), parent-child relationship (MEK; Müller, & Achtergarde, 2018), and parental couple relationship (FBZ-K; Köppe, 2001) were assessed in a pre-post design via parent questionnaires. At the study entrance, parents were randomly assigned to the training group (TG) or the waiting control group (CT). The parenting program was delivered in an online format. 6 Parents in the TG did not attend at least 4 of 6 sessions of the parenting program. Therefore, they were excluded from the analyses.

Preliminary analyses with child sex and age as covariates in each analysis were calculated. In the TG, compared with the CG, punitive reactions (CCNES) decreased from pre to post (time\*group:  $F(1, 79) = 8.63$ ,  $p < .05$ ,  $p\text{Eta}^2 = 0.10$ ; Mean TG pre to post: 1.62 - 1.48; Mean CG pre to post: 1.52 - 1.60). In the TG, supportive problem-focused reactions (CCNES) increased from pre to post (Time\*Group:  $F(1, 79) = 5.25$ ,  $p < .05$ ,  $p\text{Eta}^2 = 0.06$ ; Mean TG pre to post: 5.98 - 6.22; Mean TG pre to post: 6.13 - 6.12). Otherwise, no significant interaction effects were found.

Findings highlight the potential of the Tuning in to kids program of fostering emotion-related parenting skills in parent of children high in NA, although no significant effects on child problem behavior were found in the current study. Methodological issues and practical implications of the reported effects will be discussed at the conference.

**359**

### **Association of early life stress and emotion regulation related brain activity during behavioral emotion regulation task**

Miro Ilomäki<sup>1</sup>, Patrik Wikman<sup>1</sup>, Marjo Flykt<sup>1</sup>, Mervi Vänskä<sup>2</sup>, Raija-Leena Punamäki<sup>2</sup>, Kimmo Alho<sup>1</sup>, Jallu Lindblom<sup>2</sup>

<sup>1</sup>Department of Psychology and Logopedics, Faculty of Medicine, University of Helsinki, Helsinki, Finland.

<sup>2</sup>Faculty of Social Sciences / Psychology, Tampere University, Tampere, Finland

## Abstract (max 500 words)

### Objective

Early life stress (ELS) poses a significant risk for emotional well-being and the development of emotion regulation (ER). Robust research evidence indicates that ELS associates with alterations in spontaneous and task-based brain function involving alterations in corticolimbic connections (Kraaijenvanger et al., 2020). Such alterations have been interpreted to indicate neurodevelopmental basis for ER related difficulties. However, neurodevelopmental ELS research utilizing behavioral ER related tasks is much scarcer, making it difficult to decipher how relevant the alterations are for ER (Ross et al., 2021). Additionally, the behavioral and neurodevelopmental impact of moderate ELS is less well understood. In the current functional magnetic resonance imaging (fMRI) study we contribute to these limitations by utilizing an emotional Go/No-go task alongside prospective measures of moderate ELS. The task requires the participants to inhibit responses to emotional information. Furthermore, to consider the potential impact of ELS on motivational processes (Novick et al., 2018) we extended the task to involve reward conditions (i.e., reward, punishment, or no reward feedback). We expect increased ELS to associate with decrements in regulatory performance (i.e., response time and response errors) and task related brain activity. Alterations in task related brain activity are expected in corticolimbic areas relevant for both ELS (e.g., SFG, amygdala, precuneus, putamen) and ER (e.g., PFC, ACC, superior temporal sulcus, hippocampus).

### Methodology

The participants comprise a subsample ( $n = 86$ ; 47 females) of now adult children of the Finnish families followed from pregnancy into their children's early adulthood in Miracles of Development -project. ELS was assessed both prospectively (parental reports of family relationship problems and mental health problems during pregnancy and infancy) and retrospectively (self-reported adverse childhood experiences in late adolescence). Participants completed the MRI scanning session in early adulthood (18–21 years old). ER was measured during the scan with an emotional Go/No-go -task in which the stimuli comprise neutral, happy, and angry facial expressions. Here, the Go/No-go -task was extended with new reward conditions, where points were either given for correct answers or subtracted for wrong answers, or no feedback was given for performance. Both behavioral and imaging data are analyzed using repeated measures and drift diffusion models.

### Results

Repeated measures analyses reveal that the emotional Go/No-go -task has noticeable within-subjects effects both behaviorally and functionally, but these effects were not significantly related to ELS. Analyses (e.g., drift diffusion models for the behavioral data, and multivariate analyses for the imaging data) are ongoing.

### Conclusions

The preliminary results are suggestive of a negligible effect of moderate ELS on ER both behaviorally and neurally. The lack of clear or strong effects might be because children are developmentally resilient to more moderate ELS exposure. Further analyses, such as drift diffusion models, will reveal potential further effects that ELS might have on ER related processes, such as decision-making and reaction times.

360

## Trust across the development: A mixed-methods study of institutional and interpersonal (dis)trust

Jakub Brojáč, Jan Šerek, Jana Fikrlová, Andrea Albrechtová, Lenka Štěpánková, Petr Macek

Masaryk University, Brno, Czech Republic

### Abstract (max 500 words)

While interpersonal and institutional sources of (dis)trust among adults are relatively well-explored, the perspectives of younger individuals are not adequately represented in literature. This gap in knowledge is particularly pressing because values and attitudes are greatly formed during adolescence, and young people carry these sources of (dis)trust into adulthood, where they continue to shape the functioning of democratic societies (Tyler, 2015). It is therefore crucial to understand what sources inform young people's trust in institutions and society and whether these sources vary across young people and adults today.

To explore the importance of different sources of (dis)trust from childhood to adulthood we adopt a mixed-methods approach. As first step, we conducted a realist reflexive thematic analysis to identify, conceptualize, and connect various sources of (dis)trust. As a second step, we will conduct a vignette experiment to assess the combined effect of some of these sources and their importance across different age groups. The sample for the thematic analysis consists of 39 participants from the Czech Republic, divided into eight focus groups (collected in Summer 2022). The sample for the vignette experiment will consist of a large sample of approximately 3600 participants from the Czech Republic, Germany, Italy, and Serbia (will be collected in Spring 2023). Both samples are divided into four age groups: 11-12, 14-15, 18-19, and 30-50 years old.

Through a reflexive thematic analysis, we have constructed six overarching themes. In this contribution, we focus specifically on three of these themes that are most relevant to our subsequent vignette experiment: "The need for a predictable framework", "The quest for meaning - well-founded measures and well-acquainted people" and "Reciprocity." The first theme highlights that predictability is essential for trust, while unpredictability undermines it in both interpersonal and institutional contexts. The second theme emphasizes the meaningfulness of measures, restrictions and decisions as crucial for trust in government and policymakers. In the third theme we explore the reciprocity of trust in interpersonal relationships and its role in ensuring mutual trust. Lastly, while predictability, meaningfulness, and reciprocity were mentioned by all age groups, children and adolescents viewed the predictability and meaningfulness of measures adopted by authorities as less crucial compared to adults.

Our analysis suggested sources of (dis)trust referring to the processes through which trust and distrust may grow or deteriorate. We posit that these attributes may also be related to the fulfilment of basic needs in the epistemic (certainty), existential (security), and relational (meaningful relationships) domains, as proposed by the system justification theory (Jost, 2019). Additionally, the findings that predictability and meaningfulness were considered less crucial by younger age groups (in relation to trust in authority) may be partly attributed to the different effects of the authorities' decisions on adults, who experienced them more directly and in more aspects of their lives compared to younger individuals

(Prime et al., 2020). Finally, our upcoming vignette experiment will provide additional insights into the combined effects and relative importance of the sources of (dis)trust for different age groups.

**361**

## **Contribution of Parental Emotion-specific Vocabulary to Children's Emotion-Specific Vocabulary Development**

Catherine Gunzenhauser<sup>1,2</sup>, Katja Katarzyna Berg<sup>1,2</sup>, Berit Streubel<sup>3</sup>

<sup>1</sup>University of Freiburg, Freiburg im Breisgau, Germany. <sup>2</sup>University of Education Ludwigsburg, Ludwigsburg, Germany. <sup>3</sup>Leipzig University, Leipzig, Germany

### **Abstract (max 500 words)**

The ability to label emotions is crucial to children's emotional development, helping them to interpret subjective experiences, represent emotional concepts, and communicate with others (e.g., Lindquist et al., 2015). Consistently, children's emotion-specific vocabulary is associated with indicators of emotion knowledge (Streubel et al., 2020). From a developmental perspective, cross-sectional research has shown that children's emotion-specific vocabulary seems to grow in size and depth (i.e., more adult-like in usage) across early and middle childhood. At the same time, there are considerable individual differences between children in the same age groups (Streubel et al., 2020). It has been suggested that exposure to modeling of emotion-specific vocabulary usage by caregivers might shape children's development of emotion-specific vocabulary usage (for a summary, see Grosse et al., 2021). In the present study, we investigated (1) growth of children's emotion-specific vocabulary size and depth over a one-year interval and (2) how parental emotion-specific vocabulary size and depth contributes to (a) emotion-specific vocabulary size and depth in children, and (b) to the growth of their emotion-specific vocabulary size and depth over a one-year period.

Participants were  $N = 137$  German-speaking children (Mean age at Time 1: 77.76 months,  $SD = 4.90$  months, 53.1 % girls) as well as one parent per child (97.7 mothers). Children were participants of a larger intervention study and were oversampled to be rated high on the temperamental dimension of negative affectivity. Time 1 data collection took place in summer 2021, shortly before the children's entry into formal schooling. Time 2 data collection took place around one year later. Parents completed a short version of the Children's Emotion-specific Vocabulary Vignettes Test (CEVVT, Streubel et al., 2020) via an online questionnaire at Time 1 and Time 2. For the present investigation, we will analyze parent data of Time 1. Children completed the same short version of CEVVT in online one-on-one sessions via video chat at Time 1 and Time 2.

Data preparation is ongoing. Preliminary findings with data of  $n = 95$  children who completed CEVVT at both time points showed a positive bivariate correlation of children's emotion-specific vocabulary size between time points,  $r = .296$  ( $p = .004$ ). A paired-sample t-test indicated that children's emotion-specific vocabulary size increased between time points,  $t(94) = -3.658$ ,  $p < .001$ . At the conference, we plan to present findings of multiple regression analyses regressing size and depth of children's emotion-specific vocabulary on parental emotion-specific vocabulary while including covariates, particularly families' participation in the intervention. Moreover, we plan to conduct repeated measurement ANOVAS to investigate the association of parental emotion-specific vocabulary to changes in children's

emotion-specific vocabulary across time.

Findings of the present study will contribute to a more fine-grained understanding of how caregivers' modeling of emotion word usage might translate into developmental processes in children's emotion-specific vocabulary, focusing on parents' own emotion-specific competencies. Implications for facilitating emotional development in children will be discussed.

365

## The Relationship Between Emotion Socialization Behaviors and Emotional Abuse Potentials of Parents with Preschool Children

Ayça Ülker<sup>1</sup>, Emine Hande Aydos<sup>2</sup>

<sup>1</sup>Hacettepe University Department of Early Childhood Education, Ankara, Turkey. <sup>2</sup>Kultur University Department of Early Childhood Education, Istanbul, Turkey

### Abstract (max 500 words)

Parents' reactions to children's negative emotional experiences have an impact on their socio-emotional development from the early years. In this context, emotion socialization (ES) is defined as parents' reactions to children when they experience negative emotions. In addition to supportive ES reactions that focus on the child's emotional expression, address the problem, and encourage the child's emotional expression; reactions that reduce the importance of the child's emotional response, punitive reactions that meet the child's expression with several punishments, and distress reactions in the parent who meets the child's negative emotion with sadness are stated as non-supportive ES reactions (Eisenberg et al., 1999). With this aspect, non-supportive ES reactions of parents may be related to emotional abuse of children (Glaser, 2002). Inappropriate emotional reactions provided by the parents cause the child to be more challenged with the difficult emotions they experience and to be emotionally traumatized by this accompanying neglect. Emotional abuse often occurs due to the failure of the caregiver to provide a supportive and appropriate environment for the child. Emotional abuse includes teasing, humiliating, threatening ill-treatment that endanger the emotional development of the child, aggressive behaviors of parents or expectations from the child more than their abilities.

When the literature is examined, although there are many studies on parents' ES and emotional abuse behaviors; no study has been found on the effect of ES behaviors on emotional abuse potentials of parents. Considering the important effects of emotional abuse and protective role of supportive emotional socialization approaches on the social emotional development of the child, it is important to reveal the possible relationships between these two variables. Therefore, this study aims to examine the predictive effect of emotional socialization approaches used by parents on their emotional abuse potential. Data were collected from 206 upper-middle class parents living in Turkey using the Coping with Children's Negative Emotions Scale (Fabes et al., 1990; Altan et al., 2013) and the Emotional Abuse Potential Scale (Pekdogan & Kanak, 2019) during the spring term of 2021. Children's mean age was 53,68 months and 49,5% of them were girls.

Multiple regression analysis will be used to determine the predictor role of ES on parents' emotional abuse potential. A negative relationship between parents' supportive ES practices and emotional abuse potential is expected while a positive relationship is expected between parents' non-supportive ES and

their behaviors lead to emotional abuse. It is also thought that parents' emotional abuse potentials and preventive behaviors would differ according to emotion socialization subscales.

This study is important in terms of increasing awareness of emotional abuse behavior that remains hidden, as well as contributing to issues such as preventing negative behaviors towards children, identifying disadvantaged groups, increasing children's emotional competences, and developing effective parenting behaviors. In addition, potential relations between those variables will also guide prevention and intervention studies.

**366**

## **Age differences in conspiracy beliefs around Covid-19 pandemic and (dis)trust in the government**

Jelena Ćeriman, Ana Đorđević

Institute for Philosophy and Social Theory, University of Belgrade, Belgrade, Serbia

### **Abstract (max 500 words)**

**Objective:** Times of societal crisis, such as the COVID-19 pandemic, during which people need to make sense of a chaotic world and to protect their health and lives, according to psychological research, represent suitable ground for the development of conspiracy theories about origins, spread, and treatment of the threat (coronavirus). Although numerous studies have been conducted on this issue since the beginning of the pandemic until today, most of the studies were conducted on the adult population with limited insights into development of the conspiracy beliefs in adolescence or over the lifespan. Objective of this study is precisely to explore how conspiracy beliefs regarding COVID-19 pandemic differentiate between multiple age groups (cross-sectional design), what are their sources and contexts, and how do they relate with the tendency to trust the government.

**Methodology:** Data were gathered through eight focus group discussions with four age groups (11-12, 14-15, 18-19, 30+) in Serbia.

**Results:** Based on critical discourse analysis, this paper identifies the differences in content and the sources of conspiracy thinking and how it relates to trust in the government. Study shows that high distrust in Serbian government is associated with conspiracy beliefs both within youth and adults. However, while among adolescents this finding is exclusively related with their beliefs that ruling structures have financial gain from the pandemic, against the interests of citizens, among adults it is related to the belief that the government (un)intentionally submits to the new global order that is managed by one or more powerful actors who are coordinated in secret action to achieve an outcome that is of public interest, but not public knowledge.

**Conclusion:** The results will be discussed within current socio-political climate in Serbia, as well as the basis for understanding psychological factors which may underlie these tendencies in conspiracy theorizing, such as social identification, collective narcissism, authoritarianism, and social dominance orientation.



367

## Socio-emotional factors which contribute aggressive and prosocial behaviours in children and adolescents: A cross-cultural study

Gamze Er Vargün<sup>1</sup>, Michaela Gummerum<sup>2</sup>

<sup>1</sup>Anadolu University, Eskişehir, Turkey. <sup>2</sup>University of Warwick, Coventry, United Kingdom

### Abstract (max 500 words)

#### Study objective

Interpersonal Emotion Regulation (IER) strategies are an essential part of daily life and known to be critical for socio-emotional development. However, there is a lack of studies examining interpersonal ER strategies among children and adolescents in different cultures from a developmental perspective. Furthermore, very little research has examined how the development of IER related to maladaptive and adaptive behaviours. Therefore the aim of the present study is to investigate IER strategies developmentally from early childhood to early adolescence through the violation of positive (e.g., sharing) and negative (e.g., stealing) moral duties in Turkey and UK.

#### Methodology

The sample of the study is planned to consist of children and adolescents aged 5, 9, and 13 from Turkey and UK (N = approximately 105 from each country). An online meeting was scheduled with participants and one of their parents after receiving parental consent. IER abilities of children and adolescents were measured with questions related to two different positive and negative moral duty scenarios (stealing and sharing). Dictator game was used to measure sharing behaviours of children and adolescents. Lastly, reactive and proactive aggression tendencies of children and adolescents were measured with four hypothetical stories.

#### Results

The data collection was almost completed in Turkey and is currently ongoing in the UK. Preliminary data of N = 105 Turkish children and adolescents (5-years old N = 33, 9-years old N = 38, 13-years old N = 34) showed that, as expected, children and adolescents evaluated it more wrong to violate a negative moral duty (stealing; M = 4.58, SD = .67) than to violate a positive moral duty (not sharing; M = 3.99, SD = .94) ( $t(96) = 4.95; p < .001$ ). In terms of IER, children and adolescents mostly preferred behavioural intervention to regulate victim's emotion (for stealing = 41 %; for sharing = 34 %) but mostly preferred cognitive engagement to regulate victimiser's emotion (for stealing = 39 %; for sharing = 34) in both scenarios. In addition, while children and adolescents used instrumental and altruistic reasoning the most when justifying their emotion regulation towards the victimiser in the stealing story, they preferred the most altruistic and social reasoning in the sharing story. Lastly, regarding sharing, 53% of the participants shared half of their sources with other children who did not play dictator game. Moreover, a significant difference was found only between 5 and 9-year-olds, indicating that 9-year-olds shared more than 5-year-olds. After data collection is complete, further analysis will be conducted to explore the relations between IER, aggressive and prosocial behaviours.

## Conclusion

This study will help to understand whether IER strategies differ between cultures. It will also help to reveal whether children and adolescents' IER strategies are associated with aggressive and prosocial behaviour and whether these relations differ between Turkey and the UK.

369

## Paternal adverse childhood experiences and offspring's attentional disengagement from faces at 8 months – Results from the FinnBrain Birth Cohort Study

Magdalena Klimek<sup>1,2,3</sup>, Hasse Karlsson<sup>2,4,3</sup>, Linnea Karlsson<sup>2,4,3</sup>, Riikka Korja<sup>2,5</sup>, Saara Nolvi<sup>2,5,6,7</sup>, Tuomo Häikiö<sup>5</sup>, Jetro J. Tuulari<sup>2,4,8,9</sup>, Eeva-Leena Kataja<sup>2</sup>

<sup>1</sup>Faculty of Health Sciences, Jagiellonian University Medical College, Krakow, Poland. <sup>2</sup>FinnBrain Birth Cohort Study, Turku Brain and Mind Center, Institute of Clinical Medicine, University of Turku, Turku, Finland. <sup>3</sup>Centre for Population Health Research, University of Turku, Turku, Finland. <sup>4</sup>Department of Psychiatry, University of Turku and Turku University Hospital, Turku, Finland. <sup>5</sup>Department of Psychology and Speech-language Pathology, University of Turku, Turku, Finland. <sup>6</sup>Turku Institute for Advanced Studies, University of Turku, Turku, Finland. <sup>7</sup>Department of Medical Psychology, Charité Universitätsmedizin, Berlin, Germany. <sup>8</sup>Department of Psychiatry, University of Oxford (Sigrid Juselius Fellowship), Oxford, United Kingdom. <sup>9</sup>Turku Collegium for Science and Medicine, University of Turku, Turku, Finland

### Abstract (max 500 words)

#### Objective

Accumulating research indicates that the effects of adverse childhood experiences (ACEs) could be transmitted across generations via developmental programming processes and shape the neurodevelopment of a child. However, most of the studies exploring the intergenerational transmission of ACEs, are embedded within mother-child dyads and more attention to the paternal effects is required. Paternal ACEs have been recently linked to offspring's brain development, namely the white matter maturation and grey matter volume, suggesting that paternal exposure to early-life adversities could shape offspring's socio-emotional and cognitive development. Yet, none of the previous studies in humans explored the association between paternal ACEs and child's emotional processing, a key cognitive trait crucial for socio-emotional development. Our current study fills this gap.

#### Methods

Data were collected from 239 fathers (mean age 32.2; SD 5.04) and children at 8 months of age (51% of boys) who were part of the FinnBrain Birth Cohort Study. Paternal ACEs were evaluated using the Trauma and Distress Scale (TADS) in the area of five domains: emotional and physical neglect, emotional

and physical abuse, sexual abuse. Paternal depression (the Edinburgh Postnatal Depression Scale, EPDS) and anxiety (the Symptom Checklist-90, SCL-90) were assessed at 6 months postpartum. Additionally, information on paternal age, family income, and child sex was collected. In children, eye-tracking and an overlap paradigm was used to study attentional engagement to emotional faces with different expressions (happy, fearful, neutral) and phase scrambled control pictures. "Face bias" (attention bias towards faces vs non-facial patterns) and fear bias (attention bias towards fearful over happy and neutral faces) were calculated. Hierarchical linear regression and Student's t-test were used for analyses.

## Results

Paternal age, family income, and paternal EPDS were not related to attention measures, yet paternal anxiety was negatively associated with face bias ( $\beta=-0.264$ ;  $p=0.001$ ). A borderline significant, negative association between paternal sexual abuse and face bias in children ( $\beta=-0.167$ ;  $p=0.052$ ) was detected when paternal postpartum anxiety was controlled. No other relationships were observed for the TADS total score or the separate domains. In addition, daughters (but not sons) of sexually abused fathers expressed higher disengagement probability from neutral (Cohens  $d=0.27$ ;  $p=0.01$ ) and happy (Cohens  $d=0.25$ ;  $p=0.03$ ) faces, as well as lower face bias (Cohens  $d=0.24$ ;  $p=0.002$ ) and higher fear bias (Cohens  $d=0.20$ ;  $p=0.04$ ) than daughters of sexually non-abused fathers.

## Discussion

Our results suggest a potential, intergenerational effect of paternal ACEs, namely sexual abuse, on the emotional processing of daughters at the age of 8 months. Clearer pattern of age-appropriate fear detection, tentatively indicating more advanced development in girls of sexually abused fathers, could result from the altered maturation and growth of brain structures, catalyzed potentially by epigenetic mechanisms. The results concur with the recently emerged paradigm of Paternal Origins of Health and Disease (POHaD) which imply that paternal factors also significantly contribute to the developmental programming processes.

**370**

## **From 'adolescent' trust to 'adulthood' distrust. A developmental model of political (dis)trust through the experience of the pandemic**

Anastasia Kafe, Nikos Klironomos, Fani Kountouri

Panteion University of Social and Political Studies, Athens, Greece

### **Abstract (max 500 words)**

Objective: According to cultural theories, political trust is developed by values learned in early life and is transmitted from generation to generation (Inglehart, 1977; Putnam, 2000). It is also argued that interpersonal trust acquired in early years is highly connected with political trust and trust in institutions. On the other hand, institutional theories advocate in favor of individual assessments of

institutional performance and argue that political trust is a cognitive phenomenon based on direct knowledge and experience with institutions (Coleman, 1990; Offe, 1999). Although cultural and institutional theories are characterized incompatible, we will examine how these theories are interconnected in a lifetime model with the analysis of data from different cohorts and we will show that culture and experiences can shape political trust in every life stage.

**Methodology:** For the purpose of our study, we have collected data via focus groups with different cohorts. We have conducted eight focus groups in the age groups 11-12, 14-15, 18-19, 30+, two per age group. The focus group discussions took place between May and October 2022, online via a communication platform. For the analysis we followed an open coding technique with four coders and a final coder merged the coded files and validated coding. The method of analysis is qualitative content analysis thus generated categories following a deductive approach (Elo and Kyngäs, 2008; Schreier, 2012).

**Results:** Our data structured a categorization matrix of cultural and institutional components that were connected with different aspects of political and interpersonal (dis)trust during the pandemic. The period of the pandemic is very crucial in order to test the experiences with political institutions of the younger cohorts since their encounters with the political system are limited. We found that in early stages of socialization (ages from 11 to 15) political trust is granted unconditional and is shaped through a reasoning of undoubtfulness that is developed by the obedience they have to show in their everyday life. Furthermore, older cohorts have the cognitive ability to make assessments and develop critical (dis)trust that is the outcome not only of experiences but of their social capital as well.

**Conclusion:** We found that the conceptualization of trust changes in each age group according to their experiences but also it is dependent upon the different social and political background. As a person's sense of the world becomes more elaborated, the concept of trust is adjusted by experiences within the family, the school system, and institutions in general.

**372**

## **Maternal reflective functioning, positive and traumatic childhood memories and mother-infant interaction among mothers receiving parent-infant therapy in communal settings**

Marjo Flykt<sup>1,2</sup>, Sanna Isosävi<sup>3</sup>, Saara Salo<sup>1</sup>, Raija-Leena Punamäki<sup>2</sup>

<sup>1</sup>University of Helsinki, Helsinki, Finland. <sup>2</sup>Tampere University, Tampere, Finland. <sup>3</sup>Trauma therapy center, Helsinki, Finland

### **Abstract (max 500 words)**

#### **Objectives of the study**

Maternal reflective functioning (RF) is known to predict mother-infant interaction quality, whereas maternal unprocessed traumatic childhood memories are harmful for both RF and parenting. Angel memories, that is, maternal positive, elaborated childhood memories, can protect maternal mental health from negative effects of unprocessed traumatic ('ghost') memories. Previous research has focused on mental health outcomes, while it would also be vital to learn about the role of angel and ghost memories in mother-infant interaction and RF. Further, no previous research exists on how angel and ghost memories may influence dyadic interactions and RF in the context of early therapeutic interventions.

The study examines, first, whether maternal angel and ghost memories are associated with her RF and Emotional Availability (EA) in the mother-infant interaction among mothers attending a community-based therapeutic parenting intervention. Second, we examine whether maternal angel and ghost memories, RF, and mother-child EA change during the therapeutic intervention. Finally, we examine whether change in RF and EA is associated with changes in maternal angel and ghost memories.

### **Methodology**

Thirty-one mothers (half during pregnancy and half postpartum) receiving communal parent-infant therapeutic services were recruited as part of a larger effectiveness study conducted in natural settings in Southern Finland. Both in the beginning and the end of the treatment, maternal RF was measured with Parent Development Interview (PDI) or its prenatal version, Pregnancy Interview (PI), and maternal angel and ghost memories with Angels Interview. Mother-infant interaction was measured with the Marschack Interaction Method (MIM) and coded with Emotional Availability Scales (EAS; with prenatal version for pregnant mothers). The therapists conducted the measures and received training and supervision to integrate them as part of their clinical practice.

### **Expected results**

The results will be presented at the conference. We expect that higher angel memories and lower ghost memories are associated with higher RF and higher EA in mother-infant interaction. We further hypothesize that higher amount of angel memories is associated with higher maternal RF and EA even when controlling for ghost memories. We hypothesize that angel memories, RF and mother-infant EA increase and ghost memories decrease during the course of the intervention, and that increase in angel memories and decrease in ghost memories from pre- to post-intervention are associated with positive changes in RF and EA.

### **Conclusions**

The results give new information about risk and resilience in trauma-related memory processes and their associations with caregiving. The findings also provide preliminary effectiveness data on a community-based therapeutic parenting intervention conducted in naturalistic settings.

373

## Prosocial behaviour scale: A validity and reliability study in adolescents and emerging adults in the Netherlands

Michaela Gummerum<sup>1</sup>, Lysanne te Brinke<sup>2</sup>, Gamze Er Vargün<sup>3</sup>

<sup>1</sup>University of Warwick, Coventry, United Kingdom. <sup>2</sup>Erasmus University Rotterdam, Rotterdam, Netherlands. <sup>3</sup>Anadolu University, Eskişehir, Turkey

### Abstract (max 500 words)

#### Study objective

Although there are various tools for measuring prosocial behavior, Prosocial Behaviour Questionnaire (Boxer et al., 2004) has not been adapted to the Dutch context. The main purpose of this study was to adapt and validate Prosocial Behaviour Questionnaire into Dutch and explore its psychometric properties.

#### Methodology

Three hundred and seventy-one (242 females) participants who were between the ages of 13 and 25 ( $M = 18.39$ ;  $SD = 2.14$ ) participated in the study in November 2022. Participants filled out Prosocial Behaviour Questionnaire (PBQ sub-dimensions: altruistic, proactive, and reactive), Opportunities for Prosocial Actions (OPA) revised form for family and friends, and a Demographic Information Form.

#### Results

In order to explore the factor structure of PBQ the principle component analysis with using SPSS v.26 was performed to 15 items of prosocial behaviour scale. The initial factor analysis on SPSS v.26 revealed a three-factor structure which explained 71% of the total variance: 33% by the first factor (altruistic), 27% by the second factor (proactive) and 11% by the third factor (reactive). It is also examined the associations between PBQ and OPA to uncover the criterion-related validity of the adapted scale. It was found that altruistic and reactive sub-dimensions of prosocial behaviour scale are significantly and positively related to OPA for family and friends. In addition, proactive prosocial behaviour sub-dimension of the scale significantly and negatively related with OPA for friends. Concerning reliability, Cronbach's  $\alpha$  coefficients were 0.82 for altruistic prosocial behaviour, 0.90 for proactive prosocial behaviour, and 0.92 for reactive prosocial behaviour.

#### Conclusion

The findings revealed acceptable psychometric properties for the Dutch version of the Prosocial Behaviour Questionnaire. Thereby, we concluded that the scale can be used as a reliable and valid measure in the Dutch context.

#### References

Boxer, P., Tisak, M. S., & Goldstein, S. E. (2004). Is it bad to be good? An exploration of aggressive and prosocial behavior subtypes in adolescence. *Journal of Youth and Adolescence*, 33, 91-100.

**374**

## **The development of (dis)trust in interpersonal relationships: From essentialist reasoning to complexity**

Jana Fikrlová, Andrea Albrechtová, Jan Šerek, Jakub Brojáč, Lenka Štěpánková, Petr Macek

Masaryk University, Brno, Czech Republic

### **Abstract (max 500 words)**

**Objective:** Throughout a lifetime, the perception of trust in interpersonal relationships may evolve. According to the experiential perspective (Dinesen & Bekkers, 2017), trust in others is malleable and continuously calibrated through specific experiences despite being relatively stable. However, there is a lack of research on how the role of personal experiences in trusting others develops with age, which salient experiences affect trust in interpersonal relationships, and how. In the present study, we thus explore the developmental changes in how personal experiences shape trust in interpersonal relationships from early adolescence to adulthood and the process of building (dis)trust within a relationship.

**Methodology:** We conducted eight on-line focus group discussions with 39 participants who were divided into four age groups – 11-12, 14-15, 18-19, 30+ (Mage = 37.3, Min = 31, Max = 48). There were two focus groups for each age group. The dual moderator approach was used. We analysed the data using reflexive thematic analysis (Byrne, 2021; Braun & Clarke, 2019).

**Results:** We identified seven main themes: generalised (dis)trust, positive personal experiences, hurtful personal experiences, experiences of others, (no) reasons for distrust, trust testing, and trusting the right/wrong person. Generalised (dis)trust – a tendency to (dis)trust others – affected the approach to building trust in interpersonal relationships. Positive personal experiences of help and support, mutual respect, and sharing increased trust. Hurtful personal experiences of betrayal, dishonesty, and disappointment led to a loss of previously established trust or upfront distrust. Experiences of others with a particular person were also salient – while others' (e.g., friends') positive or lack of negative experiences with the person encouraged trust, negative experiences fuelled distrust. (No) reasons for distrust covered a general tendency to trust in the absence of reasons for distrust. Trust testing captured a preference for gradual trust-building through positive experiences. Whether the experiences were positive or negative and led to trust or distrust depended on Trusting the right/wrong person for adolescents, especially the 11–12-year-olds. On the contrary, the theme trusting the right/wrong person was absent among adults aged 30 years and older.

**Conclusion:** We identified diverse positive experiences that increase and hurtful experiences that undermine trust in interpersonal relationships. In addition, experiences of others with a specific person contribute to (dis)trust. Adolescents, especially 11–12-year-olds, displayed moral essentialism by

emphasizing the importance of trusting the right person. In contrast, adults aged 30 years and older did not use essentialist reasoning. Instead, they referred to specific experiences with the person over time. Adults may display less essentialist reasoning due to being more aware of and open to situational and environmental influences as well as due to drawing on more diverse experiences. Taken together, view of trust in interpersonal relationships is likely to become increasingly complex throughout adolescence into adulthood. People with relatively high generalized social trust need reasons in the form of negative experiences to distrust others. For those with relatively low generalized social trust, cautiously testing the other person and building trust via positive experiences might be preferable.

**375**

### **Adverse childhood experiences and strategy preferences – A pilot study of a novel game-based approach**

Jallu Lindblom

Faculty of Social Sciences / Psychology, Tampere, Finland

#### **Abstract (max 500 words)**

##### Objective

Adverse childhood experiences (ACEs) associate with alterations in various social, emotional, and cognitive functions. On one hand, such alterations may indicate disrupted development, that heightens vulnerability to harmful outcomes. On the other hand, some of the alterations may represent functional adaptations to the harsh living conditions. In line with the latter view, research suggests ACEs to associate with the rapid detection of threats, greater risk tolerance, and lower prosociality. However, it has been difficult to directly evaluate whether such alterations provide any adaptive benefits. This difficulty likely arises from the large differences between the current society and the evolutionary-ecological conditions.

To explore this issue, I utilize a new game-based approach. The game presents complex decision-making situations that concern management of threats, opportunities, and collaboration. It allows the participants to use numerous different strategies, but also to quantify their objective performance (i.e., situation-strategy fit). I expect high ACEs to associate with the altered use of the defensive strategy (i.e., avoidance and aggression) in the game. More specifically, I expect ACEs to modulate the function that links the presence of threat and the selection of the defensive strategy, and I expect the function to associate with game performance. Finally, I explore the associations between ACEs and the other game strategies.

##### Methods

A university student sample (expected N=200) is being collected. The participants fill The Revised Inventory of Adverse Childhood Experiences. Subsequently, they play a new game called Game-Based Assessment of Dynamic Personality (GADP). The aim in the game is to gather energy and to stay alive



until the end of each round. The game elements include the game character, food, monsters, and other humans. There are 104 rounds, each lasting at the maximum of 15-17s. The participant controls the game character only by determining its “personality” at the beginning of each round. The responses are given using Likert-scale for the Big Five dimensions (neuroticism, extroversion, agreeableness, conscientiousness, and openness). The automatized behaviours of the game character are programmed to mimic the traits. For example, a game character with high neuroticism (i.e., the defensive strategy) tends to avoid monsters, but if the monsters come in the vicinity, it may attack them. In contrast, a game character with low neuroticism pays less attention to monsters and focuses on other elements (e.g., food) in the game.

## Results

The analyses test whether ACEs moderate the effects of threat (i.e., number of monsters) on preferring higher neuroticism. Mediation analysis will be used to test whether the individual differences in threat-responding links ACEs to game performance. Analogous analyses will be run for the other four traits.

## Conclusions

ACEs produce long-term suffering and mental health problems. GADP may prove to be useful in understanding the self-protective motivations that stem from experiencing adversity. This may help inform interventions that focus to lessen reliance on dysfunctional beliefs and strategies. However, it is important to note that GADP is in the very early phase of development. Thus, the results are best considered as a proof-of-concept demonstration and require further validation.

**376**

## **How do adolescents deal with the emotions of their best friends and mothers? A cross-cultural study**

Lysanne te Brinke<sup>1</sup>, Gamze Er Vargün<sup>2</sup>, Michaela Gummerum<sup>3</sup>

<sup>1</sup>Erasmus University Rotterdam, Rotterdam, Netherlands. <sup>2</sup>Anadolu University, Eskişehir, Turkey.

<sup>3</sup>University of Warwick, Coventry, United Kingdom

### **Abstract (max 500 words)**

#### Study objective

Adolescence is an important period for the development of emotion regulation skills (i.e., dealing with feelings of anger, fear). However, adolescents do not only have to deal with their own emotions (internal emotion regulation), but they also have to deal with the emotions of the people around them, such as their friends and parents (i.e., interpersonal emotion regulation). Previous research on internal emotion regulation shows that emotion regulation strategies become more complex during adolescence (Zimmerman & Iwanski, 2014; te Brinke et al., 2021), and that cultural practices and attitudes influence emotional displays (Matsumoto et al., 2008). However, relatively little is known about the cross-cultural

display of interpersonal emotion regulation strategies during adolescence. Therefore, the goal of this study is to compare adolescents' interpersonal emotion regulation strategies across three countries (i.e., UK, Turkey, and the Netherlands).

### Methodology

The sample of this study is planned to consist of 450 adolescents aged 12-16 years, living in the UK, Turkey, and the Netherlands (N =150 per country). Based on previous studies (e.g. Gummerum & Lopez-Perez, 2020; Lopez-Perez et al., 2016), four vignette scenarios were developed. The scenarios contain sadness and anxiety inducing situations with best friends and mothers. Participants rate their willingness to regulate the emotions of their best friend versus their mother, and their interpersonal ER strategy use (i.e., cognitive change, affective engagement, attentional deployment, humor, response modulation, and situation modification). In addition, cultural values (i.e., individualism and collectivism) and developmental outcomes (i.e., prosocial and aggressive behavior) are measured.

### Results

The data collection is currently ongoing and expected to be finished in May 2023. Preliminary data of N = 33 Dutch adolescents (Mage = 15.86, SD = 0.84, 67% girl) shows that adolescents' willingness to regulate the emotions of their best friends (M = 3.82, SD = 1.02, range 1-5) is significantly higher than adolescents' willingness to regulate the emotions of their mothers (M = 2.99, SD = 0.97, range 1-5),  $t = -5.00$ ,  $df = 32$ ,  $p < .001$ . Moreover, a significant positive association between age and interpersonal emotion regulation was found (mother:  $r = .37$ ,  $p = .035$ ; best friend:  $r = .42$ ,  $p = .016$ ). Regarding specific interpersonal regulation strategies, adolescents reported to be most likely to use affective engagement (e.g., "I would listen carefully"), and least likely to use humor (e.g., "I would joke about the situation").

### Conclusion

This study will lead to novel insights into the strategies that adolescent themselves perceive valuable to improve the affect of their best friend and mothers, and whether these strategies differ between cultures.

**377**

## **Adverse childhood experiences predict dynamic emotion features in everyday life**

Jaakko Tammilehto<sup>1</sup>, Kirsi Peltonen<sup>2</sup>, Marjo Flykt<sup>3,1</sup>, Mervi Vänskä<sup>1</sup>, Guy Bosmans<sup>4</sup>, Peter Kuppens<sup>5</sup>, Jallu Lindblom<sup>1</sup>

<sup>1</sup>Faculty of Social Sciences / Psychology, Tampere University, Tampere, Finland. <sup>2</sup>INVEST Research Flagship Center, University of Turku, Turku, Finland. <sup>3</sup>Department of Psychology and Logopedics, Faculty of Medicine, University of Helsinki, Helsinki, Finland. <sup>4</sup>Clinical Psychology, KU Leuven, Leuven, Belgium.

<sup>5</sup>Faculty of Psychology and Educational Sciences, KU Leuven, Leuven, Belgium

## Abstract (max 500 words)

### Objective

Adverse childhood experiences (ACEs), such as physical and psychological abuse and neglect, can have detrimental consequences on people's somatic and mental health. One mechanism through which ACEs may influence people's health is by modifying their emotional development. Indeed, research has shown that ACEs are related to heightened emotional reactivity and dysregulation. However, research in this field is based on designs using one-occasional global self-reports or laboratory assessments. Thus, it remains unclear whether and how ACEs shape dynamic features of people's everyday emotions, involving baseline level (i.e., long-run mean level), variability (i.e., moment-by-moment oscillation), and inertia (i.e., a carry-over effect from one moment to the next). Some studies suggest that high ACEs may predispose to a higher baseline level of negative and a lower baseline level of positive emotions (Pries et al., 2020) and higher inertia of negative emotions (Teicher et al., 2015). Yet, these studies have so far focused on linear associations between ACEs and the emotion dynamic features, whereas evolutionary models posit some of these associations to follow curvilinear forms, reflecting developmental adaptations to one's ecological environments (Del Giudice et al., 2011). In this study, we examine both linear and curvilinear (U-shaped) associations of ACEs with the baseline, variability, and inertia of negative and positive emotions. We use two ecological momentary assessment samples, where participants reported their emotions multiple times per day over several days.

### Methodology

Sample I (N=122, Mage=26.4; 88.5% women) is part of the Daily Emotions project. In this sample, participants first answered the Revised Inventory of Adverse Childhood Experiences and four additional items concerning interparental violence and physical and psychological disciplinary violence. Two weeks later, short questionnaires were sent to their smartphones seven times a day for a week. In each questionnaire, participants reported how much they experienced four negative (i.e., anger, anxiety, shame, sadness) and positive (i.e., joy, pride, satisfaction, excitement) emotions at the present moment. Sample II (N≈110) is part of the Miracles of Development longitudinal study. At 17 to 19 years old, participants answered 11 items from the Revised Inventory of Adverse Childhood Experiences and the two additional items concerning interparental violence. At the age of 20 to 22 years, short questionnaires were sent to their smartphones ten times a day for one week. In each questionnaire, participants reported how much they experienced the four negative and four positive emotions, similar to Sample I. We will use dynamic structural equation models to analyze both samples.

### Results

We expect that people with more ACEs show a higher baseline level, variability, and inertia of negative emotions and a lower baseline level of positive emotions. We also expect that some association of ACEs with emotion dynamic features show a curvilinear form. During spring 2023, we will preregister the final analysis plan and hypotheses before conducting the study (<https://osf.io/2wstr/>).

### Conclusion

Our two-sample study will elucidate whether and how ACEs may shape people's emotions as they occur in everyday life. Such insights into emotion dynamics can help improve the well-being of those who have experienced ACEs.

**382**

## **Mechanisms potentially underlying the Healthy Context Paradox: An examination of stable victims**

Tessa Lansu<sup>1</sup>, Yvonne van den Berg<sup>1</sup>, Rozemarijn van der Ploeg<sup>2</sup>, Sabine Stoltz<sup>1</sup>, Bram Orobio de Castro<sup>3</sup>

<sup>1</sup>Behavioural Science Institute, Radboud University, Nijmegen, Netherlands. <sup>2</sup>Department of Pedagogy and Educational Science, University of Groningen, Groningen, Netherlands. <sup>3</sup>Developmental Psychopathology, University of Amsterdam, Amsterdam, Netherlands

### **Abstract (max 500 words)**

Both in research and educational practice, there is increasing attention for the existence and potential implications of the 'healthy context paradox' (HCP). This refers to the idea that victims of bullying experience poorer well-being when the overall level of victimization in the classroom is low compared to high (e.g. Salmivalli, 2018). However, the magnitude of the phenomenon and the mechanisms underlying it are not yet clear. Therefore, this study aims to replicate the HCP effect (both concurrent and change in healthiness of context). It also extends previous research by empirically testing three potential mechanisms that may explain healthy context paradox effects, being: 1) intensity of victimization, 2), victims' friendship opportunities and 3) feelings of isolation.

Data come from a nationwide study (N = 5661, 51% boys; 93.5% born in the Netherlands, Mage = 9.96 years) examining anti-bullying programs' effectiveness in the Netherlands. Using the same procedure as Garandeau et al. (2018), participants are chronic victims (n = 514), which are students who indicated being victimized in the months prior to both T1 and T2 (cf. Solberg & Olweus, 2003). Well-being indicators examined are self-esteem (Veerman et al., 1997), social anxiety (Furmark et al., 1999), depressed feelings (Chorpita et al., 2000), and school well-being (Boor-Klip et al., 2016). It is estimated whether the proportion of victims in the classroom (healthy context) at T1 predicts wellbeing at T2, the healthy context at T1 predicts the mechanism variable at T2, and whether the mechanism variable at T2 predicts well-being at T2.

Multilevel models estimating the effect of current as well as changes in healthiness of context did not demonstrate an effect of proportion of victims in the classroom on the well-being of chronic victims (see Table 1a and 1b). Subsequent models tested the effect of the potentially explaining mechanisms showing no effects for intensity of victimization, but found indirect effects for friendship and isolation (see Table 2 and 3). In concurrently healthier classrooms, victims had fewer friends, and this in turn was associated with victims' lower self-worth and feeling less comfortable in the classroom. In concurrently healthier classroom, victims also felt more isolated, which in turn was associated with victims feeling more depressed, socially anxious, having lower self-worth and feeling less comfortable in the classroom.

In the model testing for the isolation mechanism, the main effect of healthiness of context was significant for depression, anxiety and feeling comfortable in the classroom.

Whereas Garandea et al. (2018) did find a HCP effect of change in healthiness of context in a sample of chronic victims a lot smaller than the current sample, the results of the current study show no direct Healthy Context Paradox effect for victims. However, it does show that a healthier context can indirectly contribute to victims' poor well-being through fewer friends and stronger feelings of isolation. These results warrant further discussion of the magnitude and universality of the HCP effect, and contribute to further understanding the mechanisms that may underlie the HCP effect (e.g. Pan et al., 2021).

**397**

### **Can You See Me Aging? Awareness of Age-Related Change among Couples**

Fiona S. Rupperecht, Jana Nikitin

University of Vienna, Vienna, Austria

#### **Abstract (max 500 words)**

Awareness of age-related change (AARC) describes how individuals experience aging and development in terms of gains and losses across multiple domains (e.g., health and physical functioning, interpersonal relationships). AARC has so far been studied from the internal perspective of individuals, i.e., via self-ratings. Theory however suggests that next to internal perceptions, external perceptions of aging are of major influence as well. In a study assessing 60 romantic couples aged 50 years and older, we asked participants in how far they were aware of their *own* age-related change as well as their *partner's* age-related change. The goals of the study were to test (a) whether the AARC scale generally works from an external perspective, (b) whether external ratings are accurate in the sense that they overlap with internal aging experiences, or whether they are prone to over- or underestimation, and (c) whether external ratings are predictive for an individual's future outlook and aging anxieties over and above internal aging experiences. Results should shed light on how partners experience each other's aging and whether this is of consequence. Findings are discussed within a contextual perspective on development in the second half of life.

**399**

### **Family relations and adolescents' experiences and coping during the pandemic**

Emma Sorbring<sup>1</sup>, Sevtaq Gurdal<sup>1</sup>, Sabina Kapetanovic<sup>1</sup>, Birgitta Ander<sup>2</sup>

<sup>1</sup>University West, Trollhättan, Sweden. <sup>2</sup>Jönköping University, Jönköping, Sweden

**Abstract (max 500 words)**

How adolescents handle challenging times, such as pandemics, may be the question of family interactions, including adolescents and their parents. Family systems are suggested promotive of child and adolescent resilience during challenging times. However, family systems are dynamic and may change during demanding circumstances, which in turn may have an impact on adolescent lives. Therefore, the aim of the current study is to investigate the links between aspects of the way adolescents relate to their families before and during COVID-19.

**OBJECTIVES OF THE STUDY:** The aim of the current study was to investigate whether adolescent aspects of family relationships before and during COVID-19 were linked to adolescents' outlook toward the future and coping in everyday life during the pandemic.

**METHODOLOGY:** The project was designed to recruit adolescents aged 15 to 19 to study their social relations, individual characteristics, and any psychosocial changes during the COVID-19 outbreak. Participant recruitment and survey completion through an online survey occurred between 8 June and 7 July 2020. Using cross-sectional data with  $N = 1767$  Swedish adolescents, we conducted a structural equation model.

**RESULTS:** Adolescent reported pre-pandemic, general family relations (cohesion, conflict and support) were linked with adolescent outlook toward the future and coping in everyday life during the pandemic, through reported changes in family relations during the pandemic (conflicts and quality time). Pre-pandemic family cohesion was related to increased quality time during the pandemic as well as being more hopeful about the future, while pre-pandemic family conflict was related to increased conflicts with family during the pandemic. In addition, increased levels of spending quality time with family during the pandemic were linked to more perceived control in everyday life, while increased levels of conflict with family during the pandemic were linked to less control in everyday life during the pandemic. While general family cohesion was directly linked to higher levels of adolescent future orientation, the link between pre-pandemic family cohesion and adolescent perceived control in everyday life was in part mediated by a higher level of quality time spent with family during the pandemic. On the other hand, the link between general family conflict and adolescents' perception of control in everyday life was fully mediated by the reported increase of family conflict during the pandemic.

**CONCLUSION:** The results indicated that the general pre-pandemic family relations are important in terms of adolescent ability to cope with the pandemic both directly and indirectly through changes in family interactions during the pandemic. From this extraordinary situation, we can learn how parent-child relationships are associated with adolescents' psychological functioning during demanding circumstances. It is important to help adolescents maintain personal control of their everyday situation and a positive outlook on the future, despite the contextual changes that may be overwhelming and worrying, and placing more focus on strengthening parents and families is key. In that sense, building resilience in families would also help to foster resilient adolescents with a more promising outlook on the future.

400

## Developmental Trajectories of Non-Suicidal Self-Injury in Adolescence During the COVID-19 Pandemic: the Role of Positive and Negative Parenting Dimensions

Lisa De Luca, Annalaura Nocentini, [Ersilia Menesini](#)

University of Florence, Florence, Italy

### Abstract (max 500 words)

The COVID-19 pandemic represented a uniquely challenging period, rising concerns about possible changes in the developmental trend of NSSI across adolescence. Besides, the pandemic represented a perfect context to examine the impact of interpersonal factors, such as difficulties with parents, on NSSI development. This study aimed to identify different trajectory groups of NSSI during the pandemic among high school students. Second, it examined the impact of different parenting dimensions (i.e., parental poor monitoring, positive parenting, and negative parenting) on NSSI trajectory groups.

Participants included 830 Italian adolescents (44.2% females; Mage=14.52; SD= 0.80), that attended the High School, who participated at least in one of the 3-time points of data collection. The first data collection (T1) occurred in January/February 2020, before the onset of the pandemic. The second (T2) was collected one year later in December 2020/January 2021, during the third COVID-19 wave in Italy. The third (T3) was collected two years after the first in December 2021. A Latent Class Growth Analysis (LCGA) was used to define different classes of NSSI trajectories. Then, a multinomial logistic regression analysis was applied to explore the role of parenting dimensions as a predictive factor of NSSI classes.

Findings of LCGA showed three different classes of NSSI trajectories: Low Stable Class (88.6%; low intercept, no significant slope), Medium-High Increasing Class (7.7%; medium intercept, significantly increasing slope), and High-Post COVID-19 Decreasing Class (3.7%; high intercept, significantly decreasing of slope). Then the multinomial logistic regression analysis showed how adolescents in Medium-High Increasing Class reported significantly lower levels of positive parenting compared to Low Stable Class (OR= .423;  $p<.001$ ). Adolescents in High-Post COVID-19 Decreasing Class showed lower levels of positive parenting (OR= .416;  $p=.002$ ) and higher levels of negative parenting (OR= 3.125;  $p<.001$ ) compared to the Low Stable Class. No differences emerged between the two latter classes. Finally, no significant results emerged for parental poor monitoring in any of the three NSSI classes.

These findings suggest how the High-Post COVID-19 Decreasing Class, which showed a most at-risk NSSI trajectory during the most restricted period, was associated with pre-pandemic low levels of positive parenting and high levels of negative parenting. Instead, the Medium-High Increasing Class, which showed a linear NSSI increase during the pandemic, showed low pre-pandemic levels of positive parenting. Findings suggested the importance of examining the impact of the pandemic on NSSI trajectories in the long term and the role of parenting in predicting them over time. The association between different levels of positive and negative parenting and NSSI trajectories suggested the importance to design universal prevention programs, involving both adolescents and their parents, to prevent engagement in NSSI and to promote good parenting practices.

401

## **Adolescents' Longitudinal School Engagement Before and during COVID-19 pandemic: the role of family and teachers support.**

Annalaura Nocentini, Ersilia Menesini

University of Florence, Florence, Italy

### **Abstract (max 500 words)**

School engagement constitutes a relevant indicator of students' academic and psychological functioning, predicting academic achievement, student misbehavior and school dropout (Salmela-Aro & Upadyaya, 2021). Recent studies on adolescents' well-being focused their attention on understanding the trajectories of school engagement during the COVID pandemic, in particular during the first phase related to the distal schooling and to the second phase related to the "come back to school" period. However, longitudinal studies were often limited to the first or second year of the pandemic, and very rarely included the 2022.

The current study aims to examine adolescents school engagement trajectories from pre-pandemic to June 2022, evaluating the dynamic role of time-varying predictors related to the COVID perceived stress across the different phases and to the pre-pandemic vulnerability or resilience related to family, peers and teachers support, and to the academic self-efficacy.

The longitudinal data were collected in January 2020 (T0), June 2021 (T1) and June 2022 (T2) in 170 Italian middle school students (at T0: Grade 6th, M-age = 11.08, SD = 0.48). Measures used for the current study were: the Schoolwork Engagement inventory (Salmela-Aro & Upadaya, 2012), the School Well-being questionnaire (Marzocchi, Tobia, 2015), Multidimensional Students' Life Satisfaction Scale - Italian version (Zappulla et al., 2014), Perceived Stress Scale (Mondo et al., 2019).

Growth Curve Models of School Engagement from Pre covid (T0: December 2019), to 1-year into the pandemic (T1: June 2021), to 2-years into the pandemic (T2: June 2022) were tested, with Time-invariant predictors (teachers' relations, peer relations and family support, academic self-efficacy) and time-varying predictors related to COVID-19 perceived stress at T1 and at T2.

Results from the growth curve modelling showed a linear mean decrease of adolescents School Engagement from pre-pandemic to June 2022, with a significant inter-individual variability. Higher levels of family support at T0 were strongly associated with higher levels of school engagement during the pre-pandemic period, whereas more positive and supportive teacher relations are associated with a lower decrease across time of school engagement. The time-varying effect of pandemic stress was not associated with the short-term change on school engagement.

Findings stressed the interplay between family and teachers support in promoting students' academic well-being. In particular, teachers support as perceived before the pandemic seems to be very relevant in predicting the decrease of school engagement, over and above the level of COVID-19-related perceived stress across the different phases of the pandemic. Implications for intervention are discussed.



402

### Upholding the Self-Concept of a Young Person over Time

Fiona S. Rupperecht<sup>1</sup>, M. Clara P. de Paula Cuoto<sup>2</sup>, Klaus Rothermund<sup>2</sup>, Jana Nikitin<sup>1</sup>

<sup>1</sup>University of Vienna, Vienna, Austria. <sup>2</sup>University of Jena, Jena, Germany

#### Abstract (max 500 words)

In the face of prevailing negative views on old age, aging individuals try to protect their self-concept and uphold the identity of a *young* person. They may do so by feeling young or by redefining what it means to be old in terms of age thresholds. In the present work, we focused on the usage of those two strategies across various life domains (e.g., family, work, leisure). We hypothesized that individuals may hold on to a *young* age identity particularly in domains that they view (a) as important for themselves and (b) as negative when it comes to old age. We furthermore expected older adults to rely more strongly on redefining old age than on feeling young. We were able to confirm these hypotheses in a cross-sectional sample of 514 individuals aged between 39 and 91 years. Among those individuals, 490 participated again in the study 10 years later and allowed us to draw additional insights on long-term mechanism—also mostly in concordance with our hypotheses. Taken together, our research indicates that individuals place great value on upholding the self-concept of a *young* person, but they do so selectively in domains that are both important to themselves and connotated negatively when it comes to the aging process. Such strategies may allow individuals to protect their self-concept and to dissociate themselves from the often-stigmatized identity of an *old* person. Results also shed light on the idealization of being *young* in our society.

403

### Navigating an uncertain future: Perceived Effects of the Covid-19 Pandemic on Educational Progress and the Learning of Job Skills

Ingrid Schoon, Golo Henseke, Francis Green

University College London, London, United Kingdom

#### Abstract (max 500 words)

Young people navigate an increasingly uncertain and precarious employment market. They have to mobilise and use psychosocial resources necessary to adapt to a changing career landscape and employment opportunities. Even though the consequences of Covid on the education and employment related transitions of young people have been a key focus of recent studies, these study areas are often addressed separately, and there is less evidence on how young people's perception of both their educational progress and learning of job skills has been affected, nor how perceived learning loss can be mitigated. This study focuses on young people's perception of their education and work-related training

during the Covid-19 pandemic, and the role of schools in supporting their educational progression and transition to the labour market in times of economic turmoil. Guided by career development theories, this study asks if school-based career preparation activities can support the development of career adaptability of young people aged 16-25 years in the aftermath of the Covid-19 pandemic. It is expected that participation in career-related learning activities during formal education increases career adaptability, which in turn, reduces concerns about learning loss and associated career worries. The research draws on a nationally representative longitudinal sample of 16 to 25 year-olds who participated in the Youth Economic Activity and Health (YEAH) online survey conducted in the UK between February 2021 and December 2022 (n=7,000, mean age 21 years, 50% female, 24 % ethnic minority, 46.5% in education). The findings suggest that that 47 percent of young people in a representative sample perceive a loss of learning of job skills, while a sizable minority (17 percent) judge that the pandemic improved matters. The perception of skill loss is worse among those encountering Covid directly, and far worse among those in school, college or university than among those in employment. Among those in education, loss of learning of job skills is higher among those experiencing only online learning, but lower for those who have had some work experience or who participated in career-related learning activities during formal education. Among those in employment, loss of learning is mitigated by training as well as participation in career-related learning activities during formal education. The findings highlight the importance of school-based career preparation activities in supporting adaptive career-related cognitions among young people in times of economic uncertainty and upheaval.

405

## Do Perceived Expectations for Active Aging Predict Active Aging Indicators? The Roles of Resources, Motivation, Appraisals, and Domain

Sonja Radoš<sup>1</sup>, Maria K. Pavlova<sup>1</sup>, Rainer K. Silbereisen<sup>2</sup>

<sup>1</sup>University of Vechta, Vechta, Germany. <sup>2</sup>University of Jena, Jena, Germany

### Abstract (max 500 words)

**Objectives.** Perceived expectations for active aging (PEAA) reflect subjective exposure to social expectations that emphasize health maintenance and social engagement. We investigated under which conditions PEAA are seen by older adults as a challenge or a threat and yield positive effects on active aging indicators. First, we addressed the additive and combined effects of different types of resources (socioeconomic, health, personal, and social) and motivation (generativity, the life goal of developing skills, and the life goal of staying healthy) on the change in the appraisal of overall PEAA over one year (preregistered at <https://osf.io/8rud5>). We hypothesized that a combination of high motivation and high resources would predict favorable changes in the challenge and threat appraisals of overall PEAA. Second, we investigated the joint effects of domain-specific PEAA (physical/mental health and social engagement), appraisals of overall PEAA, and domain-specific indices of resources and motivation on productive activities (volunteering, childcare, and caregiving) and subjective aging perceptions (physical and cognitive self-concept) assessed one year later (preregistered at <https://osf.io/b3k4c>). We expected

higher baseline PEAA to predict more positive outcomes one year later in those with higher resources and motivation corresponding to the content of PEAA and appraisals to mediate this moderation effect.

**Methodology.** We used two waves of data (2009 and 2010) from the Jena Study on Social Change and Human Development that surveyed young-old Germans (aged 56-75 at baseline,  $N_{T1} = 1,508$ ,  $N_{T2} = 602$ ). We conducted a series of linear and logistic regression analyses using Mplus 8.5, controlling for region, employment, partnership, T1 scores of the respective outcomes where available, cognitive ability (only in supplementary analyses), and—where these variables were not used as predictors or moderators— income, educational attainment, and self-reported general health.

**Results.** Higher personal resources predicted more negative change in the threat appraisal. As expected, higher socioeconomic resources predicted a reduced threat appraisal over one year in participants with higher (but not lower) motivation to age actively, and the opposite trend was observed for the challenge appraisal. In those with higher motivation, health resources predicted more positive change in the challenge appraisal too. Health and social resources had no significant effects on the residual change in the threat appraisal, whereas personal and social resources had no effects on the challenge appraisal. Furthermore, PEAA in the social engagement domain predicted high (vs. no) amounts of caregiving one year later. All other outcomes were predicted by domain-specific indices of resources and motivation but not by PEAA. The effects of PEAA were moderated neither by resources and motivation nor by the challenge and threat appraisals, therefore no mediated moderation was found. When appraisals were included in the models, a higher challenge appraisal (rather than domain-specific PEAA) predicted high amounts of caregiving. No more significant effects of appraisals emerged.

**Conclusion.** Those who are healthier or better off and feel motivated to age actively appraise PEAA more favorably. Motivation and resources, rather than PEAA and their appraisals, predict most of the active aging indicators we considered.

406

## Classification of teachers' responses to school bullying: A person-centered approach

Wan-Yu Hua

Department of Health Education and Health Promotion, National Taiwan Normal University, Taipei, Taiwan

### Abstract (max 500 words)

Teachers play an essential role in improving the problem of school bullying, but the teachers' responses to school bullying and its related factors in Taiwan are yet to be clarified. This study aims to understand the distributions of teachers' responses to school bullying, classify teachers based on their responses to school bullying, and examine the clusters' features based on teachers' and schools' characteristics.

Participants were 563 teachers (264 elementary school teachers and 299 high school teachers; mean age = 35.47) in Taiwan. Data were collected from December 2022 to January 2023 using convenience sampling. The questionnaire contained four dimensions: teachers' responses to school bullying, perceptions of bullying, personal characteristics, and school characteristics. Factor analysis, cluster analysis, ANOVA, and chi-square analyses were used.

Factor analysis was conducted to retrieve the latent construct of teachers' responses. Six factors were retrieved: "mediating and supporting the victims," "enlisting other adults' help," "separating students," "punishing and condemning bullies," "responding passively," and "stating teachers' points affirmatively." Two-stage cluster analysis was conducted to classify teachers based on their six-factor scores. Three groups were classified: "simplification" (22.9%), "positive action" (32.6%), and "authoritative suppression" (21.6%). The "simplification group" teachers scored higher in separating students and responding passively. The "positive action group" teachers scored highest in mediating and supporting victims, separating students, and stating teachers' points affirmatively. The teachers who were classified in the "authoritative suppression group" scored highest in enlisting other adults' help, punishing and condemning bullies, and responding passively.

Most simplification-group teachers were senior high school teachers, and most were passive bystanders when they were students. Most of the positive-action-group teachers were elementary school teachers; most were never involved or witnessed bullying when they were students, and they had the highest empathic anger score among the three groups. Most authoritative-suppression-group teachers were defenders when they were students and were older than the positive-action-group teachers.

In conclusion, the results confirmed that teachers consisted of various distinct types of responses to bullying, and each kind of teacher had specific characteristics. Project designers should develop tailored teacher training programs based on the characteristics of the three bullying-responding types of teachers. Future studies should investigate whether bullying situations will evolve differently if the three types of teachers are involved.

**408**

## **Modelling the evolution and development of sensitive periods**

Nicole Walasek

Utrecht University, Utrecht, Netherlands

### **Abstract (max 500 words)**

Sensitive periods, in which the impact of experience on development is larger than in other periods, exist in all classes of organisms, yet little is known about their evolution. Recent mathematical modelling has explored the conditions in which natural selection favours sensitive periods. These models have assumed that the information obtained from experiences (cue reliability), as well as the environmental state, are stable across development, or that organisms can develop phenotypic adjustments (i.e., physical or behavioral adjustments) instantaneously at any age. Neither assumption generally holds.

**Objective:** I present two mathematical models in which organisms gradually tailor their phenotypes to their environments when either the cue reliability (model 1) or the environmental state (model 2) varies across development.

**Methods:** I use stochastic dynamic programming to compute optimal developmental programmes for a range of different environments. From these optimal programmes, I simulate developmental trajectories of organisms and quantify brain plasticity across development.

**Results and conclusion:** My results show that sensitive periods can occur at the onset, midway through, and even towards the end of development. Sensitive periods are typically favoured early during development when the reliability of cues decreases or when the environment rarely changes. Sensitive periods at later life stages, such as adolescence, may emerge when reliable information is only available at later life stages or when experiences early in life contradict organisms' expectations about their environment. Frequent environmental fluctuations favour sensitive periods towards the end of development. In contrast with models assuming stable environments, organisms always retain residual plasticity when the environmental state changes. This indicates that critical periods, after which plasticity is zero, are unlikely to be favoured in fluctuating environments. I will highlight ways in which predictions from my models may be tested in developmental data.

**410**

## **The effects of message sensation value and message appeals on the viewers' responses to YouTube Anti-bullying videos**

Wen-Chi Wu

Department of Health Education and Health Promotion, National Taiwan Normal University, Taipei, Taiwan

### **Abstract (max 500 words)**

YouTube is the most popular channel for disseminating anti-bullying videos. The effectiveness of these videos is unclear. It is hypothesized that videos with high message sensation value may have a higher impact on viewers' responses since bullying is associated with sensation-seeking traits. Emotional appeals may influence the viewer's responses more than rational appeals because bullying involves emotional arousal. This study retrieved 1431 videos from YouTube by using "anti-bullying" and "bullying prevention" as keywords. We used the quantitative content analysis method to analyze the content of the videos. The coding scheme is designed according to the literature. It consists of five sections: basic information and viewer responses, bullying, antecedents, and anti-bullying strategies, message sensation value, and message appeals. The coding scheme was reviewed by experts to ensure content validity. Two coders were trained and coded each video independently. The first 100 videos were used to revise the coding scheme. The Kappa coefficient (0.88) and the intra-class correlations (0.99) presented high levels of inter-rater reliabilities. The results demonstrated that the videos uploaded by governmental agencies received the least likes and views and had the lowest message sensation value score compared to those uploaded by celebrities or YouTubers. The results of multiple linear regression

models further presented a positive association between MSV score and the number of views of anti-bullying YouTube videos. Surprisingly, no statistical associations were found between the various appeals and the viewers' responses. Thus, to create compelling anti-bullying videos, it is suggested that government agencies should increase to employ the elements of message sensation value.

**413**

## **Testing longitudinal associations between executive control and mental health in adolescence**

Georgina Donati

University of Oxford, Oxford, United Kingdom

### **Abstract (max 500 words)**

Developmental changes in the brain networks involved in emotion regulation are thought to contribute to vulnerability to mental health problems during adolescence. Executive control is often viewed as allowing top-down regulation of emotional responses. However, while associations between executive control and mental health are commonly observed in both clinical and non-clinical populations, the direction of these associations remains unclear. Low, or immature, cognitive control could limit emotion regulation. Reversely, high emotionality could impede cognitive functioning. The scarcity of longitudinal studies testing for bi-directional effects, particularly in adolescence, has made it difficult to draw conclusions.

This study analysed data from 1,445 participants of a longitudinal cohort to understand bi-directional longitudinal associations between executive function and emotional behaviours across adolescence. Longitudinal cohort studies are key for understanding developmental change, but, capturing a construct consistently and in a developmentally appropriate way is complicated and measures often change. We use latent variables and a cross-lag panel model to enable us to measure constructs over time. Executive function was assessed using experimental working memory and inhibitory control tasks, emotional behaviours through parental report of internalising and externalising behaviours.

Cross-sectional associations replicated associations found in the literature. However, controlling for cross-sectional associations, early executive functions were not found to predict later emotional behaviours. Instead, early emotional behaviours predicted later executive function, with the strongest link observed between early externalising and later working memory. These results suggest that emotional well-being may affect the maturation of executive function during adolescence.

415

## Effects of videos with high or low perceived message sensation value on the anti-bullying attitude and defender behavior intention among viewers with high or low sensation-seeking trait

Kuan-Yi Tu

Department of Health Education and Health Promotion, National Taiwan Normal University, Taipei, Taiwan

### Abstract (max 500 words)

Increasing anti-bullying attitudes and defender behavior intention are vital factors in bullying prevention. Many intervention programs produced videos to promote anti-bullying attitudes and defender behavior intention. Videos' message sensation value may impact viewers' responses, which might be related to viewers' sensation-seeking (SS) trait. However, relatively few studies investigate the effects of perceived message sensation value (PMSV) on anti-bullying attitudes and defender behavior intention among viewers with different levels of sensation seeking. This study proposes two hypotheses. One is the consistency hypothesis, which means high-PMSV videos may impact the viewers with high-level SS more, and vice versa. The other is disentangling hypothesis, which means videos with high PMSV can have a higher impact on the viewers' responses irrelevant to the levels of SS.

We adopt a randomized control-group post-test design experiment. An online survey questionnaire will be disseminated, and anticipated about 900 students above 18 years old will provide complete data. Firstly, the viewers will be asked to answer the SS scale. The online questionnaire system will categorize the viewers into the high-SS group if they score higher than the median value of the scale (25). The remainder will be categorized into the low-SS group. Then, the viewers will be randomly assigned to three conditions/groups: a video with high-level PMSV (experiment group A), a video with low-level PMSV (experiment group B), and no video (control group). Each group consists of 300 students. After the intervention, the participants will answer questions regarding anti-bullying attitudes, defending behavior intention, and general media effects. Sex, education levels, empathic anger, bullying experience, and PMSV will be controlled in the multiple linear regression models.

The results of this study can shed light on the understanding of the effectiveness of videos as an anti-bullying prevention strategy. If the consistency hypothesis is confirmed, future video producers should consider the viewers' SS and provide low-MSV videos for low-SS viewers, and vis versa. If the disentangling hypothesis is confirmed, future producers can employ the element of MSV in the bullying prevention videos to promote anti-bullying attitudes and defender behavior intention, no matter the levels of the viewers' SS.

416

## Using non-linear mixed models to understand sensitive periods of adversity in mental health trajectories

Kathryn Bates

King's College London, London, United Kingdom

### Abstract (max 500 words)

Non-linear mixed models are a powerful tool to capture trajectories of brain development. With the advent of longitudinal, large-scale datasets, the use of non-linear modelling approaches is gaining traction given evidence to suggest cortical development during adolescence is dynamic in nature rather than strictly linear. The advantage of non-linear mixed models is that they can be used to yield readily interpretable parameters, such as the age of steepest development in a given variable. This can then be extracted to predict outcomes.

An important research question to which non-linear mixed models are particularly suitable is: How and when do adversities impact mental health trajectories most? We know that the occurrence of adversities (potentially harmful experiences, such as mental abuse and the death of a loved one) is non-linear throughout development and that the type and timing of adversity can influence outcomes. For example, the early years (birth to 3 years) have been identified as a sensitive period for the impact of adversity on later health outcomes. Adolescence presents a potential second sensitive period of brain development after early childhood, and adolescents experience a unique set of adversities during this period (such as peer bullying, romantic abuse, and school issues). Over 75% of mental health conditions are diagnosed before 25 years of age, however, research is yet to investigate how the occurrence of adversity during adolescence impacts mental health.

In this study, we leveraged non-linear mixed models to examine trajectories of mental health the Avon Longitudinal Study of Parents and Children (ALSPAC: N~15,000) and to establish how adversities unique to adolescents predict mental health trajectories. We expect evidence for a sensitive period of social adversity during adolescence. This study will highlight the types and timing of adversity, which can be applied to develop prevention efforts to support young people's mental health. In my talk within the "Modelling environmental exposures and sensitive periods in development" symposium, I will use this empirical example to highlight how these models can be used as a tool to identify sensitive periods of brain development in longitudinal data and resources on where to get started with applying these methods.

421

## Temporal relationships between non-physical bullying perpetration and victimization – A random intercept cross-lagged panel model



Ju-Chu Hsu

Department of Health Education and Health Promotion, National Taiwan Normal University, Taipei, Taiwan

### **Abstract (max 500 words)**

Previous studies regarding the temporal relationships between bullying and victimization are inconsistent. A student can be involved in bullying as a victim, bully, or victim-victim. However, the process of becoming a bully-victim is still unclear. Whether victimization is a preceding factor or a consequence of bullying are remained to be investigated. Previous studies failed to extract the personal trait effect from the carry-over effect within individuals. This study aimed to clarify the temporal relationships between non-physical bullying perpetration (NPBP) and non-physical bullying victimization (NPBV) by applying a random intercept cross-lagged panel model (RI-CLMP). It is hypothesized that NPBP and NPBV will have bi-directional associations, and the trait-like effect will be significant.

There were 1213 students recruited from 24 junior high schools and 8 senior high schools in New Taipei City and Taoyuan City in northern Taiwan. The students followed for four semesters and were surveyed once each semester. The students filled in self-reported questionnaires in the computer classroom of each school. A total of 856 students (449 girls, 407 boys) provided the complete data across the four waves. The interval between each wave is six months.

The results of RI-CLPM indicated that the trait-like effect (correlation between the random intercepts of NPBP and NPBV) was significant. The carry-over effects (autoregressive relationships) of NPBP and NPBV were significant. Surprisingly, the NPBP had a significant negative lagged effect on the consecutive NPBV. However, the NPBV did not present a lagged effect on the consecutive NPBP. The results confirmed a unidirectional negative effect from NPBP to NPBV, which means that the non-physical bullying preparation experience may decrease the possibility of being victimized at the next time point. Although the results did not verify the hypothesis, we clarified the direction of causality between NPBP and NPBV in the between and within levels. Trait-like (time-invariant) effects might orient a person who became a bully-victim. The autoregressive parameters represented the amount of within-person carry-over effect. In the current study, they were positive, implying that students who scored NPBP and NPBV above their expected scores were likely to be followed by occasions on which they still scored above the expected score again, and vice versa.

In conclusion, the current study shows NPBP and NPBV were significantly related, and there was evidence for a longitudinal association between higher NPBP at the previous time point and lower NPBP at the later time point.

**424**

### **Contributors of infant executive functioning: the role of maternal executive functions and infant sleep**

Anniina Karonen<sup>1,2</sup>, Eeva-Leena Kataja<sup>1</sup>, Tiina Paunio<sup>1,3,4</sup>, Katri Kantojärvi<sup>3,4</sup>, Riikka Korja<sup>2,1</sup>, Hasse Karlsson<sup>1,5,6</sup>, Linnea Karlsson<sup>1,5,6</sup>, Saara Nolvi<sup>1,2,7</sup>

<sup>1</sup>FinnBrain Birth Cohort Study, Turku Brain and Mind Center, Department of Clinical Medicine, University of Turku, Turku, Finland. <sup>2</sup>Department of Psychology and Speech-Language Pathology, University of Turku, Turku, Finland. <sup>3</sup>Department of Psychiatry and SleepWell Research Program, Faculty of Medicine, University of Helsinki and Helsinki University Central Hospital, Helsinki, Finland. <sup>4</sup>Department of Public Health and Welfare, Finnish Institute for Health and Welfare, Helsinki, Finland. <sup>5</sup>Department of Psychiatry, Turku University Hospital and University of Turku, Turku, Finland. <sup>6</sup>Centre for Population Health Research, University of Turku and Turku University Hospital, Turku, Finland. <sup>7</sup>Turku Institute for Advanced Studies, University of Turku, Turku, Finland

## **Abstract (max 500 words)**

### Objective of the study

Executive functioning (EF) is a set of higher-order cognitive skills that are needed in self-regulation and goal-directed behaviors. Early EF has high relevance for cognitive, behavioral and social well-being later in life. Parental EF is considered one key factor contributing to inter-individual variation in offspring EF. However, there is a lack of reported findings of mother–child EF associations in infancy, and the genetic contributions have not been considered. Aim was to investigate the largely unexplored associations between maternal EF and infant EF as well as one of its precursors, sustained attention, and the contribution of cognitive genetic factors on these outcomes (Study 1). In our future studies, infant EF development will be investigated in the context of parallel neurodevelopmental changes, such as sleep rhythm consolidation. Also, developmental trajectories of EF in early childhood and their relation to sleep will be explored. Findings of the study completed (Study 1) and a short overview of the ongoing and future work in FinnBrain Birth Cohort Study’s EF research is presented.

### Methodology

Ninety-seven mother-infant-dyads from the FinnBrain Birth Cohort Study participated in Study 1. Maternal EF was assessed using selected measures from the Cogstate test battery. At 8 months, infants completed Lab-TAB Blocks and modified A-not-B tasks. Genetic contributions were measured using polygenic score for educational attainment. The data for future studies have been gathered using A-not-B (at 8 months), Snack Delay (30 months), Spin the Pots (30 & 60 months), EF Touch (60 months) and Delay of Gratification (60 months) for EFs (i.e. inhibition, working memory), and Brief Infant Sleep Questionnaire (BISQ) (6 & 12 months) and The Sleep Disturbance Scale for Children (SDSC) (24, 48 & 60 months) for sleep. Approximate N for analyses is 200-300.

### Results

In Study 1, no association was found between mother and infant EF, but a modest but robust link between maternal EF and infant attention (i.e., a precursor of EF) was revealed in girls ( $B = 0.08$ ,  $p = 0.031$ ) (1).

### Conclusion

In Study 1, the association between maternal EF and infant attention was modest and revealed only in girls. Mother-infant EF association was not observed though such associations may be present a little later in infancy, when children's EF has further matured. Both maternal EF and genetic factors contribute to infant attention but likely through different pathways. Sex may be a relevant factor to take into consideration in future research.

We will continue looking for sources of individual variation in EF development. Associations between different sleep patterns and EF in infancy will be explored. Developmental trajectories of EF from infancy to preschool years are examined. We are also interested in how sleep patterns/sleep problem profiles in early childhood are related to EF trajectories.

1= Karonen, A., Kataja, E-L., Bridgett, D. J., Paunio, T., Kantojärvi, K., Korja, R., Karlsson, H., Karlsson, L., & Nolvi, S. Maternal Executive Functioning is Associated with Infant Sustained Attention, but not Executive Functioning, in a Sex-Specific Manner. Accepted.

**425**

### **Event-related brain potentials to speech, and their relation to early print exposure and family risk for dyslexia.**

Ariane Tretow<sup>1</sup>, Daria Khanolainen<sup>2</sup>, . the JLD team<sup>3</sup>, Jarmo Hämäläinen<sup>1</sup>, Minna Torppa<sup>2</sup>, Paavo H. T. Leppänen<sup>1</sup>

<sup>1</sup>Department of Psychology, University of Jyväskylä, Jyväskylä, Finland. <sup>2</sup>Department of Teacher Education, University of Jyväskylä, Jyväskylä, Finland. <sup>3</sup>University of Jyväskylä, Jyväskylä, Finland

#### **Abstract (max 500 words)**

##### Objective

We set out to relate children's environmental factors during literacy development to their brain responses to speech stimuli, all in respect to their later reading skill outcomes. Previous findings have shown environmental, and brain related factors to be linked to reading development, but have not displayed the relations when incorporating both factors. It is unknown whether speech-related brain responses could be influenced by environmental factors such as home literacy environment (HLE) practices. We investigated the influence of child's print exposure and brain responses to speech on later reading development, in a longitudinal investigation from pre-school to third grade.

##### Methodology

Our hypothesis was investigated in a sample of children with and without family risk for dyslexia (N dependent on time point and variable entered, e.g. family risk N=198, ERP age six N = 64). A longitudinal path model was constructed considering children's print exposure (out of own interest and parental), brain responses to speech stimuli recorded via electroencephalogram (EEG), as well as children's later

reading skills (fluency and accuracy). The family risk status for dyslexia and parental education were included in the model. As a secondary step, cognitive skill variables were entered in order to verify the stability of the results. Furthermore, a mediation analysis between print exposure, event related potentials (ERPs) and reading skill was conducted to obtain insight of the influence of print exposure (own or parental) on ERP responses and reading skill outcome at third grade.

## Results

Our data reveals that family risk for dyslexia affects the brain responses directly, with the presented effect not running via own or parental print exposure. However, the paths of parental education and family risk did not reach significance towards own and parental print exposure in the main model with ERP responses and later reading skills. Children with richer own print exposure at pre-literate age display smaller N250 amplitude to speech stimuli at age six, and correspondingly develop more accurate reading skills at grade three. The finding of earlier own interest in print exposures relatedness to ERP at age six remained when controlling for children's cognitive skills (RAN, first grade reading, letter knowledge, vocabulary, phonological awareness).

## Conclusion

This study demonstrates how the relation between environmental factors, brain responses and reading skill outcome can provide more insight into the development of a child's reading ability, and answer in part how these variables are related to each other in a longitudinal setting. It further encourages the cross domain consideration of brain responses and environmental factors in developmental reading research.

**427**

## **SIGNALLED NIGHT AWAKENING AND ITS ASSOCIATION WITH EXECUTIVE FUNCTIONING IN INFANCY AND SCHOOL-AGE**

Tiina Mäkelä<sup>1</sup>, Mikko Peltola<sup>1</sup>, Outi Saarenpää-Heikkilä<sup>2</sup>, Tiina Paunio<sup>3</sup>, Juulia Paavonen<sup>3</sup>, Anneli Kylliäinen<sup>1</sup>

<sup>1</sup>Tampere University, Tampere, Finland. <sup>2</sup>Tampere University Hospital, Tampere, Finland. <sup>3</sup>National Institute for Health and Welfare, Helsinki, Finland

### **Abstract (max 500 words)**

#### Objective of the study

In infancy executive functioning (EF) begins to develop and the development of EF continues into early adulthood. In adulthood and adolescence, it has been extensively shown that difficulties in sleep impair performance of executive function related tasks, but whether signaled night awakening is associated with EF in infancy is unknown. Due to the long course of maturation of EF and its strong associations

with the frontal lobes, it is suggested that EF might be especially vulnerable to the effects of sleep difficulties in infancy. In the current study, EF was investigated longitudinally in infants with and without signaled night awakenings within the first two years of life and again at 8 years of age.

### Methodology

Infants with (n=75,  $\geq 3$  awakenings in a night) and without signaled night awakenings (n=63,  $\leq 1$  awakening in a night) at 8 months of age were studied within the CHILD-SLEEP birth cohort at 8 and 24 months of age. At both ages, a computerised task (Switch task) was used as a measurement of infant EF. At 24 months of age, in addition to the computerised task, behavioural tasks and a parent-rating of EF (BRIEF-P) were used. At 8 years of age, parent-ratings of EF (BRIEF) was repeated and a go/no-go task was performed as a measure of EF at school-age.

### Results

The Switch task data showed that infants with signaled night awakenings were less able to learn new stimulus sequences and to inhibit their responses to a previously cued location compared to infants without signaled night awakenings at 24 months of age. At 8 months of age, there were no differences between the two groups in their EF performance. Contrary to our expectations, parent-ratings and behavioural tasks of EF did not reveal differences between the two groups at 24 months of age. The 8-year-old data are currently being analysed and will be ready by the time of the conference. These data will show whether the differences between the two groups in EF are sustained and associated with parent-ratings.

### Conclusion

According to our results, it seems that the development of EF follows somewhat distinctive pathways in infants with and without signaled night awakenings. Our partly conflicting results in infancy could be explained with the different methods used. Perhaps the computerised methods are more sensitive for detecting small differences between groups than traditional methods of EF. Further studies within the cohort at 8 years of age will reveal whether the differences between groups remain, increase or diminish with age.

**430**

## **Executive function profiles from infancy to 5 years and associations with mother-child interaction quality**

Pauliina Juntunen<sup>1,2</sup>, Anniina Karonen<sup>1,2</sup>, Riikka Korja<sup>1,2</sup>, Saara Nolvi<sup>1,2,3</sup>, Akie Yada<sup>4</sup>, Eeva-Leena Kataja<sup>1</sup>, Eeva Eskola<sup>1,2,5</sup>, Eeva Holmberg<sup>1,2</sup>, Elisabeth Nordenswan<sup>1</sup>

<sup>1</sup>FinnBrain Birth Cohort Study, Turku Brain and Mind Center, Department of Clinical Medicine, University of Turku, Turku, Finland. <sup>2</sup>Department of Psychology and Speech-Language Pathology, University of Turku, Turku, Finland. <sup>3</sup>Turku Institute for Advanced Studies, University of Turku, Turku, Finland.

<sup>4</sup>Department of Education, Faculty of Education and Psychology, University of Jyväskylä, Jyväskylä, Finland. <sup>5</sup>Expert Services, Turku University Hospital, Turku, Finland

## **Abstract (max 500 words)**

### 1) Objective of the study

Executive functions (EFs) are higher-order cognitive and self-regulatory processes that underlie goal-directed behavior. Core EFs (inhibitory control, working memory and set-shifting) develop rapidly at 3-5 years and start to differentiate from one another during this period. As early childhood EFs have been linked with child outcomes such as academic performance, socio-emotional development and early-onset neuropsychiatric disorders, research on factors influencing EF development is called for to facilitate interventions supporting EF development. There is building evidence that positive parenting (e.g. maternal sensitivity) fosters child EF development and negative or harsh parenting may hinder child EF development. However, only little is known about the longitudinal developmental EF trajectories and how they relate to mother-child interaction. Especially little is known about the bidirectionality of these pathways, with recent research suggesting that strong child EFs may also improve interactions between mother and child. To fill these gaps in the literature, we will examine child EF profiles from infancy to 2.5 years to 5 years of age and explore how these profiles relate to mother-child interaction quality at 2.5 and 5 years.

### 2) Methodology

General EF was assessed at 8 months using a modified A-not-B task. Inhibitory control was assessed at 2.5 years using the Snack Delay task and at 5 years using the Forbidden Toy task, the Delay of Gratification task and two tasks from the EF Touch battery, Arrows and Go/No-Go. Working memory was assessed at 2.5 years using the Spin the Pots task and at 5 years using the Spin the Pots task and the Farmer task from the EF Touch battery. Mother-child interaction was measured at 2.5 and 5 years by analyzing a video-recorded 10-minute free play situation using the Emotional Availability Scales, which includes dimensions measuring interaction characteristics of both mother and child. Data collection has been finished (longitudinal N=148, cross-sectional N=370-500) and IRT analyses for EF measures have been completed. We will conduct latent profile analysis (LPA) to identify both cross-sectional and longitudinal EF profiles and random intercept cross-lagged panel modeling (RI-CLPM) to explore whether EF profiles are connected with mother-child interaction quality at 2.5 and 5 years.

### 3) Results expected

We expect to identify differential EF profiles that have continuity in a manner that children with high EFs in infancy remain in the high skill profile at 2.5 and 5 years. We anticipate better quality of mother-child interaction to be associated with the high EF profile across the follow-up.

### 4) Conclusion

We analyze the developmental trajectories of EFs between infancy and 5 years of age using LPA. In addition, we study associations between these profiles and parent-child interaction quality using RI-CLPM. In the symposium, analysis will be presented and results discussed.

432

## Early cognitive executive functions in toddlers with signs of ASD - associations between executive function skills and deficits in social behavior

Fiia Takio, Terhi Helminen, Elina Lehtonen, Jenni Lauttia, Heini Saarimäki, Anneli Kylliäinen

Faculty of Social Sciences/Psychology, Tampere University, Tampere, Finland

### Abstract (max 500 words)

#### Objectives of the study

Early toddlerhood is an essential developmental period for social skills and executive functions (EF), such as inhibitory control, working memory and flexibility. In typical development, better inhibitory control has been related to better child social interaction quality. Deficits in both social interaction and EF are present in developmental neuropsychiatric disorders such as autism spectrum disorder (ASD), but only little is known when and how EF deficits may emerge and how EF is related to social deficits. The aim of the present study was to investigate EF skills in prodromal stage of ASD and the possible associations between early EF and social skills observed in familiar (parent) and unfamiliar (stranger) social interactions.

#### Methodology

Twenty-three toddlers with signs of ASD according parent screener (M-CHAT-R/F), aged 13-30 months, participated in the study as a part of the longitudinal Gaze@Toddler study. ADOS-2 for Toddlers was applied to evaluate social skills and other ASD related behaviour. The BOSCC behavioral coding scheme was applied to code social interaction between the child and parent (N=18) from free-play situation. Parents also filled online the Early Executive Functions Questionnaire (EEFQ) suitable for 9-to 30-months old. From 31-items, 28 were questions concerning activities from everyday life. Three items were behavioral games for parents to play with their children to elicit particular behaviour. Four scales were calculated: Inhibition, Working memory, Flexibility, Regulation. Statistical analyses were conducted for the EEFQ Cognitive Executive Function (CEF) factor including questionnaire items from Inhibition (7 items,  $\alpha = .532$ ), Working memory (6 items,  $\alpha = .690$ ) and Flexibility (7 items,  $\alpha = .621$ ). The internal consistency for CEF was evaluated with Cronbach's alpha. The possible associations between CEF subscales and ADOS-2, and CEF subscales and BOSCC were evaluated with Pearson's correlation coefficients.

#### Results

The internal consistency for the CEF factor score evaluated by the Cronbach's alpha was .826 being equivalent to typically developing toddlers. Since the ADOS-2 score was positively correlated with age ( $r(21) = .433$ ,  $p = .039$ ), partial correlation was run to determine the relationships between CEF subscales and ADOS-2 total score, and between CEF subscales and BOSCC core score whilst controlling for age. Moderate, negative partial correlations between Working memory and ADOS-2 total score ( $r(20) = -.431$ ,  $p = .045$ ), between Working memory and BOSCC core score ( $r(15) = -.507$ ,  $p = .038$ ) and between Flexibility and BOSCC core score ( $r(15) = -.482$ ,  $p = .050$ ) were observed whilst controlling for age.

## Conclusions

Negative association between observed autistic social behavior and emergent executive functions, such as working memory skills and flexibility, indicate that the more the child had social deficits observed both in familiar (parent) and unfamiliar (stranger) social interactions, the more the child had difficulties in EF skills. Thus, early EF deficits may be present already before the age of three in toddlers with signs of ASD. The small sample size means that the present result can only be considered preliminary. However, our on-going study enables us to confirm these findings with larger sample size and comprehensive data analysis.

**433**

## **Essentialism Facilitates Anti-Immigrant Prejudice, Reduces Contact with Immigrants, and Explains Parent-Child Similarity in Anti-immigrant Prejudice**

Ioana Zagrean<sup>1</sup>, Marta Miklikowska<sup>2</sup>, Daniela Barni<sup>1</sup>

<sup>1</sup>LUMSA University of Rome, Rome, Italy. <sup>2</sup>Umea University, Umea, Sweden

### **Abstract (max 500 words)**

Despite the importance of nationality for our educational, healthcare, and work opportunities as well as for the assumptions we make about the social world, there has been little research into lay beliefs about nationality, the development of these beliefs, and their consequences for attitudes and behaviors toward members of national outgroups. To our knowledge, studies have mainly focused on essentialist beliefs about race and gender. Little work has instead been done on national essentialism, especially in formative adolescent years, and on behavioral consequences of these essentialist beliefs. National essentialism is a system of intuitive beliefs according to which social groups reflect biological distinctions (for example, "being Italian is written in blood") (Haslam, 2017; Medin & Ortony, 1989).

The first goal of this research was to examine the extent to which adolescents hold essentialist beliefs about nationality. We expected that essentialist beliefs would decrease across adolescent age-groups and that adolescents would be lower in national essentialism than children (Siddiqui et al., 2020) but higher than adults (Davoodi et al., 2020). The second goal was to examine the extent to which essentialist beliefs about nationality are shaped by social experiences. We expected that adolescents' essentialist beliefs would be positively associated with parental beliefs, but negatively with classroom ethnic diversity. The third goal was to examine the implications of essentialist beliefs for attitudes and behaviors toward national outgroups as well as for intergenerational transmission of prejudice. We predicted that adolescents' and parents' essentialist beliefs would be associated with higher anti-immigrant prejudice and less positive contact. We also expected that parent-child concordance in essentialist beliefs would contribute to explaining the intergenerational similarity in prejudice.

We involved a sample of Italian adolescents (N = 754, 57.6% girls) and their parents (N = 469, 59.7% mothers) from the city of Rome (91.1%), which resembles the national average on factors such as population density (4,355,725 residents), income level, and unemployment (34,8%) (ISTAT, 2018). The



sample was selected through the collaboration of two secondary schools and two high schools, located in different areas of the city, with the purpose of including participants of both genders, with varying social and cultural backgrounds, and assigned to both vocational and theoretical programs.

Adolescents and parents were asked to individually complete an anonymous, online questionnaire, after providing an informed consent. The data collection occurred at a single point in time, in March 2022. Adolescents' data collection took place during school hours in the presence of the principal investigator.

Our results showed that the level of adolescent essentialist beliefs about nationality decreased across adolescent age-groups and was higher than parents' essentialism. The results also showed that adolescents who had parents higher in essentialism and who attended less diverse classrooms expressed higher levels of essentialism. Adolescents and parents with higher levels of essentialism expressed higher levels of anti-immigrant prejudice and lower levels of contact with immigrants as well as that parent-adolescent concordance in essentialism partly explained the impact of parental prejudice on adolescent prejudice. We will discuss practical implications and future research developments.

**436**

## **Active, Passive, Standby? – Types of Political Activity and Its Correlates in Youth**

Katharina Eckstein<sup>1</sup>, Marta Miklikowska<sup>2</sup>, Jan Serek<sup>3</sup>

<sup>1</sup>University of Jena, Jena, Germany. <sup>2</sup>Umea University, Umea, Sweden. <sup>3</sup>Masaryk University Brno, Brno, Czech Republic

### **Abstract (max 500 words)**

Youths' active involvement in the public sphere is the foundation of a vital democracy. Large-scale surveys repeatedly showed that young people are politically active and involved in many ways and, for instance, characterize the face of political movements striving for environmental and societal change. Still, longitudinal studies allowing to examine predictors and changes in youths' political engagement are scarce. Moreover, most research to date has concentrated on the question whether young people are actively engaged or not. Recent studies suggest going beyond the dichotomy and to distinguish between active citizens (politically engaged and interested), passive citizens (not engaged and not interested), and standby citizens (interested, but not politically engaged). Drawing on longitudinal data the goal of the present study was threefold: (1) To confirm the differentiation between active, passive, and standby citizens within a sample of European youth; (2) to examine whether the identified profiles differ according to youths' socio-demographic characteristics (i.e., age, gender, immigrant background, SES); (3) to consider stability and changes in engagement profiles across time as well as predictors thereof (e.g., internal political efficacy, dissatisfaction with democracy, political cynicism).

The study draws on a subsample of the pan-European Project "Constructing Active Citizenship Among European Youth" (Catch-E-yoU). Young people from Germany, Sweden, Czech Republic, and Italy were surveyed at two time points over the course of one year (N= 5,495; 56.7% female; Mage = 20.1 years).

Person-centered statistical approaches (i.e., latent profile and latent transition analysis) were used to identify subgroups of young people depending on their level of political interest and engagement.

The results showed that a 3-class solution fit the data well at both time points. In line with the expectation, a passive (49.4%), standby (37.1%), and active (13.7%) profile could be identified. Univariate equality tests with post-hoc comparisons revealed few differences according to socio-demographic background factors (e.g., gender, SES, immigrant background). Moreover, longitudinal analysis showed a considerable level of stability in the passive and standby pattern, while the active pattern was less stable across time (transition probability from active at T1 to standby at T2: 42.2%). Youths' internal political efficacy and political cynicism explained transitions from the active profile at T1 to a less active profile at T2.

The study contributes to a better understanding of youths' political engagement. It will be discussed in detail, in how far a politicized or polarized environment, as it is the case during election periods or unpredictable political crises, provides opportunities to reach out to young people who are likely to abstain from politics, but also to lose some young people who may further withdraw from the political domain.

**437**

### **Active youth, happy youth? The relation between different forms of civic participation and well-being**

Jan Serek, Michal Mužík, Dana Seryjová Juhová

Masaryk University, Brno, Czech Republic

#### **Abstract (max 500 words)**

Young people's civic participation is often framed positively in terms of empowerment and a stronger voice in society. However, besides its societal impact, civic participation also represents a part of one's individual development, and as such, it can have both positive and negative consequences for well-being. Previous research has demonstrated some reliable associations between young people's civic participation and the indicators of well-being (Albanesi et al., 2007; Hart et al., 2014; Klar & Kasser, 2009). However, only limited attention has been paid to the systematic investigation of potential differences between various forms of civic participation (Ballard & Ozer, 2016; Ballard et al., 2019; Kim & Morgül, 2017; Wray-Lake et al., 2019). To address this gap, this study investigates the relation between three forms of civic participation and well-being. Specifically, we focus on protest participation (e.g., demonstrating), institutional participation (e.g., helping a political party), and volunteering (e.g., helping the needy). Well-being is understood as indicated by emotional well-being, psychological well-being, social well-being, stress, and depressive mood.

We analyzed data from the initial wave of the ongoing longitudinal study on civic participation and well-being. Participants were late adolescents and young adults from the Czech Republic, N=995; 71%

females; age 18-30,  $M=23.6$ . Data were collected from October to December 2022 using online questionnaires involving several self-rating scales (e.g., MHC-SF, PSS-4, etc.).

Results from structural equation modeling showed that civic participation was most strongly related to social well-being ( $R^2=.14$ ). Specifically, there was a positive relation to institutional participation ( $\beta=.30$ ) and volunteering ( $\beta=.19$ ) but a negative association to protest participation ( $\beta=.14$ ). Institutional participation was also related to smaller perceived stress ( $\beta=-.27$ ), less depression ( $\beta=-.17$ ), and greater psychological well-being ( $\beta=.21$ ). In contrast, protest participation was associated with greater perceived stress ( $\beta=.19$ ) or slightly worse emotional well-being ( $\beta=-.14$ ).

These results corroborate previous findings on mixed associations between civic participation and well-being. Similar to some previous studies, mixed results are given mainly by protest participation which seems to be characterized by a lacking or even negative association with well-being. A potential explanation can consist in changing perceptions of the social and political system – its fairness and responsiveness. However, the directionality of the associations between civic participation and well-being must be interpreted only with caution, considering the cross-sectional nature of our data. Thus, civic participation may affect well-being, but at the same time, well-being may serve as a prerequisite for civic participation. We believe that follow-up waves of our longitudinal data collection in the Spring and Summer 2023 will help us gain greater insight into this issue.

**441**

## **Developmental Links between Wellbeing, Self-Concept and Prosocial Behaviour in Early Primary School**

Caoimhe Dempsey<sup>1</sup>, Rory Devine<sup>2</sup>, Elian Fink<sup>3</sup>, Claire Hughes<sup>1</sup>

<sup>1</sup>Centre for Family Research, University of Cambridge, Cambridge, United Kingdom. <sup>2</sup>School of Psychology, University of Birmingham, Birmingham, United Kingdom. <sup>3</sup>School of Psychology, University of Sussex, Brighton, United Kingdom

### **Abstract (max 500 words)**

**Objectives.** Wellbeing is a key dimension of children’s education from the start of school, yet measurement issues have limited studies in the early primary school years. Using a recently developed child self-report measure of school wellbeing (Allen et al., 2018), the current longitudinal study examines the stability of school wellbeing and developmental links with academic self-concept and prosocial behaviour.

**Methodology.** Across a 12-month interval that straddled the transition from Reception Year (Time 1) to Year 1 (Time 2), we tracked a sample of 202 children (T1 child  $M$  age = 5.3,  $SD = .46$ , 54.3% girls), who rated their school wellbeing and academic self-concepts at both time-points; in addition, we gathered parental ratings for child school wellbeing and prosocial behaviour at both time-points. We used cross-lagged analyses to investigate developmental links between these three key constructs.

**Results.** Parent and child reports of school wellbeing showed similar stability over time and converged by Time 2. Girls reported greater school wellbeing than boys at both timepoints and received higher parental ratings of wellbeing than boys at Time 2. Cross-lagged analyses showed that parent and child reports of wellbeing display similar stability and converge over time. For both girls and boys, associations between wellbeing and self-concept / prosocial behaviour were asymmetric: early wellbeing predicted later self-concept and prosocial behaviour, but the reciprocal associations were not significant.

**Conclusions.** These findings support young children's reliability as reporters on their wellbeing, highlight the early onset of gender differences in school wellbeing and demonstrate that early wellbeing heralds later prosocial behaviour and positive academic self-concepts.

**443**

## **Prenatal parental identity predicts parental burnout in first-time parents: A longitudinal approach**

Wim Beyers, Charlotte Schrooyen, Bart Soenens

Ghent University, Ghent, Belgium

### **Abstract (max 500 words)**

Although it has long been recognized that parenting is sometimes stressful, the theme of parenting stress has gained renewed attention since the observation that it can lead to parental burnout (Roskam et al., 2017; Roskam et al., 2021). Parental burnout is not the same as ordinary parenting stress (Brianda et al., 2020) but occurs when parenting stress severely and chronically overwhelms parents' resources to cope (Mikolajczak et al., 2020). In other words, it is a consequence of a chronic imbalance between risks and resources in the parenting domain (Hubert & Aujoulat, 2018; Mikolajczak & Roskam, 2018). Parental burnout is a known risk factor for psychopathology (Mikolajczak et al., 2019) and child maltreatment (Moons et al., 2010). However, in order to prevent this type of detrimental outcomes, we need more knowledge on important predictors of parental burnout. From a prevention perspective it's needed to look at the first phases of development of parental burnout, that is, as soon as adults become first-time parents. Earlier research on parental identity (Piotrowski, 2018) showed that a strong parental identity commitment was associated with positive mental health outcomes such as life satisfaction, whereas ruminating about the parental role was associated with negative mental health outcomes such as anxiety. Parental identity development however does not start after the first child is born, but well before this life event.

In this study we gathered online data on parental burnout in a sample 677 young parents, 1 and 2 years after the birth of their first child. Data on identity-related predictors of parental burnout (Schrooyen et al., 2021) were gathered in the third semester of pregnancy during home visits.

A Latent Change Model revealed no mean change in parental burnout between 1 and 2 years of the child. However, both level and change in parental burnout showed substantial variance, indicating large interindividual differences in degree of and change in parental burnout. Concretely, levels varied between low (1.21) and very high (4.37) parental burnout, and changes varied between decreases (-

1.50) and increases (+1.84) in parental burnout between 1 and 2 years of the child . Initial exploration of prenatal identity correlates of level and change in parental burnout revealed interesting findings. A strong parental identity commitment (Schrooyen et al., 2021) during the third trimester of pregnancy correlated with lower levels of parental burnout (-.18\*\*), whereas rumination about the parental role correlated with higher levels of parental burnout more than a year later (.26\*\*\*). Rather than quality of motivation, it was lack of motivation or amotivation for becoming a parent that correlated with higher levels (.20\*\*\*) and higher increases (.14\*) of parental burnout more than two years later. Further analyses will distinguish different parent profiles based on their parental identity and relate this to later development of parental burnout. Results of this study are informative for prevention and intervention work tackling parental burnout.

**445**

## **Listen to the Language – Age Differences in Empathic Accuracy Vary by Language and Modality**

Andrea Schlesier-Michel, Michaela Riediger

University of Jena, Jena, Germany

### **Abstract (max 500 words)**

Empathic Accuracy (EA) - the ability to infer what another person thinks and feels – is considered a crucial interpersonal skill for building and regulating relationships. EA requires the integration of information from various channels or modalities, including interpreting the interaction partner's facial expressions, prosody and other paralinguistic information, in addition to verbally conveyed information. Previous research suggests possible age-related declines in EA across adulthood, although the evidence is not yet conclusive. Age-related decline is typically observed when information channels are restricted to nonverbal or paralinguistic modalities of information (e.g., when emotions are to be recognized from facial expressions, voices and body gestures that were presented in absence of any verbal information; e.g. Ruffman et al., 2008). According to Ickes (2016), however, EA is based only to 10-20% on nonverbal information and only to ~30% on paralinguistic cues, while the major source of EA is verbal information (50-60%). In fact, measuring EA in more naturalistic settings, which also provide verbal information, yields a less clear picture of adult age differences (Riediger & Blanke, 2020). The purpose of the present study therefore was to investigate the relevance of different modalities of information for adult-age differences in EA. We expected age differences in EA to be more pronounced when only nonverbal and paralinguistic information was available as compared to when verbal information was provided as well. To create equivalent experimental stimuli that vary across information modalities, we recorded videos of three bilingual persons, reporting one time in German and a second time in their other language (which study participants did not understand) about positive and negative experiences, also obtaining self-reports of their feelings while recalling the events. In an online study,  $N = 123$  participants ranging from 18 to 74 years of age (80.5% female) were presented with these recordings and reported which feelings they thought the target had experienced when recalling the event. Correspondence with the targets' respective self-reports served as indicator of EA. Participants were randomly assigned to either the German or the unknown-language condition and watched/listened to three different recordings, providing only audio, only visual, and both audio and visual information. Contrary to our hypothesis, age

was only related to EA when participants could understand the verbal information provided (i.e., for German audio files and German full video recordings), with older adults being less empathically accurate in these conditions. Age was unrelated to EA when only visual information was available or when verbal information was provided in a language that participants did not understand. Results are discussed in light of the roles of verbal understanding and of wanting to understand for adult age differences in EA.

446

## **Intergenerational transmission of self-esteem in adolescence: a longitudinal study**

Eirini-Spyridoula Mastellou, Spyridon Tantaros

Department of Psychology, National & Kapodistrian University of Athens, Athens, Greece

### **Abstract (max 500 words)**

Global self-esteem has been documented from recent surveys as a determinant of important life outcomes, especially during the crucial period of adolescence, demonstrating the importance in the study of this variable. Differences in self-esteem have been studied in the light of individual demographic characteristics such as age, gender, birth-order as well as their interaction. As the relevant findings seem to be still inconclusive, the examination of these differences in self-esteem was one of the objectives of this research. Furthermore, focusing on the developmental trajectory and formation of self-esteem, considerable evidence are indicated an enduring impact on adolescent's self-esteem by parents, which may refer to an intergenerational transmission of self-esteem; however, the intergenerational transmission of self-esteem is still an open field of research. The main goal of this study aimed to determine whether such intergenerational transmission occurs by examining the longitudinal relations between mother's self-esteem and her offspring's self-esteem in adolescence. In the context of a broader research HFRI-funded doctoral thesis project, one hundred and sixty-two dyads of mothers and their 14-year-old adolescent offspring participated who filled-in via e-forms the "Rosenberg Self-Esteem Scale" (Rosenberg, 1965, standardization in Greek Spanea et al., 2005) following a longitudinal research design (one year interval). Analyses indicated gender and birth order differences among the sample of adolescents, showing that higher score of self-esteem was reported by males rather than females and by first-born rather than second-born adolescents respectively, with a significant interaction effect between gender and birth order showing that first-born males adolescents reported the highest scores in self-esteem of any others combinatorial groups. With respect to age differences, adults (mothers) reported higher scores in this variable than adolescents. Self-esteem seemed to be stable for mothers but not for adolescents as it seemed to increase from T1 to T2, confirming the respective hypothesis. Consistent with previous research, mother's self-esteem was associated with and predicted her offspring's self-esteem in each wave. Results highlight that mother's self-esteem positively predicted self-esteem of her offspring one year later confirming the hypothesis of intergenerational transmission of self-esteem in adolescence. The practical applications according to findings on intergenerational transmission of self-esteem are discussed with reference to planning prevention and intervention programs for adolescents and their families.

Acknowledgment: The research work was supported by the Hellenic Foundation for Research and Innovation (HFRI) under the HFRI PhD Fellowship grant (Fellowship Number: 891).

447

## Well-being at school for children with Down syndrome: A cross-informant approach

Hana D'Souza<sup>1</sup>, Elian Fink<sup>2</sup>, Rory Devine<sup>3</sup>, Claire Hughes<sup>4</sup>, [Laura Katus](#)<sup>5</sup>

<sup>1</sup>School of Psychology, Cardiff University, Cardiff, United Kingdom. <sup>2</sup>School of Psychology, University of Sussex, Brighton, United Kingdom. <sup>3</sup>School of Psychology, University of Birmingham, Birmingham, United Kingdom. <sup>4</sup>Centre for Family Research, University of Cambridge, Cambridge, United Kingdom. <sup>5</sup>University of Greenwich, Greenwich, United Kingdom

### Abstract (max 500 words)

**Objectives.** It is increasingly recognised that children's wellbeing at primary school has implications for both academic success and social outcomes, however, wellbeing for young neurodivergent pupils at school is rarely examined. Using a recently developed child- and parent-report measure of wellbeing at school (How I Feel About My School scale, HIFAMS; Allen et al., 2018), the current study examines; (a) the factor structure of self-reported well-being for children with Down syndrome (DS), (b) the cross-informant consistency of school well-being as rated by parents and children, and (c) the association between school well-being and emotional and behavioural problems for primary school children with DS.

**Methodology.** 63 primary school children with DS (Mage = 9.0 years, SD = 1.4, 54% female) and their parents completed the 7-item HIFAMS school well-being questionnaire. The HIFAMS, designed for neurotypical children between 4 and 8 years of ages, assesses the degree of positivity that children feel across different school-related situations (e.g., in the classroom, in the playground, their teacher, etc.). Parents also completed the Strengths and Difficulties Questionnaire (SDQ; Goodman, 2001) to assess their child's emotional and behavioural problems. Children completed the British Picture Vocabulary Scale (BPVS; Dunn et al., 2009) and Raven's Colored Progressive Matrices (RCPM; Raven et al., 1990) as measures of verbal and non-verbal IQ respectively.

**Expected results.** We expect the factor structure of the HIFAMS for children with DS to broadly mirror that found for neurotypical children, that is, all items will load onto a single school wellbeing factor. However, compared to neurotypical children, we expect that children with DS will show less diversity across items, that is, children with DS will be less likely to report differing levels of positivity across different school settings, although this may be a function of child IQ. Based on the findings of Allen et al. (2018) we expect low levels of consistency across child- and parent-report of the HIFAMS, although we predict that low levels of parent-rated school wellbeing will be associated with greater behavioural and emotional problems.

**Conclusion.** The current findings have important implications for how we understand and assess well-being for neurodivergent children.

**449**

### **Affect-Health Coupling from Adolescence to Old Age: Evidence from a Longitudinal Experience-Sampling Study**

Michaela Riediger<sup>1</sup>, Fabian Münch<sup>1</sup>, Jennifer Bellingtier<sup>1</sup>, Elisabeth Blanke<sup>1</sup>, Cornelia Wrzus<sup>2</sup>, Gloria Luong<sup>3</sup>

<sup>1</sup>University of Jena, Jena, Germany. <sup>2</sup>University of Heidelberg, Heidelberg, Germany. <sup>3</sup>Colorado State University, Fort Collins, USA

#### **Abstract (max 500 words)**

While there is consensus that physical and emotional well-being are related, divergent claims have been made about possible age-related differences. This study aimed to investigate potential age-related differences in concurrent and prospective associations between everyday affective experiences and individuals' health and physical well-being. We used two waves of measurement burst data (wave 1:  $N = 398$ , 12 – 90 years; wave 2:  $N = 365$ , 14 – 88 years; inter-wave interval:  $M = 2.53$  years). Per wave, participants provided 54 experience samples of their momentary affective and physical well-being. In addition, several person-level health indicators were assessed, including subjective health as well as number and severity of health conditions and complaints. Overall, results point to an age-related increase in affect-health coupling: The older participants were, the more strongly were health problems associated with lower concurrent affective well-being. Age moderations also emerged for prospective affect-health links, both across shorter (hours) and longer time intervals (years). Dynamical structural equation modeling showed an age-related increase in cross-lagged associations between individuals' time series of momentary emotional and physical well-being, assessed while participants pursued their normal daily routines. Similarly, moderated cross-lagged panel models yielded age-related increases in cross-lagged associations between everyday emotional well-being and indicators of physical health, assessed 2.5 years apart. Such age moderations emerged in both directions of cross-lagged associations (i.e., affect predicting later health, and health predicting later affect). This suggests that both the affective relevance of health impairments and the health-protective role of daily affective experiences may become more pronounced with advancing age.

**450**

### **The bidirectional effect between parental burnout and the child's internalized and/or externalized behaviors**

Aline Woine<sup>1</sup>, Moïra Mikolajczak<sup>1</sup>, Virginie Dardier<sup>2</sup>, Isabelle Roskam<sup>1</sup>



<sup>1</sup>Psychological Sciences Research Institute, UCLouvain, Louvain-la-Neuve, Belgium. <sup>2</sup>Department of Psychology, Université Rennes II, Rennes (Bretagne), France

### **Abstract (max 500 words)**

Becoming a parent is said to be the happiest event one can ever experience in one's life. This popular (and almost absolute) truth contrasts with the nuances that reality offers. Indeed, while many parents do thrive in their parenting role, some others falter and become progressively overwhelmed by their parenting role, ineluctably caught in a spiral of exhaustion. Parental Burnout (henceforth PB) sets in when parental demands (stressors) exceed parental resources. The young (but already abundant) literature on the subject emphasizes the importance of addressing the syndrome because of the deleterious effect it has, amongst others, on the parent's behavioral attitudes towards their children. More specifically, recent research has shown that PB was a trigger for parental negative behaviors such as neglect and (physical and/or psychological) violence toward the child. Thus, while it is now generally acknowledged that PB affects the parent's behavior in terms of neglect and violence toward their offspring, little is known about the impact that the syndrome might have on the children's internalized (anxious and depressive symptoms, somatic complaints, etc.) and/or externalized (irritability, violence, aggressiveness, conduct disorder, oppositional disorder, etc.) behaviors. Furthermore, at the time of writing, no research has yet tested the reverse effect, namely, that of the child's internalized and/or externalized behaviors on the onset and/or maintenance of parental burnout symptoms. The present pioneering research proposes to fill an important gap in the existing literature related to PB by investigating the bidirectional effect between PB and the child's internalized and/or externalized behaviors. Relying on a cross-lagged longitudinal study with three waves of data collection (4 months apart), our study tests a transactional model with bidirectional and recursive relations between observed variables and at the three waves, as well as autoregressive paths and cross-sectional correlations. As we write this, wave-two data are being collected via Qualtrics and we expect a final sample of about 600 participants composed of French-speaking (snowball sample) and English-speaking (Prolific sample) parents. Structural Equation Modelling is employed using Stata version 17 and R version 4.2.2.. In order to retain as much statistical power as possible, we use all available data and therefore apply the maximum likelihood with missing value (mlmv) as the method of estimation to compute the parameters estimates. To limit (in so far as possible) the shared method variance bias in the evaluation of the child's behavior, the study relies on a multi-informant evaluation approach. We expect our three-wave longitudinal study to show that PB symptoms (measured at T1) raises the occurrence/intensity of the child's externalized and/or internalized behaviors (measured at T2 and T3). We further expect the child's occurrence/intensity of externalized and/or internalized behaviors (measured at T1) to augment the risk for PB (measured at T2 and T3). Should our hypotheses be confirmed, our results will make an important contribution to the understanding of both PB and children's behavioral issues, thereby opening interesting theoretical and clinical avenues.

**451**

**On a meta-need for autonomy in adolescence and emerging adulthood: development of an "authentic inner compass" in relation to parents', educators', and friends' practices**

Elisavet Chrysochoou<sup>1</sup>, Eleftheria Gonida<sup>1</sup>, Nikolaos Paraskevaïdis<sup>1</sup>, Avi Assor<sup>2</sup>

<sup>1</sup>School of Psychology, Aristotle University of Thessaloniki, Thessaloniki, Greece. <sup>2</sup>Department of Education, Ben-Gurion University of the Negev, Beersheba, Israel

### **Abstract (max 500 words)**

The present paper discusses evidence from a recently conducted project on adolescents' and emerging adults' experience of an authentic inner compass (AIC), a key facet of Assor's (2018; Assor et al., 2023) meta-need for autonomy, in relation to supportive socializing practices of significant others (parents, educators, friends). The AIC is defined as one's perception and feeling of knowing what is truly important to her/himself because one has explicit and articulable core preferences (values, general need satisfying aspirations, and personal preferences), as well as long-term goals and commitments derived from such preferences, that feel authentic. Participants were 410 adolescents (14- to 17-year-olds, mean age = 16.05; secondary school students) and 268 emerging adults (18- to 25-year-olds, mean age = 21.96; university students mostly, and some already employed) in Greece. Participants were administered questionnaires regarding (a) their AIC experience, (b) the supportive practices (fostering inner valuing, support for value examination, and inherent value demonstration) of adolescents' parents and educators, and emerging adults' parents and friends, (c) youth development and resilience outcomes, including self-congruence, vitality versus depressive feelings, resistance to peer influence, and (d) young individuals' autonomous and persistent engagement in the pursuit of goals and plans. Data analysis is in progress with the aim of developing a comprehensive model of AIC formation in the specific significant periods for the development of autonomy, in relation to key socializing antecedents and positive youth development outcomes. Preliminary analyses conducted to address questions stemming from the limited, yet currently increasing relevant evidence, have demonstrated the following general trends: (a) greater perceived formation of an AIC in emerging adults versus adolescents, and particularly, among girls/women versus boys/men, (b) significant contributions of all supportive practices to the prediction of an AIC formation, especially in the case of girls'/women's sub-samples, (c) greater predictive capacity demonstrated by inherent value demonstration by each significant other (parent, educator, friend), relative to the fostering inner valuing and support for value examination practices, (d) higher levels of perceived parental support in adolescents relative to emerging adults, (e) a significant mediating role of the AIC in the contributions of supportive practices to youth development and resilience outcomes, as well as to young individuals' autonomous and persistent engagement in the pursuit of goals and plans, and moderation of these mediation patterns by developmental phase (i.e., the AIC has a stronger mediating effect in the emerging adults' sample). The findings from the Greek context will be discussed within Assor's broader conceptualization of autonomy, as a meta-need for self-direction, and recent evidence on the development of an AIC and its antecedents and outcomes, considering possible cultural effects.

**452**

### **Is Civic Engagement More Beneficial in Older Age? It Depends on the Country You Live in**

Maria K. Pavlova, Matthias Lühr

University of Vechta, Vechta, Germany

### **Abstract (max 500 words)**

Civic engagement is believed to improve well-being of engaged individuals, especially in old age, but prior evidence on such effects is inconclusive. In the present studies, we used the cross-sectional data from Round 6 (2012) of the European Social Survey (ESS) to investigate the variation in the associations between civic engagement and eudaimonic and social well-being across types of engagement (nonpolitical volunteering vs. political participation), age groups, and European countries. Eudaimonic well-being encompassed sense of direction, flow experiences, sense of competence, and learning new things. Social well-being was measured by generalized trust, perceived social support, and low loneliness. Study 1 tested for individual-level associations and age differences (preregistered at <https://osf.io/2p9sz> and <https://osf.io/6twqe>). Two-level multiple regression with a broad range of control variables showed that the associations between civic engagement and well-being indicators were small on average. Nonpolitical volunteering had significantly more positive effects than did political participation, but few significant age differences emerged. Study 2 addressed the country-level variables that might account for the large cross-national variation in the main effects of civic engagement (preregistered at <https://osf.io/mq3dx>). Only GDP per capita was a significant moderator at the country level: The links between nonpolitical volunteering and eudaimonic well-being were more positive in the European countries with lower GDP. Other country-level variables (Gini coefficient, social welfare spending, and democracy indices) yielded no consistent moderation effects. Study 3 investigated potential country-level explanations for the substantial cross-national variation in whether younger or older adults appeared to benefit more (preregistered at <https://osf.io/7ks45>). None of the country-level variables considered (effective retirement age in men, life expectancy at 65, average age of members of the national parliament and cabinet, and youth unemployment rate) could explain this variation. We conclude that there is no general rule regarding age differences in the effects of civic engagement on well-being. Given the large cross-national variation, more attention to national specifics is warranted.

455

### **An Examination of the Relationship Between Childhood Victimization and Eating Disorders in Emerging Adults**

Panagiota Mastrosavvaki, Maria Markou, Panayiotis Stavrinides

Department of Psychology, University of Cyprus, Nicosia, Cyprus

### **Abstract (max 500 words)**

According to previous research, childhood school bullying (CSB) is one of the most important risk factors for the development of eating disorders and subclinical symptoms of eating disorders, such as disordered eating behaviors (DEB). However, despite empirical findings pointing to DEB as a potential outcome of CSB, important questions remain regarding particularly the mechanisms involved in the development of DEB during emerging adulthood. The high rates of DEB in emerging adulthood, as well

as the negative physical and psychological effects that have been associated with DEB highlight the need for early detection and targeted interventions for this population.

This paper presents a follow up of an earlier study regarding the examination of the relationship between Childhood Victimization and Eating Disorders in Emerging Adults (Markou et al., 2021). The results of the first study were analyzed through Interpretative Phenomenological Analysis indicating that emerging adults who have suffered from CSB interpret DEB on the basis of how they are triggered and developed, as well as on the ways they are maintained. The main finding was that emerging adults experience their DEB because of their experience with CSB.

The present study extends this line of research, aiming to verify the results regarding child victimization and eating disorders and behaviors. Specifically, through qualitative methodology, it seeks to examine (a) how these factors contribute to the relationship between the negative effects of CSB and the development of DEB in emerging adulthood, as well as (b) how emerging adults with CSB experience and interpret DEB. Specifically, the experience of DEB in emerging adults who have suffered from CSB is examined using semi-structured interviews. The sample consists of 15 individuals who are selected based on their scores on questionnaires for DEB and CSB [The Retrospective Bullying Questionnaire (RBQ; Schaefer et al., 2004); The Eating Disorder Examination Questionnaire (EDE-Q; Fairburn & Beglin, 1994; Giovazolias et al., 2013)], which have been administered to them in the context of the earlier study described above. The analysis of the interviews is based on Interpretive Phenomenological Analysis. Overall, the present research provides further evidence, highlighting the role of CSB in the development of DEB in emerging adulthood, as well as new insights into how emerging adults with CSB experience DEB.

456

## Parental burnout and distance education arrangements during COVID-19 pandemic: A mixed methods study

Matilda Sorkkila<sup>1</sup>, Maarit Alasuutari<sup>2</sup>, Eija Pakarinen<sup>3</sup>, Johanna Lammi-Taskula<sup>4</sup>, Noona Kiuru<sup>1</sup>, Kaisa Aunola<sup>1</sup>

<sup>1</sup>Department of Psychology, University of Jyväskylä, Jyväskylä, Finland. <sup>2</sup>Department of Education, University of Jyväskylä, Jyväskylä, Finland. <sup>3</sup>Department of Teacher Education, University of Jyväskylä, Jyväskylä, Finland. <sup>4</sup>Finnish Institute for Health and Welfare, Helsinki, Finland

### Abstract (max 500 words)

*Objective of the study.* Although it has been shown that COVID-19 pandemic and related lockdowns have been challenging for many families, very few studies have assessed the relationship between children's distance education and parental burnout. This mixed methods study examined whether the time parents spent on their children's distance education and felt responsible of it was associated with parental burnout. Furthermore, we enabled parents to describe their experiences about distance education in their own words. *Methods.* The participants were 634 parents (89% mothers) with at least one school-aged child, who answered a questionnaire during the COVID-19 lockdown in Finland in the

spring of 2020. The quantitative data was analyzed using analysis of covariance and linear regression, and qualitative data was analyzed using thematic analysis. *Results.* The results showed that parents who spent more with their children's distance education and experienced being responsible for it were more burned out than parents who experienced the responsibility being with children's teacher. Parents experienced distance education as time-consuming, causing problems for everyday coping, and decreasing their children's well-being. *Conclusion.* The present study offered a unique and holistic perspective to the challenges of COVID-19 pandemic by combining quantitative information about parental burnout and children's distance education with parents' own voices. It will be discussed how the results can be used in developing distance education to meet better needs of different kinds of families and in supporting families' well-being.

457

## Mind-mindedness and Children's Feelings About School: A Hong Kong Study

Ho Pui Catherine WU<sup>1</sup>, Zhenlin Wang<sup>2</sup>, Claire Hughes<sup>1</sup>

<sup>1</sup>Centre for Family Research, University of Cambridge, Cambridge, United Kingdom. <sup>2</sup>Department of Psychology, The Education University of Hong Kong, Hong Kong SAR, China

### Abstract (max 500 words)

**Objectives.** Mind-mindedness (defined as caregivers' propensity to view a child as an agent with individual thoughts and feelings) has been shown to promote children's school readiness (Bernier et al, 2017); emotion regulation (McMahon & Newey, 2018; Zeegers et al., 2018); and to mitigate the risk of disruptive behaviour (Hughes, Aldercotte & Foley, 2018). However, the scarcity of developmentally appropriate child self-report measures of early wellbeing has limited investigation into whether mind-mindedness is also related to children's feelings about school. To address this gap, we applied a newly developed child measure (How I Feel About My School: HIFAMS, Allen et al., 2018) that we have recently validated for use in Hong Kong. To expand the scope of this work, we also included children's ratings of maternal acceptance, to assess possible mediating and moderating roles of this construct.

**Methodology.** We recruited 240 parent-child dyads from 20 kindergartens in Hong Kong. Parent's mind-mindedness was assessed based on a 5-min speech sample that invited the parent to share what kind of a person their child is and how they get along together (Daley, Sonuga-Barke, & Thompson, 2003). Parents' responses were then recorded and later transcribed verbatim. We coded the transcripts using the scheme developed by Meins and Fernyhough (2015). Individual descriptions of the child were coded based on emotional valence (i.e., positive, neutral, negative) and mentalization of comments (i.e., mental, non-mental). To gather children's own view of their well-being at school, we used the seven-item 'How I Feel About My School' – HIFAMS (Allen et al., 2018). Similarly, parental acceptance was assessed using a 6-item pictorial scale developed by Harter and Pike (1984). Both measures were presented to children during zoom-based home visits. In addition, parents completed online questionnaires assessing the child's emotional symptoms and school well-being.

**Expected Results.** Based on research showing predictive associations between parental mind-mindedness and child positive outcomes (for a meta-analysis, see Aldrich et al., 2021), we expect that a higher level of mind-mindedness predicts a greater cross-informant agreement among parent-reported and child-reported HIFAMS. We expect that positive-valence mind-mindedness will be associated with higher child well-being at school, with child-perceived parental acceptance playing a mediatory role in this association.

**Conclusion.** In previous work we have shown that Hong Kong mothers appear less mind-minded than their UK counterparts (Hughes et al, 2018). Our current work examines the potential implications of this for children's school engagement, and we hope will foster increased parental sensitivity to children's mental states as they prepare for the transition to primary school.

458

## Asking Children About Their Feelings about School: Does Interview Context Matter? A UK-HK Comparison

Siu Ching Wong<sup>1</sup>, Ho Pui Catherine Wu<sup>1</sup>, Laura Katus<sup>2</sup>, Molly Leach<sup>3</sup>, Daisy Dunworth<sup>4</sup>, Claire Hughes<sup>1</sup>

<sup>1</sup>Centre for Family Research, University of Cambridge, Cambridge, United Kingdom. <sup>2</sup>School of Human Sciences, University of Greenwich, London, United Kingdom. <sup>3</sup>Newnham College, University of Cambridge, Cambridge, United Kingdom. <sup>4</sup>Downing College, University of Cambridge, Cambridge, United Kingdom

### Abstract (max 500 words)

**Objectives.** How I Feel About My School (HIFAMS) is a newly developed questionnaire that measures children's subjective happiness and wellbeing at school (Allen et al, 2018). Despite its promising psychometric properties, cross-format equivalence has yet to be established. Understanding the validity of children's responses being collected during zoom home-visits is important for remote research since the COVID-19 pandemic has changed how researchers gather data from children. Our first objective is to examine the equivalence of children's responses on school wellbeing gathered in virtual home visits and in-person school visits. Our second objective is to gather teachers' views on the utility of whole-class level feedback on HIFAMS scores for teachers' understanding of their students and educational practice.

**Methodology.** Our child sample includes 796 children in Hong Kong (62.8% Kindergarten year 2, 37.2% Kindergarten year 3 children, 49.6% girls) and 400 children in the United Kingdom (mean age = 5.3 years SD = 0.6, 54% girls). Our teacher sample includes 20 Kindergarten teachers in Hong Kong and 10+ Early Years teachers in the UK. We applied the 7-item child self-report measure: How I Feel About My School (HIFAMS; Allen et al., 2018) and controlled for covariates including gender, year group, type of school, stringency of pandemic measures during data-collection (Hale et al., 2021). For objective 1, we will use: (a) multi-group confirmatory factor analysis (CFA) to assess the factor structure across survey formats, and test for metric and scalar invariance; (b) differential item functioning analysis to test for item-level invariance; (c) t-tests to compare mean scores across sites and survey formats. For objective 2, we will

evaluate teachers' accuracy in predicting whole-class HIFAMS responses (e.g., % students who are happy doing classwork / when thinking about classmates) and explore their views regarding the utility of whole-class feedback on the HIFAMS.

**Expected Results.** Objective 1: We expect that a one-factor model had a good fit to the data across sites, with both samples (seen in both zoom home-visits and in-person school-visits) reporting relatively high levels of school wellbeing. Objective 2: We expect that teachers will find whole-class feedback on the HIFAMS useful in guiding their daily efforts to support children's school wellbeing.

**Conclusion.** This is the first study to examine effects of response context (within / outside school) for young children's self-reported school wellbeing, to examine possible cross-cultural differences in children's well-being, and to explore teachers' views on the utility of HIFAMS feedback. Our findings will therefore be valuable both for future child-centred research across the globe in the post-covid era and, we hope, for teachers' pedagogical practice.

468

## **Siblings in Lockdown: International Evidence for Birth Order Effects on Child Adjustment in the COVID-19 Pandemic**

Claire Hughes<sup>1</sup>, Luca Ronchi<sup>2</sup>, Sarah Foley<sup>3</sup>, Caoimhe Dempsey<sup>1</sup>, Serena Lecce<sup>2</sup>

<sup>1</sup>Centre for Family Research, University of Cambridge, Cambridge, United Kingdom. <sup>2</sup>Department of Brain and Behavioral Sciences, University of Pavia, Pavia, Italy. <sup>3</sup>Moray House School of Education and Sport, University of Edinburgh, Edinburgh, United Kingdom

### **Abstract (max 500 words)**

**Objective:** Supportive family relationships may mitigate the impact of the COVID-19 pandemic on young children's adjustment, but existing work is limited by its reliance on single site designs and focus on parental influences. Addressing these gaps and drawing on reported buffering effect of older siblings on child mental health (Lawson & Mace, 2010), the current international study examined whether child adjustment problems were, on average, elevated by the pandemic and whether this buffering effect of older siblings would be maintained.

**Method:** In the first wave of the COVID-19 pandemic (April to July 2020), 2,516 parents of 3- to 8-year-old children (M Age = 5.77 years, SD = 1.10 years) living in Australia (N = 161), China (N = 336), Italy (N = 244), Sweden (N = 795), United Kingdom (N = 706), and United States of America (N = 274) (six countries with contrasting governmental responses to the pandemic) completed an online survey about family experiences and relationships and child adjustment, as indexed by ratings on the Strengths and Difficulties Questionnaire (SDQ: Goodman, 1997).

**Results:** Building on evidence for cross-site measurement invariance in parental SDQ ratings (Foley et al, 2022), our analyses showed that child SDQ total difficulty scores were, as expected, elevated in all sites except Sweden (which, notably did not enforce mass school closures during the pandemic). Compared

to children without siblings, children with one or more older siblings showed fewer adjustment problems. Children from lone-parent households displayed more adjustment problems, as did those whose parents reported increased sibling conflict. Finally, child adjustment problems were negatively associated with family SES but positively related to the indices of COVID-19 disruption and government stringency.

**Conclusions:** We discuss these findings in relation to existing work on the impact of the pandemic on young children's mental health, as well as asymmetric effects of older versus younger siblings as sources of support.

469

## Using Etch-a-Sketch Online to Better Understand Parent-Observant Discrepancies

Patty Leijten

University of Amsterdam, Amsterdam, Netherlands

### Abstract (max 500 words)

**Objective.** Valid assessments of parental and child behavior are essential for high quality developmental psychological research on the nature of parent-child interactions and how these shape children's development. It is well-known that each assessment type (e.g., parental self-report and observations by researchers) have its own strengths and limitations. For example, parent report can capture parental and child behavior across days and parenting situations (e.g., from stressful morning routines to more relaxed Sunday mornings) but may be subject to social desirability bias and parental beliefs about typical or atypical child behavior. In contrast, observations by researchers are blind to parental beliefs and biases, but single-time videotaped interactions may not necessarily reflect daily interactions between parents in their children. Evidence is emerging that discrepancies between parental self-report and researcher observed parent-child interactions differ across families, and, rather than reflecting noise, may be meaningful for understanding the validity of either assessment type.

**Methods.** In a sample at risk for child conduct problems (>75th percentile on parenting stress due to difficult child behavior), we compared observant ratings of 120 parent-child dyads (child age 3–8;  $M = 4.29$ ;  $SD = 1.66$ ; 46% girls; 86% mothers) to parent ratings of (1) parental warmth; (2) parental hostility; (3) parental use of positive reinforcement; and (4) child compliance. Observed ratings are based on parent-child interactions during the 8 minute etch-a-sketch online developed by Oliver and Pike (2019) and coded using the PARCHISY. Parent-report ratings are based on the Parental Acceptance and Rejection Questionnaire, Alabama Parenting Questionnaire, and Eyberg Child Behavior Inventory.

**Expected results.** Coding is in progress. Based on previous literature, we expect greater discrepancies for warmth than for hostility (Hendriks et al., 2017) and greater discrepancies for families with more negative parent-child interactions (Moens et al., 2018). But because literature on parent-observant



discrepancies is limited (most research has focused on discrepancies between parents, children, and teachers), our analyses will be exploratory to generate hypotheses for future research.

**Discussion.** This study will contribute to more valid assessments of parent-child interactions by improving our understanding of when parent and observant ratings are more likely to result in different study findings.

470

## **“Mummy’s drawn up, what do you think you need to do now?” Parents’ references to internal states during the Etch-a-Sketch Online and children’s social understanding**

Amy L. Paine<sup>1</sup>, Nina Howe<sup>2</sup>, Salim Hashmi<sup>3</sup>, Peter Mitchell<sup>4</sup>

<sup>1</sup>Cardiff University, Cardiff, United Kingdom. <sup>2</sup>Concordia University, Montreal, Canada. <sup>3</sup>King's College London, London, United Kingdom. <sup>4</sup>University of Bradford, Bradford, United Kingdom

### **Abstract (max 500 words)**

**Objective:** It is well established that features of parental speech are associated with children’s social understanding in the preschool years, but few studies have explored this relationship in middle childhood. Previous work suggests that parents’ discussions about their own inner states (e.g., thoughts, feelings, desires) may provide children with a “window” into another person’s unobservable, mental processes, and are therefore associated with children’s developing capacities for social understanding (Paine et al., 2021). To better understand the association between parent-child conversations about internal states and domains of social understanding, we will examine parents’ references to their own and their child’s internal states during a novel online parent-child interaction task. We will investigate associations with children’s ability to recognize dynamic, subtly expressed, natural emotions like those they encounter in real life.

**Methodology:** We will harness data from a diverse community sample of 130 children in the UK (M age = 6.16 years, range 5-7; 51.5% female, 47.7% male, 0.8% non-binary; 75% mothers and 68% fathers identified as Welsh, English, Scottish or Irish). Children took part in an online assessment session via Zoom to complete a battery of social, emotional, and cognitive tasks. During the session children completed a ‘retrodictive mindreading’ task where they viewed videos of people’s (targets) reactions as they were ‘getting a present’ and ‘being told off’. Children were asked to identify, based on the target’s dynamic and subtle facial expressions, the video in which each target was getting a present. Children also completed a parent-child interaction task in which they and their parents were asked to work together to draw a house on using the Etch-a-Sketch Online (ESO; Oliver & Pike, 2021). Children’s and parents’ speech during the interaction will be transcribed and coded for references to internal states by type (i.e., cognitions, emotions, desires) and referent (self or other; Paine et al., 2021).

**Results Expected:** We will first take an iterative approach to identify family and child-related covariates, such as child age, executive functioning (inhibitory control and working memory, NIH Toolbox, 2016), and receptive language skills (BPVS; Dunn et al., 1982). We will examine associations between parent and child internal state language during the ESO and children's recognition of emotions in the retrodictive mindreading task. We expect that, in line with previous work, parents' references to their own internal states, specifically, their cognitions (thoughts, knowledge, beliefs) will be associated with their social understanding skills as indicated by the retrodictive mindreading task.

**Conclusion:** Our findings will contribute to understanding of whether parents' discussions about their own thoughts may contribute to older children's social understanding by offering the child insight into another person's perspective (Harris, 1999). We will also reflect on the benefits and challenges of conducting developmental research in online contexts by drawing on our programme of work that has investigated parent-child interaction in middle childhood both face-to-face and online.

471

## What Mediates the Effect of Family Disruption in the COVID-19 Pandemic on Children's Prosocial Behavior: A Multisite Study

Claire Hughes<sup>1</sup>, Luca Ronchi<sup>2</sup>, [Jean Heng](#)<sup>1</sup>, Chiara Basile<sup>2</sup>, Paola Del Sette<sup>2</sup>, Serena Lecce<sup>2</sup>

<sup>1</sup>Centre for Family Research, University of Cambridge, Cambridge, United Kingdom. <sup>2</sup>Department of Brain and Behavioral Science, University of Pavia, Pavia, Italy

### Abstract (max 500 words)

**Objective:** At the start of the COVID-19 pandemic, unprecedented social distancing rules (including mass school closures) dramatically constrained children's social lives, jeopardizing human connections that foster prosocial development. This multisite study included data from six different countries with varying levels of virus transmission and social restrictions and examined if (a) COVID-19 pandemic-related family disruption was associated with reduced prosocial behavior in young children and (b) this association was mediated by children's understanding of/feelings about COVID-19 social distancing rules.

**Methods:** 2,516 families of 3–8-year-olds (Mage = 5.77 years, SD = 1.10) from six countries—Australia (N=161), China (N=336), Italy (N=244), Sweden (N=795), United Kingdom (N=706), and United States of America (N=274)—responded to online surveys. Change in children's prosocial behaviour was measured retrospectively using the Strengths and Difficulties Questionnaire prosocial behaviour subscale. To assess children's feelings towards/understanding of COVID-19 regulations, parents used a 3-point Likert-type scale to rate children's responses to five COVID-19 regulations. Our composite measure of COVID-19 related family disruption encompassed: change in employment or income reduction, financial strain, level of work/family conflict experienced, and worry about loved ones. Data from the Oxford COVID-19 Government Response Tracker (OxCGRT) was used to create a national stringency index of COVID-19 regulations. A path model analysis was conducted in which (a) children's understanding of COVID-19 regulations, (b) children's negative feelings about COVID-19 regulations, and (c) change in prosocial

behavior were regressed onto both distal (i.e., national stringency index) and proximal (i.e., COVID-19-related family disruption) measures of the COVID-19 crisis. Pre-pandemic ratings of children's prosocial behavior, family SES, child gender, and age were included as control variables in the model.

Results: For all six sites, COVID-19-related family disruption did not directly predict reduced prosocial behavior during the pandemic when control variables were included in the model. Notwithstanding, family disruption was associated with (a) higher negative feelings about COVID-19 regulations and (b) lower understanding of COVID-19 regulations. In turn, higher negative feelings (but not lower understanding) predicted reduced prosocial behavior over

the pandemic. This pattern of association was consistent with a mediation model in which higher negative feelings about COVID-19 regulations mediated an indirect association between COVID-19-related family disruption and decrease in child prosocial behavior across the first few months of the pandemic in all sites except China. Mediation analyses confirmed the significance of this indirect effect,  $B = .049$ , 95% CI = [.070, .034],  $\beta = .062$ , which accounted for the 75% of the total association between COVID-19-related family disruption and decreased prosocial behavior. In contrast, understanding of COVID-19 regulations was not implicated in the link between family disruption and reduced prosocial behavior.

Conclusion: Elucidating the immediate and long-term psychological and behavioral impact of the COVID-19 pandemic on children is an urgent global challenge for researchers. Findings from this study add to our understanding of mechanisms by which family disruption during the pandemic affect children's prosocial behaviour, potentially informing future intervention approaches in mitigating adverse child outcomes.

**472**

## **Policy implications of European longitudinal cohort studies – The contributions of the COCON study**

Marlis Buchmann

University of Zurich, Zurich, Switzerland

### **Abstract (max 500 words)**

#### Objective of the study

The aim of the longitudinal, multi-cohort, and multi-informant COCON study is to better understand how children, adolescents, and young adults deal with core developmental tasks and transitions in the institutionalized life course, given unequal resources and opportunities in the contexts of growing up. The conceptual framework for assessing the social and individual antecedents and consequences of coping with key developmental tasks focuses on the dynamic interplay of structure and agency

(Heckhausen & Buchmann, 2019). Inequality in opportunities and resources imposes different scales of constraints on young people's development, whereby individual agency, encompassing cognitive, socio-emotional, motivational, and behavioral competencies, may help overcome disadvantages and constraints. The empirical evidence of this interplay helps inform policy designs.

### Methodology

COCON includes three cohorts selected at ages in childhood (6-year-olds, N=1,273), mid-adolescence (15-year-olds, N=1,258), and early adulthood (21-year-olds, N=584) (Buchmann et al., 2021). Each cohort is characterized by a normative life-course transition related to education or work in the Swiss context. Representative samples in Switzerland's German- and French-speaking parts (92% of the country's population) were selected with survey waves spanning the period from 2006 to 2020. To date, nine survey waves are available for the child cohort, four for the adolescent cohort and one for the early adult cohort, which serves as a reference cohort. The longitudinal multi-cohort design facilitates assessing intra-individual development, inter-individual differences in developmental trajectories, and social change in these processes. The multi-informant design involves data collection from the primary caregiver and teacher, both of whom were surveyed in multiple waves. This helps understand socialization as a dynamic process of mutual influence.

### Results obtained or expected

From a policy perspective, the availability of longitudinal studies with a cohort born around the turn of the century in several European countries provides the opportunity to capture commonalities and differences in coping with developmental tasks across national contexts and to assess the significance of different social policies in supporting children in doing so and alleviating inequalities. Shedding light on how differences in the macro context of growing up are intertwined with policy measures and jointly affect child and adolescent development has the potential of informing policy making.

### Conclusions

Together with other European longitudinal cohort studies, the COCON study has the potential of assessing policy implications by providing novel empirical evidence across national contexts in Europe.

### References

Buchmann, M., Grütter, J., & Igel, C. (2021). COCON: Swiss Longitudinal Survey of Children and Youth. *Longitudinal and Life Course Studies* 12,4:573-589.

<https://dx.doi.org/10.1332/175795920X16062920646814>

Heckhausen, J., & Buchmann, M. (2019) A multi-disciplinary model of life-course canalization and agency, *Advances in Life Course Research*, 41, 1–9 art. 100246.

<https://doi.org/10.1016/j.alcr.2018.09.002>

473

## Policy implications of European longitudinal cohort studies – Growing Up in Digital Europe

Jennifer E. Symonds<sup>1</sup>, Katariina Salmela-Aro<sup>2</sup>

<sup>1</sup>University College Dublin, Dublin, Ireland. <sup>2</sup>University of Helsinki, Helsinki, Finland

### Abstract (max 500 words)

#### Objective of the study

GUIDE will be Europe's first comparative birth cohort study of children's and young people's wellbeing. The aim of the GUIDE study is to track children's personal wellbeing and psychosocial development, in combination with key indicators of children's homes, neighbourhoods, and schools, across Europe. Together these measurements will enable researchers from multiple fields to analyse how children's wellbeing develops in response to children's experiences of growing up in different European Member States and associated countries.

#### Methodology

GUIDE will be an accelerated cohort survey including a sample of infants as well as a sample of school age children. Each Member State and Associated Country will provide nationally representative samples that are designed to retain statistical power throughout the lifetime of the study. The samples will be surveyed at regular intervals using input harmonized questionnaires and other measurement modes, until the children are 24-years old.

To date, the GUIDE RI has been developed through four European Commission funded projects: MYWeB (GA 613368), the European Cohort Development Project (ECDP) (GA 777449), the COhort cOmmunity Research and Development Infrastructure Network (COORDINATE) (GA 101008589), and Growing Up in Digital Europe Preparation Phase (GUIDEPREP) (GA 101078945). The GUIDE RI was appointed to the European Strategic Forum on Research Infrastructures (ESFRI) Roadmap in 2021.

#### Results obtained or expected

The first wave of GUIDE fieldwork is planned for 2027, with country pilot studies planned for 2026. GUIDE partner countries are being asked to identify funding sources for the main GUIDE fieldwork before the end of 2025. A pre-pilot of the GUIDE questionnaires is being carried out in Finland, France, Croatia, Ireland, and Slovenia in March 2023 to ensure that the questionnaires are ready for cross-national administration and comparability.

#### Conclusions

The harmonized design will create the first internationally comparable, nationally representative, longitudinal study of children and young people in Europe. With two cohorts taking place in parallel it will be possible to make cohort comparisons early in the life of the survey, making the survey more

responsive to the policy cycle. GUIDE will be an important source of evidence in developing social policies for children, young people, and families across Europe for many years to come.

**474**

## **Policy implications of European longitudinal cohort studies – COhort cOmmunity Research and Development Infrastructure Network for Access Throughout Europe (COORDINATE)**

Katja Upadyaya<sup>1</sup>, Jennifer E. Symonds<sup>2</sup>, Katariina Salmela-Aro<sup>1</sup>, Gary Pollock<sup>3</sup>

<sup>1</sup>University of Helsinki, Helsinki, Finland. <sup>2</sup>University College Dublin, Dublin, Ireland. <sup>3</sup>Manchester Metropolitan University, Manchester, United Kingdom

### **Abstract (max 500 words)**

#### Objective of the study

The COORDINATE project involves partners across 14 European countries (Ireland, England, France, Finland, Italy, Netherlands, Germany, Norway, Croatia, Spain, Portugal, Austria, Slovenia, Belgium). Funded by the European Commission under the 'Integrating Activities for Starting Communities' call, the aim of the COORDINATE project is to initiate the community of researchers and organizations which will drive forwards the coordinated development of comparative birth cohort panel survey research across Europe. The infrastructural community initiated by COORDINATE will benefit from enhanced access to current infrastructural data platforms, and will promote the harmonization of and improve access to international cohort panel survey data in the study of children and young people and their well-being as they grow up.

#### Methodology

COORDINATE Scientific Community will gather researchers with an interest in longitudinal data and child well-being. The COORDINATE project facilitates improved access to international birth cohort panel and cross-sectional survey data across Europe. In addition, the project undertakes joint research in the form of a large-scale cohort pilot survey using a harmonized instrument and research design in four European countries (France, Ireland, Finland, Croatia). The infrastructural community initiated by COORDINATE will benefit from enhanced access to current infrastructural data platforms, and will promote the harmonization of and improve access to international cohort panel survey data GUIDE? in the study of children as they grow up.

#### Results obtained or expected

The COORDINATE project will have several outputs. The transnational visits for the researchers from the collaborating organizations will produce research papers, policy articles, blog posts which will be disseminated through the COORDINATE website. As a result from the data harmonization process which

aimed to achieve and improve the comparability of surveys over time and over country borders has produced a report outlining any comparability issues identified, including recommendations for adapting the pilot questionnaire. In addition, a data storage and access infrastructure will be produced to develop and use comparative birth cohort panel survey research across Europe.

### Conclusions

The European Union has highlighted the importance of securing the future of children and young people. It has become accepted that inequalities must be thought of longitudinally and not regarded as static events unrelated to prior events and future likelihoods. In this regard, it is incumbent upon policymakers to ensure that they base their policy interventions and adjustments on the best evidence available and this must include cohort survey data. The COORDINATE project has developed new policy briefings on the use of longitudinal data, research infrastructures and child and youth wellbeing, as well as organized events for policy actors and funding bodies in order to inform about the work of the COORDINATE project and promote the GUIDE study.

**476**

## **A cross-cultural examination of parent-child interaction quality using the Etch-A-Sketch Online**

Jean Anne Heng, Laure Lu Chen, Claire Hughes

Centre for Family Research, University of Cambridge, Cambridge, United Kingdom

### **Abstract (max 500 words)**

**Objectives:** Understanding the mechanisms driving cross-cultural variations in parent-child relationships is necessary for inclusive theory and practice. Beyond the early preschool years, parent-child relationships have traditionally been assessed via parental questionnaires, with existing studies limited to samples that do not reflect the global population. Parent ratings offer only an indirect picture and translating questionnaires for use in distinct cultures raises questions about validity. To address these twin issues, we used a novel online observational tool (the Etch-a-Sketch Online, ESO) and included large and diverse samples from two distinct cultures: UK and Hong Kong. Our analyses were designed to examine: (a) group differences in child and parental behaviours (e.g., parental affect, positive control, child autonomy); (b) consistency across groups in the patterns of associations between parenting and child behavior; and (c) the relative salience of parenting and cultural group as predictors of child behaviour, when family covariates (e.g., SES, parental education) are controlled.

**Methods:** We will compare observer ratings of 240 Hong Kong parent-child dyads (child Mage = 5.02; SD = .32;120 girls) and 260 UK parent-child dyads (child Mage = 5.4 years, SD = .31;135 girls) based on video recordings of dyads engaging in the Etch-A-Sketch Online (ESO; Oliver and Pike, 2019). Based on a 7-point global rating scale (Parent Child Interaction System; PARCHISY), we will create an index of parental positivity (positive affect, reverse-coded negative affect) and parental positive control, as well as an index of child autonomy and child positivity (positive affect, reverse-coded negative affect).

**Expected results:** Based on our experience in administering the ESO in both sites, we expect site contrasts in parental positive control (HK < UK) and child autonomy (HK < UK) but similar levels of positivity in both parents and children. We will adopt an exploratory approach in assessing whether group differences in parenting fully account for site contrasts in child behaviour.

**Conclusion:** Our expected findings will add to the literature on cross-cultural variations between parenting and child behaviours, based on a novel online observation tool to assess parent and child interaction within an in-home setting.

**477**

## **The Impact of Limited Social Interactions During COVID-19 on Infant Sensory Processing and Self-Regulation**

Staci M. Weiss<sup>1</sup>, Ezra Aydin<sup>1,2</sup>, Jane Barlow<sup>3</sup>, Topun Austin<sup>4,5</sup>, Mark H. Johnson<sup>1,6</sup>, Sarah Lloyd-Fox<sup>1</sup>

<sup>1</sup>Department of Psychology, University of Cambridge, Cambridge, United Kingdom. <sup>2</sup>Department of Psychiatry, Columbia University, New York City, USA. <sup>3</sup>Centre for Evidence-Based Intervention, Department of Social Policy and Intervention, University of Oxford, Oxford, United Kingdom. <sup>4</sup>The Rosie Hospital, Cambridge University Hospitals NHS Foundation Trust, Cambridge, United Kingdom. <sup>5</sup>NIHR Cambridge Biomedical Research Centre, Cambridge, United Kingdom. <sup>6</sup>Centre for Brain & Cognitive Development, Birkbeck, University of London, London, United Kingdom

### **Abstract (max 500 words)**

**Objective:** Although it is well-established that infants' interactions with their primary caregivers influences later developmental outcomes by impacting reciprocal social exchange, contingency detection and processing of emotional expression, less is known about how development is affected by social input from 'auxiliary' social partners outside the household (Legerstee & Markova, 2007; Sear, 2016; Bernier et al., 2020). In order to reduce the spread of COVID-19 in the UK, in April 2020 new parents and the general population were instructed not to interact with non-household members. The COVID in the Context of Pregnancy, Infancy and Parenting (CoCoPIP) Study recruited participants from July 2020 to July 2021 to an on-line survey. Here we investigated how COVID-19 social restrictions and 'stay-at-home' orders affected infants sensory perception, self-regulation and sensitivity to social stimuli and further whether this was due to limited access to a network of caregivers and social partners impacting infants directly, or indirectly, through pandemic-specific stressors on families.

**Methods:** From 1,142 parents with infants aged 0-9 months born during a COVID-related lockdown (LD), we found there was reduced in-person social input from occasional caregivers, alloparental figures including relatives and grandparents, children other than siblings, and healthcare visitors, as compared to infants born prior to the first COVID-19 social restrictions as well as infants born during the summer reopening (July-Oct 2020).



Bayesian Adaptive Sampling (BAS) regression examined how infants' face-to-face social interaction with parents and auxiliary social partners related to variability in self-regulatory (infant behavior questionnaire) and social and non-social sensory processing (infant-toddler sensory profile). BAS regression rank-ordered criterion variables based on their contribution to the distribution of outcomes. The mediating role of sociodemographic factors (change in parental employment, family income, ethnicity, education) and COVID-specific impacts (household case of COVID-19, maternal report of COVID concern and mental health impact, parental social restriction adherence and infant lifetime exposure to government lockdown) were explored.

Results: Parents who reported below average access to auxiliary social partners had no difference in quality of face-to-face parenting, but their infants exhibited low sensory registration and sensitivity to social stimuli, with this relation holding above infant age, prematurity and sociodemographic mediators. Maternal report of COVID-19 concern, mental health impact, parental social restriction adherence and infant lifetime exposure to lockdown partially mediated the association of infant socialization with sensitivity to social stimuli, but did not significantly account for lower sensory registration.

Conclusion: Infants born during lockdown 2 (Nov-Dec 2020), lockdown 3 (Jan-May 2021), and periods of increased social restrictions (Oct 2020, Dec-Jan 2021) were found to have lower detection of sensations (registration) compared to infants born before COVID-19, during the first lockdown (Mar-June 2021), and during the summer reopening. The timing of birth specifically was critical, rather than the infants' lifetime exposure to lockdowns which was not predictive of altered sensory processing.

**478**

## **The Impact of COVID-19-Related Family Stress and Socioeconomic Status on Children's Executive Functions**

Mishika Mehrotra<sup>1</sup>, Jean Heng<sup>1</sup>, Rory T. Devine<sup>2</sup>, Claire Hughes<sup>1</sup>

<sup>1</sup>Centre for Family Research, University of Cambridge, Cambridge, United Kingdom. <sup>2</sup>School of Psychology, University of Birmingham, Cambridge, United Kingdom

### **Abstract (max 500 words)**

Objective: Despite the importance of understanding the potential interplay between socioeconomic status (SES) and exposure to COVID-19 related family disruption and stress (Wade et al., 2020), existing research has been limited by the preponderance of cross-sectional studies and heavy reliance on parental reports. There is a need to assess the long-term effects of the pandemic on children using direct measures of their abilities while considering contextual sensitizing factors. To address these gaps, we aim to examine whether COVID-19 related family stress predicts children's directly assessed executive functions (EF) and whether SES moderates this association. These questions will be examined across children's transition to school, a period when EF is particularly susceptible to environmental influences.

Methods: UK-wide social media advertisements in July-August 2021 were used to recruit 260 families of Reception Year children (M child age = 5.4 years, SD = 0.31), who completed a battery of tasks via a Zoom video call at home with a parent. This session included three EF tasks, each with different response modalities: (i) an online Fish-Flanker inhibitory task (keyboard response), (ii) an animal-based child-friendly adaptation of backwards span working memory task (verbal response), (iii) and the Head-Toes-Knees-Shoulders task (gross motor response) which required inhibitory control, working memory and cognitive flexibility. Families were contacted again to complete the same measures a year later at Time 2 (M = 6.5 years, SD = 0.52). Parents completed an online questionnaire to report on their SES (indexed by parental education and self-perceived social status) and pandemic-related disruptions, indexed by the COVID-19 Family Stressor Scale (Prime et al., 2021).

Results Expected: We are currently assessing longitudinal measurement invariance for an EF latent factor. This will be included in a structural equation model to assess the unique effects and interactions between COVID-19 family stress and SES as predictors of Time 2 child EF, with Time 1 EF and demographic factors (age, gender) included as controls. We expect COVID-19 stress to predict poor EF and this link to be stronger in low SES families.

Conclusion: This study adds to the growing body of literature examining the impact of COVID-19 on children's skills by examining children's EF longitudinally and considering the moderating influence of pre-existing risk factors, such as low SES, on this relationship. Lower SES is associated with poor EF performance (e.g., Hackman et al., 2015) and the transition to school is also a sensitive period for the development of EF skills. Therefore, assessing the impact of pandemic-related disruption experienced by families on children's regulatory skills in these early years can help us identify where to target our intervention efforts.

**494**

## **How youth emotion regulation mediates the effects of parenting on youth psychological adjustment: A meta-analytic review**

Anne-Marie Iselin<sup>1</sup>, Jamie DeCoster<sup>2</sup>

<sup>1</sup>Elon University, Elon, USA. <sup>2</sup>University of Virginia, Charlottesville, USA

### **Abstract (max 500 words)**

Understanding the mechanisms linking parenting to youth psychological adjustment is critically important for improving treatments for youth psychological adjustment. Youth self-regulation is one likely mechanism. Meta-analyses have demonstrated that parenting influences both youths' self-regulation (e.g., manuscript under review) and mental health (e.g., Clayborne, et al. 2021). The relation of youth self-regulation with their psychological adjustment has also been established meta-analytically (e.g., Schäfer et al., 2017). Accordingly, there is burgeoning literature simultaneously examining relations among parenting, youth self-regulation, and youth psychological adjustment. The current study seeks to quantitatively summarize this growing body of research by meta-analyzing the ability of youths' self-regulation to mediate the relation of parenting with youths' psychological adjustment, using recent

statistical developments in meta-analysis allowing the estimation and aggregation of effect sizes from larger structural models. We will also examine variables that moderate the strength of the pathway from parenting through self-regulation to psychological adjustment (e.g., parent gender, youth age, youth gender).

To locate articles, we will conduct systematic searches of several major databases (e.g., PsycInfo, Google Scholar), cited references, and the table of contents of relevant journals. Studies need to report three bivariate relations (i.e., parenting with self-regulation, self-regulation with psychological adjustment, and parenting with psychological adjustment) or direct tests of the mediational pathway of interest for us to include their data in our analysis. The proposed meta-analysis is currently in preparation. We recently started our search in one database (i.e., PsycInfo) to locate studies including terms related to parenting AND youth self-regulation AND youth psychological adjustment. This search resulted in an initial pool of 6,804 studies matching our criteria. This initial search result is similar in size to that found by Goodman et al. (2020), who eventually identified 40 studies for a similar meta-analysis examining the ability of parenting to mediate the relation of depression with youth functioning. We therefore expect our final sample to contain between 30 and 50 studies.

Based on prior work in this area, we expect to find that harsher parenting will be associated with poorer youth self-regulation, which will in turn be associated with worse psychological adjustment. We expect the overall indirect effect to be small to moderate in size. We further hypothesize that the indirect effect will be stronger when the study examines maternal rather than paternal parenting and when the mean age of the sample is younger. We do not expect youth gender to significantly impact our mediational pathways.

Findings from the proposed study will offer empirical evidence for self-regulation as a mechanism explaining the influence of parenting on youth psychological adjustment. Our results will also be helpful by informing prevention and intervention methods focused on enhancing youth psychological adjustment through the development of positive parenting skills and youth self-regulatory abilities.

**495**

## **Developmental basis of regulatory emotional self-efficacy beliefs in early adolescence**

Natalie Christner<sup>1</sup>, Laura Di Giunta<sup>2</sup>, Daniela Kloo<sup>1</sup>, Markus Paulus<sup>1</sup>

<sup>1</sup>Ludwig-Maximilians-Universität München, Munich, Germany. <sup>2</sup>Sapienza University of Rome, Rome, Italy

### **Abstract (max 500 words)**

Emotion regulation is essential for adolescents' social functioning. Regulatory emotional self-efficacy beliefs (RESE), i.e., beliefs about own competencies in regulating negative emotions and expressing positive emotions, play a central role in emotion regulation and have received great interest in developmental psychology. They influence beliefs about what outcomes can be achieved and thus affect the motivational determinants of actions. Previous research has highlighted that RESE relates

to adaptive emotion regulation and psychosocial functioning. Yet, the developmental basis of RESE is largely unknown. The current study aimed to deepen our understanding of the ontogenetic precursors of RESE by examining the impact of parent-child-relationship and cognitive competencies. In addition, we aimed to confirm the link with adolescents' functioning.

We relied on a longitudinal study (N = 155) to answer these research questions. At 12 years, we assessed RESE regarding despondency, anger, and positive affect (Caprara et al., 2008). Additionally, parents rated their children's overall functioning on a 7-point Likert scale following Mischel et al. (1998), reflecting social and academic competence and coping with problems. We measured maternal emotional availability in a mother-child interaction at 4 years (Biringen et al., 2014), child emotion understanding at 4 and 5 years, goal maintenance at 5 years, and global self-worth at 8 years. Temperament at 4 years, verbal IQ at 6 years, and gender served as control variables.

To examine developmental origins of RESE, we computed stepwise multiple regressions on the individual subscales. We entered the control variables first and the potential predictors second. The final model for RESE despondency revealed emotion understanding ( $\beta = .32$ ,  $p = .005$ ) and maternal emotional availability ( $\beta = .26$ ,  $p = .019$ ) as significant predictor. RESE anger was predicted by maternal emotional availability ( $\beta = .28$ ,  $p = .014$ ) and goal maintenance ( $\beta = .26$ ,  $p = .023$ ). For RESE regarding positive emotions, global self-worth ( $\beta = .27$ ,  $p = .018$ ) and gender ( $\beta = -.26$ ,  $p = .030$ ) emerged as significant predictors, with girls reporting higher RESE than boys. To examine the link with adolescent functioning, we computed a path model with maternal emotional availability predicting RESE and RESE relating to adolescent functioning. The model showed a good fit and significant links from emotional availability to RESE and, in turn, to overall competence.

The current study provides first evidence on the developmental origins of RESE by identifying predictors from early childhood to early adolescence. Importantly, maternal interaction characteristics predicted adolescents' beliefs about emotion regulation skills across eight years. Beyond that, early competencies in understanding emotions and keeping up goals serve as a basis for the development of RESE. The findings thus highlight the impact of both early interaction experiences and cognitive competencies for later self-efficacy in managing emotions. In addition, they support the role of RESE for adolescents' social and coping competencies. Extending research on the importance of RESE during adolescence, this study gives first answers to the question where these beliefs originate from. The study thereby provides a new direction in understanding the psychological processes underlying RESE.

**496**

### **Disagreement in adolescent-mother dyads ratings on parental warmth and psychological adjustment – adaptive or maladaptive?**

Gabriela Gniewosz<sup>1</sup>, Burkhard Gniewosz<sup>2</sup>

<sup>1</sup>Leopold-Franzens-University Innsbruck, Innsbruck, Austria. <sup>2</sup>Paris Lodron University Salzburg, Salzburg, Austria

**Abstract (max 500 words)**

Mothers and their offspring do not always agree when it comes to rating the quality of parenting, especially during early adolescence. There is a growing body of literature, yet not unequivocally, suggesting that discrepancies in perceptions and evaluations between adolescents and their parents are not entirely beneficial for the development of adolescents and their families. Positive effects might emerge as a result of individuation processes that are developmental tasks during adolescence. Negative effects might indicate underlying problems in the relationships within the family. This unclear results pattern might stem from a limited focus on linear relationships between discrepancy and psychological adjustment ratings. It seems plausible to assume that moderate discrepancies might be adaptive for adolescent development. However, there might be a tipping point from which extreme discrepancy levels shape adolescents' psychological adjustment negatively.

Based on 947 German mother-adolescent dyads (adolescents' age  $M_{age} = 8.57$  years and mothers' age  $M_{age} = 36.82$  years at 3rd grade), this study investigated the association between the extent of shared and discrepant mother-adolescent parenting ratings (i.e., warmth parenting) and early adolescents' social and emotional problems between 3rd and 6th grade. Latent Congruency Models were employed to estimate the level as well as linear and quadratic discrepancy effects in mothers' and adolescents' ratings on positive parenting.

This study showed that before secondary school transition, high levels of shared parenting ratings negatively predicted emotional and social problems. In the post-transition phase, very high levels of rating discrepancies positively predicted problem behaviors as shown by quadratic effects. No linear effects were found.

This study provided insights into the role of multiple perspectives of positive parenting within mother-adolescent dyads and the association with adolescents' emotional and social problems. No linear, but only quadratic, association between problem behaviors and the discrepancy level were found. These results highlight the importance of investigating quadratic discrepancy effects, because negative parenting discrepancy effects were only found, if the within-dyad differences were large. This result pattern indicates no positive but rather negative relations with adolescent psychological adjustment.

**497**

## **Data for policy consulting: How longitudinal data may inform politics**

Sabine Walper

German Youth Institute, Munchen, Germany

### **Abstract (max 500 words)**

Decision making in politics relies increasingly on empirical evidence not only regarding the conditions of life and needs of their citizens, but also with respect to effectiveness and efficiency of their measures in policy making. This paper draws on the research conducted at the German Youth Institute to illustrate how empirical findings from large-scale longitudinal studies may feed into politics targeting the well-being of children and youth.

The first example is linked to the ongoing debate in Germany, how support for children of parents with mental health problems can be improved. Despite a well-developed public health system with broad coverage of health care including psychotherapy through all citizens' health insurance and despite a unique and highly differentiated child welfare system at the state and communal level, children whose parents experience mental health problems are still underserved. Recent analyses of data from the Germany Family Panel pairfam revealed that only every third parent with clinically relevant symptoms of depression or other mental health problems had access to psychotherapy or medical therapy during the subsequent two years, and only 12% received family support through the child welfare system. Although their children's risk of psychological health problems was twice as high compared to parents without mental health problems, these children were not more likely to receive psychological therapy. While parental use of psychotherapy increased children's chances of psychological support, family support services were less integrated in mental health services and even had a negative effect on children's access to psychotherapy. Such findings have increased the awareness of improving the cooperation of services across political sectors.

A second example rely on research conducted at the National Center for Early Childhood Intervention. In order to facilitate positive family development and children's healthy upbringing during the important early years, the National Center for Early Childhood Intervention has launched various measures, most importantly family midwives who may support families up to one year postpartum. The large-scale survey "Children in Germany 0-3" (KiD 0-3) aimed to inform about families' needs and access to various support services. The longitudinal follow-up three years later showed that support by family midwives was linked to a decrease in children's negative emotionality across time, particularly in highly burdened families. Interestingly, children benefited even though the preventive measures could not reduce risk factors in parents' environment and parental stress. However, parents have become increasingly able to prevent a spill-over of their own stressful conditions into parenting and children's well-being.

The discussion will point to the many benefits of large-scale longitudinal data not only for progress in science but also for progress in policy making.

500

## **Longitudinal associations between parent-child interactions and children's theory of mind.**

Jean Anne Heng<sup>1</sup>, Rory T. Devine<sup>2</sup>, Claire Hughes<sup>1</sup>

<sup>1</sup>Centre for Family Research, University of Cambridge, Cambridge, United Kingdom. <sup>2</sup>School of Psychology, University of Birmingham, Birmingham, United Kingdom

### **Abstract (max 500 words)**

**Objectives:** Numerous studies have reported predictive associations between parent-child relationship quality and children's social understanding (for a meta-analytic review, see Devine & Hughes, 2018). However, much less attention has been given to the possible influence of children's social understanding upon parent-child interaction quality. This bidirectionality may become particularly apparent as children

start school and develop increased autonomy and agency. To address this possibility, our study had three objectives: (i.) to adopt a novel paradigm for gathering remote observations of parent-child interactions (Etch-a-Sketch Online; ESO, Oliver and Pike, 2021); (ii.) to recruit and follow a UK sample of children across the first year of primary school (from age 5 years to 6 years); (iii.) to include a diverse set of social understanding tasks to test developmental links between theory of mind and parent-child interaction quality.

**Methods:** 260 parent-child dyads participated in the Etch-A-Sketch Online (ESO; Oliver and Pike, 2019) at two time points (time 1: child Mage = 5.4 years, SD =0.31; time 2: child Mage = 6.5 years, SD =0.52). We rated each interaction using the 7-point global scales from the Parent Child Interaction System (PARCHISY) (Deater-Deckard et al., 2004). At both time-points, child theory of mind was assessed using a battery of tasks, consisting of a first-order false belief task, emotion false belief task, and items from the Strange Stories task (Happé, 1994) and the Silent Film task (Devine and Hughes, 2013). Time 1 coding indicates the suitability of a positive parenting aggregate (i.e., positive affect / control, reverse-coded negative affect /control,  $\alpha = .67$ ). Given the dyadic nature of the data, we will use an Actor-Partner Interdependence Model (APIM) to examine bidirectional effects of child theory of mind and positive parenting.

**Expected results:** We expect a positive association between Time 1 positive parenting and Time 2 child theory of mind. Recent perspectives highlight the child's agentic role in their own socialization processes (e.g., children who take a 'willing stance' towards their parents promote positive developmental cascades: Kochanska et al., 2015). We therefore also expect Time 1 child theory of mind to predict Time 2 positive parenting.

**Conclusion:** Existing work on the social consequences of theory of mind focus on peer relationships (e.g., popularity, prosocial behaviour). Our expected findings will widen this field by highlighting the developmental implications of children's theory of mind for their social interactions with caregivers, and so challenge traditionally unidirectional models of family influence.

503

## What is the association between five-year-old's understanding of real/apparent emotions and language ability

Annette Sundqvist, Felix-Sebastian Koch

Linköping University, Linköping, Sweden

### Abstract (max 500 words)

Research often finds that language and theory of mind are interrelated. We do not know, however, if this remains true with all aspects of the theory of mind. The theory of mind scale developed by Wellman and Liu (2004) contains several different aspects and the most advanced is the ability to hide an inward emotion while showing a different outward one. This pilot study aims to assess if this sociocultural emotional aspect of theory of mind shows an association with the child's language ability. One hidden

emotion task was assessed (Wellman & Liu; Sundqvist et al 2018). The language of the children was assessed through the Children's Communication Checklist-2 which contains statements that the parents responded to regarding the child's language development. The statements are categorized into several different subgroups. The focus of this study will be on syntax, semantics, nonverbal communication, and social relations. Preliminary data are analyzed from 42 Swedish children aged 5 years of age. Hidden emotion was passed by 67% of the children compared to 32% in the original US study. A correlation analysis was made. Hidden emotion shows a strong significant association with semantic and nonverbal communication but not with syntax and social relations. The result of this pilot study shows that some parts of language seem to be associated with this but other parts such as understanding syntax or social relations seem not to be. These are aspects that warrant further investigation. We do not know if different tasks assessing different hidden emotion stories will show the same association or if this association remains when assessing different languages and cultures.

**504**

### **Preschoolers' understanding of hidden emotions: what can be learned from testing multiple emotions across varying social contexts?**

Paula Döge<sup>1</sup>, Monika Abels<sup>2</sup>, Gabriella Óturai<sup>2</sup>, Annette Sundqvist<sup>3</sup>

<sup>1</sup>Free University of Bozen-Bolzano, Bozen-Bolzano, Italy. <sup>2</sup>UiT The Arctic University of Norway, Tromsø, Norway. <sup>3</sup>Linköping University, Linköping, Sweden

#### **Abstract (max 500 words)**

Within children's development of emotion comprehension, the understanding of hidden emotions is one of the most difficult tasks for preschool children and is usually mastered in the late preschool years. As Pons et al. (2004) point out, understanding the discrepancy between felt and shown emotion requires several mentalistic aspects: it necessitates knowledge of causes of emotion, knowledge of desires, anticipating consequences of a certain emotion display, as well as knowledge of culturally informed norms that may prompt someone to hide real emotions. Traditionally, researchers assess children's competence by presenting a scenario depicting a situation in which a child protagonist experiences one emotion, but specific situational demands cause the protagonist not to show it. For example, in Wellman & Liu's (2004) real – apparent emotion task a child is mocked by other children, hence feeling sad, but does not want to appear weak to the others. Children are then asked to select the emotion that is felt by the protagonist, as well as to indicate the emotion that is shown by the protagonist. If the child differentiates between the emotion felt and the emotion shown, it is considered to manage the understanding of the hidden emotion for the described scenario. As this kind of hidden emotion test is oftentimes included in larger test batteries on emotion comprehension (e.g., Pons et al., 2004) or theory of mind (e.g., Wellman & Liu, 2004), the used test procedure usually comprises only one or two scenarios and includes only one negative emotion.

Little is known, however, about the variation of preschoolers' understanding of hidden emotions across different emotions. Additionally, contextual factors that constitute the described situation might provide differential cues for children. We were therefore interested in systematically examining whether



children's understanding of hidden emotions is distinct for different emotions and whether the social context influences children's respective hidden emotion understanding. The present study therefore built on the existing testing approach and enlarged the procedure to encompass four different emotions: happiness, sadness, anger, and fear. Furthermore, we constructed two scenarios for each emotion: one scenario was embedded in the family context, while the other scenario was situated in the peer context. Pilot tests yielded promising results for the resulting eight test scenarios. In the main study, participants will be 5-year-olds recruited in spring from preschools in Norway, Sweden, and Italy. Analyses will focus on the psychometric properties of the newly developed test scenarios within and across the included samples. The study aims at delineating developmental trajectories in the understanding of hidden emotions and pointing out situational characteristics that might influence this understanding. The discussion will concentrate on results regarding the used method, whereas the cross-cultural perspective of the study will be addressed by another talk within the symposium.

505

## Cultural differences in children's understanding of hidden emotions

Monika Abels<sup>1</sup>, Paula Döge<sup>2</sup>, Gabriella Óturai<sup>1</sup>, Annette Sundqvist<sup>3</sup>

<sup>1</sup>UiT The Arctic University of Norway, Tromsø, Norway. <sup>2</sup>Free University of Bozen-Bolzano, Bozen-Bolzano, Italy. <sup>3</sup>Linköping University, Linköping, Sweden

### Abstract (max 500 words)

Cultural differences in emotional display have long been a topic of interest also in terms of our emotional development (Halberstadt & Lozada, 2011). When children learn to understand others' emotions, these cultural differences in emotional display should therefore play a role in their development, for example when it comes to understanding that a different emotion is displayed than is really felt. We expect that when children learn to understand hidden emotions depends on their parents' socialization goals and practices. Children's understanding of hidden emotions has been approached both from the perspective of emotion comprehension (e.g. Pons et al., 2004) and from the perspective of Theory of Mind (e.g. Wellmann & Liu, 2004).

Both traditions have found some cross-cultural differences, though the results are somewhat inconsistent. For example, in the emotion comprehension tradition, Italian children have sometimes been found to be better at recognizing hidden emotions than German children (Molina et al., 2014), but not consistently (Cavioni et al., 2020). Comparing results of the hidden emotion subtest of the Test of Emotion Comprehension (TEC) between samples from Norwegian, Italy, Peru and Brazil, Kårstad and colleagues (2016) found quite similar results in both European groups. From the Theory of Mind tradition, Sundqvist and colleagues (2018) found that the item on hidden emotions was solved relatively early by Swedish preschoolers compared to other cultural communities. Sundqvist and colleagues (2018) hypothesized that this effect could be due to specific child-rearing practices and institutions in Sweden.

In the current study, we therefore selected three countries/four groups to test for cultural/language differences. We have included Sweden and Norway which are expected to share many of the child-

rearing practices and institutions, such as shared parental leave and almost universal early day care attendance. In addition, we are studying Italian- and German- speaking children in South Tyrol, Italy which might help us understand the inconsistent findings from the previous literature on Italian and German children by studying children with different backgrounds from the same region. We expect to find more consistencies in the Scandinavian and the Italian samples than when comparing them.

The current study utilizes a test battery developed by the authors of this presentation, which tests children's understanding of hiding four different emotions (anger, fear, sadness and happiness) in a family and a peer context. To understand the expected differences better, we are including questionnaires on parents' emotion related child-rearing values and practices, as well as their assessment of the children's familiarity with the described situations. This presentation focuses on the intercultural differences whereas the differences according to emotion and context are presented in a different presentation in this symposium.

506

### **Predicting parents' encouragement and expectations for children's skills for masculine- and feminine-stereotyped careers**

Andrea Kočiš<sup>1</sup>, Aife Hopkins-Doyle<sup>1</sup>, Sabine Sczesny<sup>2</sup>, Harriet Tenenbaum<sup>1</sup>

<sup>1</sup>University of Surrey, Guildford, United Kingdom. <sup>2</sup>University of Bern, Bern, Switzerland

#### **Abstract (max 500 words)**

Gender segregation continues to exist in numerous activity and occupational domains. Research shows that parents play a significant role in steering children's educational and career choices in gender-stereotypical directions from a young age. Despite the centrality of early experiences and parents' expectations and encouragement for children's career choices, there is a gap in research on these topics in parents of young children. Therefore, the present study examined (a) factors behind parents' encouragement of their children to pursue masculine- (e.g., engineer) and feminine-stereotyped (e.g., nurse) careers; and (b) factors behind parents' expectations about children's future skills needed to pursue masculine- and feminine-stereotyped careers, starting from the age of 4 years and extending to 14 years. Of interest were parents' general beliefs about gender roles, parents' perceptions of their children's agentic and communal traits, children's gender, parents' gender and children's age.

Parents of children aged 4 to 14 from the UK (227) completed an online study and reported their demographics, encouragement of masculine- and feminine-stereotyped careers, expectations about children's future skills needed for masculine- and feminine-stereotyped careers, perceptions of children's agentic and communal values, and their general beliefs about gender roles. The data were analysed using linear multiple regression.

Parents' beliefs about gender roles, parents' perceptions of their children's communal and agentic traits, child's gender, and parent's gender significantly predicted encouragement of masculine-stereotyped careers,  $F(5, 221) = 15.11$ ,  $p < .001$ ,  $R^2 = .26$ , encouragement of feminine-stereotyped careers,  $F(5, 221)$

= 7.41,  $p < .001$ ,  $R^2 = .14$ , expectations about skills for masculine-stereotyped careers,  $F(5, 221) = 8.20$ ,  $p < .001$ ,  $R^2 = .16$ , and expectations about skills for feminine-stereotyped careers  $F(5, 221) = 7.74$ ,  $p < .001$ ,  $R^2 = .15$ . Regression analyses indicated that parents had higher skills-expectations for masculine-stereotyped careers for boys than for girls and higher skills-expectations for feminine-stereotyped careers for girls than for boys. Encouragement for pursuing masculine-stereotyped careers was higher for boys than girls, whereas there were no differences in encouragement for pursuing feminine-stereotyped careers. Mothers more strongly encouraged feminine-stereotyped careers than fathers.

Results suggested that parents have gender-biased expectations about children's future skills from early ages. The implications of these findings will be discussed.

**507**

### **Not different interpretation but different prompts: Gender difference in adolescents' task value development based on dimensional comparison**

Kezia Olive, Junlin Yu, Janica Vinni-Laakso, Katariina Salmela-Aro

University of Helsinki, Helsinki, Finland

#### **Abstract (max 500 words)**

##### 1. Objective of the study:

What process do adolescents go through in translating their experiences into internalized gendered (task) values?

This study sets forth to answer this question by specifying the role of dimensional comparison process in students' gendered task value development. We argue that gendered difference emerges based on differing pattern of prior achievement more than differing interpretation.

##### 2. Methodology:

We assessed 1149 Finnish students from grade 7 to 8 (Mean age at grade 7 = 12.8 years old, 55% females) to model the relation between (gendered) prior achievement and development of values.

With structural equation modelling, we demonstrated both within and cross domain relationship of achievement to values, followed by a comparison of two sets of models that is assumed to drive gendered task values. The first set of model tests moderation role of gender between prior achievement and values, while the second set tests the mediating role of achievement between gender and values.

##### 3. Results obtained:

In terms of general dimensional comparison, we confirmed positive within-domain effect of achievement on values, and partial negative cross-domain effect as illustrated in figure 1. Finnish achievement was negatively associated with Math intrinsic value ( $\beta = -.20, p < .00$ ) and cost ( $\beta = .19, p < .00$ ), and no significant association between Math achievement and Finnish values.

Testing the two gendered processes, we did not find evidence for gender moderation. The freely estimated pathways between achievement and values did not differ significantly from the constrained main model. This confirms that boys and girls weigh their achievement and translate them to values similarly. In contrast, as shown in figure 2, our mediation model showed that prior achievement explained parts of gender value difference: girls achieve significantly higher compared to boys in all domains, with more advantage in Finnish, which influence the within and cross-domain effects.

#### 4. Conclusion:

The results support the argument that students utilize dimensional comparison of prior achievement across domains as a source of information to develop their task values, with strongest evidence in math. More importantly, we confirmed that boys and girls weigh their achievement similarly but have different pattern of prior achievement. In other words, girls might have higher tendency of antagonizing math and valuing languages more not because they weigh one domain's achievement as more important than the other, but because their starting point (prior achievement) prompted them to do so.

Thus, we suggest a focus on intervening the general trend of perceiving math as not interesting and costly in comparison to languages and discuss specific implications for different socializing contexts.

508

### **How Gender Moderate Finnish School Principals' Work Experience: work-home conflicts, leadership demands, and institutional resources' influence on job burnout**

Yirou Fang, Junlin Yu, Katariina Salmela-Aro

University of Helsinki, Helsinki, Finland

#### **Abstract (max 500 words)**

Objectives: Currently, the labor market is gender segregated. Women and men vastly differ in their gender roles, social expectations, as well as working experience. In this study, we answer to the question of how Finnish school principals experience job burnout regarding to work-home conflicts, leadership job demands, and institutional resources the workplace provides, as well as how gender moderate the relationship between work-home conflict and job burnout. As a secondary focus, this study offers a descriptive analysis on gendered workplace stress sources.

**Methodology:** A national questionnaire was distributed to all school principals in Finland, starting from year 2019 to 2022. This study used the newest wave of data collected in 2022 (N = 698, Mean age = 52, 61.7% female).

A structural equation model (SEM) will be carried out investigating the relationship between job burnout and leadership demands (i.e., emotional demands, cognitive demands, qualitative demands), work-home conflicts, and institutional resources (i.e., own influence on workplace, workplace inclusiveness, work meaningfulness). Gender will be tested as a moderator between job burnout and work-home conflict.

The descriptive analysis will be carried out with categorization of different stress sources (e.g., poor management, inability to detach from work), followed by Chi-square tests investigating gender difference in reporting different workplace stress sources.

**Expected results:** As expected, the correlation table (Figure 1) showed that job burnout was negatively related to institutional resources (i.e., inclusiveness, meaning of work, own influence in workplace) and positively related to work-home conflicts and leadership demands (i.e., emotional demands, cognitive demands, qualitative demands). Additionally, institutional resources were positively related to each other, and leadership demand and work-home conflict were positively related to each other.

According to the Job Resource and Demand model (JD-R), we expect that the SEM will show that both leadership demand and work-home conflict will be positively related to job burnout. Gender will moderate the relationship between work-home conflict and job burnout, meaning that the association between job burnout and work-home conflict will be more prominent for women.

From the descriptive analysis, we expect that female and male principals will differ in stress source reporting. We expect that men will report more agency-related and financial stressors (e.g., administrative and financial issues) and women will report more emotion-related and communal stressors (e.g., inability to detach from school/community).

**Conclusion:** Results of this study unveil the demand and resource mechanisms behind Finnish school principals' job burnout and offers a roadmap to different workplace stressors women and men encounter in the same domain of work. The expected results imply that women and men differ in the kind of work stressors they experience; women see higher salience in their roles of caretakers, suggesting traditional gender role's influence upon modern working adults.

**511**

## **Tita – a smart mindfulness app for adolescents**

Oskari Lahtinen

INVEST flagship, University of Turku, Turku, Finland

**Abstract (max 500 words)**

**Objective:** Mindfulness-based programs (MBPs) have been found to be effective in alleviating anxiety and depression in adults and in youth. A novel evidence-base is emerging around similar efficacy of mindfulness apps and other digital mindfulness-based programs. One such program, studied in a nationwide large randomized control trial (RCT), is Tita, developed by the applicant. To date mindfulness-based programs have been somewhat crude instruments, delivering the same contents to all users, even though users differ in their psychological profiles, in the problems they face, and in their needs. As personalized medicine is emerging, its natural extension is to offer personalized content to mindfulness app users based on, for instance, which malady they suffer from: anxiety, depression, or stress.

**Methodology:** An app version of Tita will be studied in a new nationwide RCT starting in 2023. The app will profile users and then offer content tailored to specific user groups. It also functions as a novel data collecting tool, allowing further research to be conducted in the future as well. I will study the 1) the program's effectiveness overall, 2) how well the tailored content offers improvement over and above traditional mindfulness apps, and 3) how much different levels of home practice affect well-being outcomes, and 4) how the large-scale roll-out of Tita will affect Finnish students.

**Results expected and conclusion:** Tita is cautiously expected to benefit users over and above treatment as usual and standard mindfulness apps without tailoring.

**512**

## **Designing and Testing an Evidence-Based Program for Clinician Burnout**

Lia Antico, Judson Brewer

Mindfulness Center, School of Public Health, Brown University, Providence, USA

### **Abstract (max 500 words)**

Clinicians struggle with burnout, anxiety, depression, and empathy fatigue. The pandemic has been a burnout accelerant and had a negative impact on suicidal thoughts and resignation. Intensive mindfulness training had greater effects on burnout than the average trainings. However, shorter and more practical formats are needed to not inadvertently contribute to overload. The goal of this research project is to develop and test a brief app-based training to support and increase empathy while decreasing burnout, and to gather effect sizes for future randomized controlled efficacy and effectiveness trials. We developed a 7-day clinician burnout audio course and used user centered design to iteratively refine it by collecting feedback from 44 clinicians in two rounds and tested it under the format of podcast in physicians. We are running two single arm studies to test the efficacy of the app-based delivery of course in two independent cohorts, physicians and residents. We measure anxiety, depression, burnout, intolerance of uncertainty, self-compassion and emotion regulation before and after the training and one month after that for follow-up. We expect to replicate the results we obtained in a previous study run with the podcast version of the audio- course. At the post-test and follow up assessments, physicians reported lower anxiety, burnout, intolerance of uncertainty and higher self-

compassion than at baseline. Outcomes from these studies will be used to calculate effect sizes of future randomized controlled trials.

**513**

### **Mindfulness-based imagery training program for parents (MBIP): A qualitative study of the user experience of MBIP**

Timo Teräsahjo

INVEST-flagship, Turku, Finland

#### **Abstract (max 500 words)**

Mindfulness-based imagery training for parents, MBIP, is a mobile application in which the practice of mindfulness is directed to the imagined parent-child interaction situations. The MBIP contains a 10-day training program (10-15 minutes per day) to support parental mentalization e.g. capacity of the parents to envision their child as being motivated by internal mental states. In this study, three parents are interviewed about their experience of using MBIP recordings. Interviews are analyzed by a phenomenological method used to uncover subjective experience of mindfulness-based imagery training. The results are discussed in relation to mentalization theory.

**514**

### **Transitions - digital Mental health literacy and anti-procrastination program for the first-year medical students**

Sonja Gilbert, Marjo Kurki, Andre Sourander

INVEST flagship, University of Turku, Turku, Finland

#### **Abstract (max 500 words)**

Objective: Medical students are particularly prone to anxiety, depression, stress and burnout. Procrastination is a major problem among students, and it can intensify the mental health problems and jeopardize academic performance. Increasing mental health literacy (MHL) of students is critically important.

Each academic year, we provide new first-year medical students, University of Turku, a digital Transitions MHL program. Our objectives are: i) to improve students' MHL, comprising mental health knowledge, attitudes towards mental health problems and help-seeking attitudes and behavior, ii) to reduce their perceived stress and mood symptoms, and iii) to reduce procrastination behavior. This

presentation aims to describe the trajectories of the Transitions and to present preliminary findings of an ongoing study.

**Methodology:** Transitions, originally developed in Canada, is a combined life and academic skills package and MHL program. We digitalized the program and integrated a mindfulness component to it. Digital Transitions has been provided since 2018 to the first-year medical students at University of Turku, first as an optional course and since 2020 as a part of the curriculum. The program has been translated and implemented also in Lithuania, Indonesia, Argentina, Kenya and China (2020-2021). In 2022, a CBT-based anti-procrastination tool, developed in Amsterdam, was translated and integrated in the program.

Transitions course lasts 3 months and comprises a lecture per month and independent learning of the digital material. The materials are divided in four main themes: I Life and academic skills, II Mental health and stress management, III Mental health problems, mental disorders, help-seeking and treatment and IV CBT-based anti-procrastination tool, comprising five modules. These contain (1) psycho-education about procrastination (2) understanding one's own procrastination behavior, (3) uncovering unhelpful thoughts underlying procrastination (4) replacing such thoughts with helpful ones. Mindfulness component contains theoretical and practical audiotapes and is available to participants throughout the program.

All medical students (2022: N=234) register in Transitions program to attend the course and give voluntary informed consent to participate in research. Study design is one-group pre-post-test. Participants fill out e-assessments before the program, after it and 4 months after the baseline. Measurements include MHL literacy tool (knowledge, attitude and help-seeking scales), Depression, Anxiety and Stress Scale, Perceived Stress Scale, Loneliness questions and Irrational Procrastination Scale. Modified Client Satisfactory Questionnaire in the post-test measures participants' satisfaction.

**Results:** In a pilot study (2018-19), we found that the students' knowledge about mental health increased and help-seeking attitudes improved. They also reported reduced stress levels and less symptoms of anxiety and depression. They were also highly satisfied with the program contents and delivery. Similar findings are expected for 2020-2022, when the program was integrated in the curriculum. It is also anticipated that the students' will report reduced procrastination behavior during the program.

**Conclusions:** Transitions is a feasible method of increasing MHL of students and they have found it useful. The program is particularly important for future health care professionals as it increases their awareness of mental health but is also scalable to general student population nationwide as well as internationally.

**515**

### **Within-person associations between adolescents' academic self-efficacy, school relatedness, and intrinsic academic motivation**

Jingyun Wang, Tessa Kaufman, Susan Branje



Utrecht University, Utrecht, Netherlands

### **Abstract (max 500 words)**

Adolescents with higher levels of the basic psychological needs autonomy, competence, and relatedness report better school functioning compared to their peers with lower levels of these needs. This study extended previous work by examining within-person associations among these psychological needs in the school context. To be specific, we examined within-person relations between academic self-efficacy, school relatedness and intrinsic academic motivation. 290 early Dutch adolescents (Mage = 11.58, SD = 0.44 at T1) who were in their last year of primary school were followed four waves across 2 years. In random-intercept cross-lagged panel models, moderate to strong concurrent associations between self-efficacy, school relatedness, and intrinsic academic motivation were found, at both the within- and between-person level. Moreover, when focusing on predictive associations, increases in individual adolescents' school relatedness predicted increases in their intrinsic academic motivation six months later. The interaction of academic self-efficacy with academic intrinsic motivation also positively predicted school relatedness, but only after the school transition. This study helps teachers and educators to focus on the importance of establishing social connections and belonging after the school transition, in order to increase intrinsic academic motivation and guides intervention and prevention practices.

516

### **The links of individual and shared perceptions of classroom goal structures with students' achievement goals and grades: A multilevel perspective considering student background**

Rasa Erentaitė<sup>1</sup>, Rimantas Vosylis<sup>2</sup>

<sup>1</sup>Kaunas University of Technology, Kaunas, Lithuania. <sup>2</sup>Mykolas Romeris University, Vilnius, Lithuania

### **Abstract (max 500 words)**

Our study uses a multilevel approach to assess the role of students' individual and shared perceptions of classroom goal structures for their achievement goals and grades, also considering students' background characteristics. Analyses conducted with a sample of 1,268 adolescents (51.7% females; M = 14.87; SD = 0.39) nested in 72 classrooms reveal differential associations at an individual and classroom level. Within classrooms, stronger individual perceptions of mastery structures are related to higher achievement goals and, in turn, higher grades, while stronger perceptions of performance structures are directly related to lower grades. Comparing between classrooms, higher classmates' consensus on mastery goal structures has a boosting (compositional) effect for a grade point average of the entire class, which goes above and beyond aggregate estimates of individual scores. In addition, we found that girls and students with more favorable socioeconomic backgrounds, as well as classes with a higher proportion of such students, demonstrate higher grades, and these links are at least partly mediated by perceived goal structures and students' goals. Thus, promoting individual and shared perceptions of mastery structures

among classmates may be particularly important in classes with high proportions of socioeconomically disadvantaged students and boys to buffer low grades.

**517**

## **Bidirectional Associations between Maternal Homework Involvement, Adolescents' Academic Motivation, and School Well-Being across Educational Transitions**

Mari Tunkkari<sup>1</sup>, Riikka Hirvonen<sup>2</sup>, Kati Vasalampi<sup>1</sup>, Noona Kiuru<sup>1</sup>

<sup>1</sup>University of Jyväskylä, Jyväskylän yliopisto, Finland. <sup>2</sup>University of Eastern Finland, Kuopio, Finland

### **Abstract (max 500 words)**

Changes related to educational transitions may cause challenges for adolescents' motivation and well-being if significant others, such as parents, do not provide sufficient support. When parents provide help with homework in an autonomy-supportive manner, adolescents are more likely to place a higher value and interest in and liking of school and learning. Despite acknowledging that adolescents' academic and motivational characteristics may also elicit different homework involvement practices from parents, less research has been conducted on the bidirectional associations between parental homework involvement, adolescents' motivation, and school well-being. Consequently, the first aim of this study was to examine the extent to which maternal homework involvement predicts adolescents' school well-being directly and indirectly via academic motivation across the transitions to lower and upper secondary school. Second, the extent to which adolescents' school well-being predicts maternal homework involvement directly and indirectly via academic motivation across the educational transitions was examined. The data consisted of Finnish adolescents ( $n = 841$ ; 457 girls at T1) and their mothers ( $n = 652$ ; T1). Adolescents rated their school well-being (school satisfaction and school-related stress) and academic motivation (intrinsic motivation, extrinsic motivation, and amotivation) before and after the educational transitions, whereas mothers rated their autonomy support and psychological control in homework situations before and after the educational transitions. The data were analyzed using the RI-CLPM while controlling for adolescents' gender and general ability and mothers' education and parenting styles. The results showed that higher levels of maternal psychological control in the fall of Grade 7 predicted lower school satisfaction in the fall of Grade 9 via higher levels of adolescent amotivation in the spring of Grade 7. The findings also lend some support for the bidirectional associations between maternal homework involvement, adolescents' academic motivation, and school well-being by showing that the higher adolescents' school satisfaction was in the fall of Grade 9, the more they were intrinsically motivated in the spring of Grade 9, which, in turn, predicted lower maternal psychological control in the fall of the first year of upper secondary school. In turn, the less mothers exhibited psychological control in the fall of Grade 9, the more adolescents' were intrinsically motivated in the spring of Grade 9 which led to higher school satisfaction in the fall of the first year of upper secondary school. These results suggest that mothers should be provided with more tools for how to involve themselves in adolescents' homework in more supportive ways during educational transitions.

519

## The role of need supportive teaching for the development of high-ability students' motivation and achievement

Jeroen Lavrijsen<sup>1</sup>, Bart Soenens<sup>2</sup>, Maarten Vansteenkiste<sup>2</sup>, Eline Camerman<sup>1</sup>, Alicia Ramos<sup>1</sup>, Karine Verschueren<sup>1</sup>

<sup>1</sup>KU Leuven, Leuven, Belgium. <sup>2</sup>Ghent University, Ghent, Belgium

### Abstract (max 500 words)

#### Objective

Whereas students with high cognitive ability hold the possibility to excel at school, a lack of motivation puts some of them at risk of underachievement (Ramos et al., 2022). According to Self-Determination Theory, teachers can play a crucial role in supporting the motivational development of their students. In particular, students are argued to thrive when teachers support students' basic psychological needs through autonomy support, involvement, and structure (Deci & Ryan, 2002). Whereas the motivational benefits of these teaching practices have been repeatedly observed in the general population (Stroet et al., 2013), it is not yet clear to which extent these general findings apply to the specific case of high ability students. In addition, differentiated instruction, that is, tailoring instruction to student needs, may be particularly important for high ability students' engagement because it reduces risks of underchallenge (Tomlinson, 2000). This study investigated the benefits of autonomy support, involvement, structure and differentiated instruction for the motivational (i.e., intrinsic value of mathematics and behavioral engagement in math classes) and academic (i.e., scores on a standardized math test) development of high ability students, and assessed whether these associations were similar as for their average ability peers.

#### Methodology

The longitudinal study followed a sample of 3,586 students (50.3% males; average age 12.4 years at first measurement occasion) from 166 classes within 27 Flemish schools during the first two years of secondary school. Students were administered a cognitive ability test (CoVaT-CHC; Magez et al., 2015) at the start of Grade 7 to identify high ability (IQ above 120; n = 401) and average ability students (IQ between 90 and 110, n = 1,682). In the Fall and Spring of Grade 7 and the Fall and Spring of Grade 8, students rated the use of autonomy support, structure, and involvement by their math teacher (TASCQ; Belmont et al., 1988), his/her use of differentiated instruction (Bos et al., 2005), their intrinsic value of mathematics (Eccles & Wigfield, 1995) and their behavioral engagement during math classes (Skinner et al., 2008). In addition, students completed a standardized math test (Dockx et al., 2017) at waves 1, 2 and 4. Multilevel models predicted student outcomes by teacher practices, differentiating between between-student and within-student effects and taking into account nesting of students in classes.

#### Results

Both in the high and average ability group, autonomy support, involvement, structure and differentiated instruction uniquely and positively predicted intrinsic value and behavioral engagement. Moreover,

these associations were observed both at the between-student (i.e., interindividual differences) and within-student level (i.e., intraindividual change over time). Math test scores were meaningfully associated only with autonomy support. Associations between teaching and motivational and academic adjustment were fully similar for high and average ability students.

## Conclusion

In a large longitudinal sample of Flemish early adolescents, need-supportive teaching was found to matter for the motivational and academic development of high ability students; these benefits were as important for high ability students as for their typically developing peers.

## 521

### Biological correlates of internalising disorders amongst Syrian refugee children

Demelza Smeeth, [Andrew May](#), Michael Pluess

School of Biological and Behavioural Sciences, Queen Mary University of London, London, United Kingdom

#### Abstract (max 500 words)

**Objective:** Refugee children are often exposed to prolonged complex trauma, placing them at significant risk for internalising mental health problems. However, not all children experiencing trauma develop adverse psychological consequences. Interindividual differences in biology might distinguish children at-risk or resilient to internalising behaviours, but putative biomarkers have not been thoroughly explored. We investigated the potential of hair cortisol concentrations and seven psychopathology-related polygenic scores to predict clinically diagnosable levels of post-traumatic stress disorder (PTSD) and depression amongst Syrian refugee children. Both main effect and interaction models were tested. We hypothesised that 1) elevated hair cortisol levels would predict more internalising behaviour, and 2) interaction terms between hair cortisol and polygenic scores would offer stronger predictive ability than polygenic scores alone.

**Methodology:** Participants included 1359 Syrian refugee children ( $M_{age} = 11.3$  years,  $SD_{age} = 2.4$ , 47.2% male) and their respective caregivers, recruited from informal tented settlements in the Beqaa region of Lebanon. In addition to capturing general demographic information, trained research staff administered several instruments (translated into Arabic) including the Center for Epidemiological Studies Depression Scale for Children, the Child PTSD Symptom Scale and Trauma Symptoms Checklist and the War Events Questionnaire. Clinical cutoffs, derived from expert judgement, were applied to diagnose PTSD and depression, and children were dichotomised based on whether they had zero or at least one diagnosis. Hair cortisol concentrations were assayed from hair sections at least 3 mm diameter using an ELISA-based protocol. DNA was extracted from saliva samples and genotyped on the Illumina Infinium Global Screening Array. Further genotypes were imputed and polygenic scores calculated by means of the Michigan Imputation Server's Genotype Imputation and Polygenic Scores service. Logistic regression models were then used to regress diagnosis categories onto hair cortisol concentrations and polygenic

scores while controlling for covariates. Multiple testing was controlled for by applying a false discovery rate correction.

Results: Elevated cortisol concentrations were significantly associated with having diagnosable internalising mental health problems ( $p < .01$ ). There were no significant associations between internalising behaviour and polygenic scores for depression (recent, or related to trauma), ever contemplating suicide or self-harm, neuroticism, or recent feelings of foreboding. There was, however, a marginally significant interaction ( $p < .10$ ) between hair cortisol and polygenic score for depression.

Conclusion: Our results highlight hair cortisol concentration as a promising biomarker for early, objective identification of refugee children at risk for internalising disorders. Alone, polygenic scores remain of insufficient predictive ability, but might be useful in conjunction with other biomarkers.

523

## DNA Methylation as a Mediator or Moderator of the Relationship Between Perceived Parenting and Loneliness in Early Adolescence

Yentl Koopmans<sup>1</sup>, Stefanie Nelemans<sup>2</sup>, Stephan Claes<sup>3</sup>, Patricia Bijttebier<sup>1</sup>, Guy Bosmans<sup>4</sup>, Wim Van Den Noortgate<sup>5</sup>, Karla Van Leeuwen<sup>6</sup>, Luc Goossens<sup>1</sup>

<sup>1</sup>School Psychology and Development in Context, KU Leuven, Leuven, Belgium. <sup>2</sup>Department of Youth and Family, Utrecht University, Utrecht, Netherlands. <sup>3</sup>Department of Neuroscience, KU Leuven, Leuven, Belgium. <sup>4</sup>Department of Clinical Psychology, KU Leuven, Leuven, Belgium. <sup>5</sup>Methodology of Educational Sciences, KU Leuven, Leuven, Belgium. <sup>6</sup>Parenting and Special Education, KU Leuven, Leuven, Belgium

### Abstract (max 500 words)

Objective: As a complex trait, the development of loneliness is influenced by both genetic and environmental factors. Recently, DNA methylation, an epigenetic process that affects gene expression, has been proposed as a mechanism in the development of loneliness. This is the first study to examine the role of DNA methylation in the association between perceived parenting, as a specific case of unfavorable environmental conditions, and the development of loneliness in early adolescence. We will examine two possible models of how the relationship between environmental conditions and loneliness may be influenced by DNA methylation. The first model examines whether the impact of the environment on loneliness levels is dependent upon methylation levels (i.e., the moderation model). The second model examines whether unfavorable parenting conditions lead to changes in DNA methylation levels, which in turn affect the development of loneliness (i.e., the mediation model).

Methodology: The sample consisted of 622 Flemish adolescents (55% girls,  $M_{\text{age T1}} = 10.77$  years,  $SD_{\text{age T1}} = 0.48$ ) who were followed from Grade 5 to 7. Loneliness was assessed annually on all three waves, and adolescents completed parenting questionnaires at the first measurement occasion. As loneliness is associated with a dysregulation of the stress response, saliva samples were obtained at Wave 1 to assess DNA methylation levels in stress-related genes. Among others, these stress-related genes include the

glucocorticoid receptor gene (NR3C1), the serotonin transporter gene (SLC6A4), the brain derived neurotrophic factor (BDNF), and the oxytocin receptor gene (OXTR). We employed latent growth curve models (LGCMS) to study the developmental changes in loneliness during early adolescence. Different models for moderation and mediation were examined by adding perceived parenting and DNA methylation at Wave 1 as predictors of the growth parameters of loneliness.

Results: We found partial evidence for a moderating role of DNA methylation in the association between perceived parenting and loneliness. Adolescents who perceived high levels of parental psychological control and had increased methylation of the NR3C1 gene, had higher initial levels of loneliness ( $\beta = .09$ ,  $p = .043$ ).

Conclusion: The results suggest that higher levels of perceived parental psychological control form a bigger risk factor for adolescent loneliness when the adolescents also have higher NR3C1 methylation. Further research should aim to incorporate physiological evaluations of the stress response to examine this response as an intermediary mechanism in the association between parenting behaviors, DNA methylation, and adolescent loneliness.

**524**

## **Communal Goals and Cyberbullying: The Role of Normative Belief about Aggression and a Sense of Peer Community among South Korean Children**

Jingu Kim

Busan National University of Education, Busan, Korea, Republic of. Radboud University, Nijmegen, Netherlands

### **Abstract (max 500 words)**

#### OBJECTIVE OF THE STUDY

A growing body of empirical studies has examined the role of interpersonal goals and associated protective and risk factors in children's peer bullying. For instance, agentic goals positively influence aggression, whereas communal goals are negatively associated with aggression (Ojanen & Nostrand, 2014). In addition, the communal goals were negatively associated with bullying, whereas the agentic goal were positively related to bullying (Sijtsema et al., 2008). However, most research on interpersonal goals has investigated face-to-face bullying, and limited research has been conducted on the associations between interpersonal goals and cyberbullying.

The current study investigates the direct and indirect links between communal goals, normative beliefs about aggression, a sense of peer community, and cyberbullying from a sample of South Korean children. We also tested gender differences in the structural relationship among the variables.

#### METHODOLOGY

Participants were 354 South Korean pupils attending grades 3rd to 6th (49.4% girls) who answered self-report measures of cyberbullying (Hinduja and Patchin, 2008), sense of peer community (Battistich & Hom, 1997), Interpersonal Goal Inventory for Children (Ojanen et al., 2005) and the Normative Belief about Aggression Scale (Huesmann & Guerra, 1997).

## RESULTS

Using structural equation modelling, we found that the communal goals were negatively associated with the normative beliefs about aggression for both boys ( $\beta = -.49, p < .001$ ) and girls ( $\beta = -.32, p < .001$ ). And communal goals had positive associations with a sense of peer community for both boys ( $\beta = .45, p < .001$ ) and girls ( $\beta = .46, p < .001$ ). However, gender differences were found in the associations among the communal goals, the sense of peer community and cyberbullying. Communal goals were negatively associated with cyberbullying for girls ( $\beta = -.29, p < .01$ ), not for boys. Whereas the sense of peer community negatively predicted cyberbullying only for boys ( $\beta = -.31, p < .01$ ). Moreover, the sense of peer community mediated the associations of communal goals, normative beliefs about aggression, and cyberbullying among boys ( $\beta = -.04, p < .05$ ).

## CONCLUSION

This study highlighted the importance of considering interpersonal goals and social belonging among peers to study cyberbullying. Although communal goals and the sense of peer community have been extensively studied in traditional bullying, the unique interactive effect of communal goals and the sense of peer community has not been explored yet, and not in relation to cyberbullying. Our findings indicated that communal goals play a more important role in mitigating cyberbullying among girls whereas, having a positive sense of peer community is related to reducing the risk of cyberbullying among boys. This study extended the knowledge about the influence of interpersonal goals on cyberbullying research and highlighted the role of the social-motivational process and peer influences to contribute to these relationships. Implications for cyberbullying prevention will be discussed.

525

## The Role of Systemic Inflammation in the Association Between Peer Victimization and Depressive Symptoms

Tamara Lorenz, Nathalie Michels, Matteo Giletta

Department of Developmental, Personality and Social Psychology, Ghent University, Ghent, Belgium

### Abstract (max 500 words)

Objective: Peer victimization during adolescence is linked to various long-lasting mental health problems, most prominently depressive symptoms (Bowes, et al., 2015; Copeland et al., 2013), which are not only associated with significant personal distress, but are a major contributor to the global burden of disease (Ormel et al., 2015; World Health Organization, 2021). Theoretical work emerging from research on childhood adversity suggests that social stressors may upregulate crosstalk within

neuroimmune pathways, resulting in low-grade systemic inflammation that may, in turn, lead to mental health problems further down the line (e.g., Nusslock & Miller, 2016). Though promising in its approach, to date, there is only piecemeal support for the proposed mediation model in relation to peer victimization, as researchers have more often examined associations between peer victimization and inflammation or between inflammation and depressive symptoms, rather than the complete pathway of interest. Furthermore, some evidence suggests that elevated levels of low-grade systemic inflammation may increase the risk for depression in the context of adversity, rather than serve as a biological pathway (e.g., Kautz et al., 2020; Miller & Cole, 2012). Building on prior research, the current study aims to examine whether 1) peer victimization predicts depressive symptoms through inflammatory pathways, and 2) low-grade systemic inflammation plays a moderating role, such that peer victimization predicts depressive symptoms particularly among adolescents with elevated levels of systemic inflammation.

**Methodology:** To address these goals, longitudinal data from 213 secondary students in the Netherlands are examined (Mage = 12.65; SD = .50; 44% female). Participants completed four assessments every six months over a period of one and a half years. At each time point, adolescents' peer victimization experiences and depressive symptoms were assessed via self-report measures. Moreover, participants took part in brief health assessments which included a finger stick procedure to collect dried blood spots, from which a marker of low-grade systemic inflammation (i.e., IL-6) was assayed at each time point. Data are analyzed using multilevel models to account for the nested structure of the data and to examine within-person associations.

**Expected results:** Results of the analyses are presented. In light of prior evidence (e.g., Miller & Cole, 2012) and given that the sample is relatively young, we expect to find support for a moderation model in which peer victimization and low-grade systemic inflammation interact to increase the risk for depressive symptoms.

**Conclusion:** With a focus on the biological mechanisms underlying the link between peer victimization and depressive symptoms, this study is the first to use a multi-wave design with repeated assessments of inflammation taken over a time span of one and a half years. This study will therefore offer novel insights into how peer victimization and inflammatory processes may jointly contribute to the development of depression.

**526**

## **Parenting Experiences, Serotonergic Genetic Variation, and Adolescent Internalizing Symptoms: A Polygenic, Longitudinal G×E Approach**

Stefanie Nelemans<sup>1</sup>, Luc Goossens<sup>2</sup>, Susan Branje<sup>1</sup>

<sup>1</sup>Department of Youth & Family, Utrecht University, Utrecht, Netherlands. <sup>2</sup>School Psychology and Development in Context, KU Leuven, Leuven, Belgium

**Abstract (max 500 words)**



**Objective:** Adolescent internalizing symptoms are the result of complex interactions between environmental experiences and individual characteristics. In the proximal environment, several negative aspects of parenting and the parent-adolescent relationship have been systematically associated with higher adolescent internalizing symptoms (for meta-analyses, see e.g., Piquart, 2017; Yap, Pilkington, Ryan, & Jorm, 2014). Yet, these associations are typically modest. This may reflect individual differences in adolescents' sensitivity to parenting experiences (in line with Environmental Sensitivity; Pluess, 2015). This study aimed to examine whether the association between both positive and negative parenting experiences and adolescent internalizing symptoms was moderated by genetic variation associated with the serotonin pathway as a marker of environmental sensitivity (i.e., gene-by-environment interaction or G×E).

**Methodology:** Sample 1 consisted of 327 Dutch adolescents (44% girls, Mage T1 = 13.00 years, SDage T1 = 0.44) attending Grade 7 at the start of the study. Sample 2 consisted of 1,031 Flemish adolescents (49% girls, Mage T1 = 13.80 years, SDage T1 = 0.94) attending Grades 7 to 9 at the start of the study. DNA was obtained from saliva samples and adolescents completed questionnaires on their internalizing (i.e., depressive and anxiety) symptoms and parenting experiences annually for 6 (Sample 1) or 4 (Sample 2) successive years. Building on the polygenic, hypothesis-driven work of Vrshek-Schallhorn et al. (2015), a serotonergic multi-locus profile score (MGPS) was created that captured genetic variation from 5 single nucleotide polymorphisms (SNPs) in 5 serotonergic genes (i.e., HTR1A, HTR2A, TPH1, TPH2, and SLC6A4).

**Results:** Latent Growth Curve Models suggested significant G×E results for the intercept of both depressive symptoms ( $\beta = .14$ ) and anxiety symptoms ( $\beta = .18$ ) in Sample 1, controlling for sex and gene-environment correlation. Specifically, in line with the Diathesis-Stress framework, findings suggested the highest mean-levels of internalizing symptoms from early to late adolescence for adolescents who reported higher mother-adolescent conflict and had higher serotonergic 'risk' scores.

**Conclusion:** Parenting experiences do not uniformly affect adolescents, in line with person-by-environment models and principles of developmental psychopathology. Results from this study suggest that experienced mother-adolescent conflict is a stronger risk factor for adolescent internalizing symptoms for adolescents with higher serotonergic 'risk' scores. The discussion focusses on internal replication and robustness of findings within Sample 1, external (partial) replication in Sample 2, and specificity of findings in the context of specific parenting experiences (e.g., positive vs. negative).

**527**

## **Gender's differences in cyberbullying behavior and victimization and perceived parental control before and during the COVID-19 pandemic**

Carlo Marinoni<sup>1</sup>, Assunta Zanetti<sup>1</sup>, Simona C. S. Caravita<sup>2</sup>

<sup>1</sup>University of Pavia, Pavia, Italy. <sup>2</sup>Norwegian Centre for Learning Environment and Behavioral Research in Education, University of Stavanger, Stavanger, Norway

**Abstract (max 500 words)**

## OBJECTIVE OF THE STUDY

During the COVID-19 pandemic, Italian school students could communicate with peers only via ICT technologies, suffering an overexposure to social media that had never happened before. We aimed to investigate the involvement in cyberbullying and cybervictimization before and during the COVID-19 pandemic in relation to gender, and to explore whether parental control, as perceived by students, represents a risk or a protective factor, by also taking into account the amount of time spent online during the lockdown.

## METHODOLOGY

Participants were 5658 Italian children and adolescents (47.97% girls; age:  $M=13.32$   $SD=2.12$ ) attending schools in North of Italy. They answered a self-report questionnaire investigating their involvement in cyberbullying as bully or victim before and during the COVID-19 pandemic.

We run regression models with cyberbullying and cybervictimization (before and during the pandemic) as criterion variables, gender (boy 0; girl 1) as predictor and parental control as moderator. In the models examining cyberbullying and cybervictimization during the pandemic, the amount of time spent online was introduced as mediator of the associations between gender and cyberbullying/cybervictimization, with parental control moderating the association between gender and the time spent online.

## RESULTS

Before the pandemic being a boy was associated with higher cybervictimization ( $b = -.588^{***}$ ), but boys were decreasingly at risk of cybervictimization for low (association gender-cybervictimization:  $b = .792^{***}$ ), medium ( $b = -.588^{***}$ ) and high level ( $b = -.384^*$ ) of parental control.

During the pandemic, in comparison to boys, girls were more at risk of both cybervictimization ( $b = .346^*$ ) and cyberbullying ( $b = .365^{***}$ ). Parental control was a protective factor for boys, because boys were at risk of cybervictimization for low ( $b = -.52$ , bootstrap s.e.=.021, bootstrap 95% C.I.: -.100; -.017) and medium levels ( $b = -.028$ , bootstrap s.e.=.013, bootstrap 95% C.I.: -.058; -.006) of parental control, but not high levels ( $b = -.018$ , bootstrap s.e.=.018, bootstrap 95% C.I.: -.014; .058). This effect the amount of time spent online.

Likewise, boys were at risk of being cyberbullies via the time spent online for low ( $b = -.050$ , s.e.=.019, bootstrap 95% C.I.: -.091; -.016), and medium ( $b = -.027$ , s.e.=.012, bootstrap 95% C.I.: -.054; -.006) levels of parental control, but not high levels ( $b = .017$ , s.e.=.017, bootstrap 95% C.I.: -.015; .054).

## CONCLUSION

During the pandemic in general girls were more at risk of being cyberbullies or cybervictims. This result may be due to the different use of social media by boys and girls, as boys use social media more to play online games and searching information, while girls to seek attention and acceptance from others (Nesi et al., 2015), making the latter more vulnerable during the pandemic with the related ICT technologies overuse. However, higher levels of parental control represented a protective factor against cyberbullying and cybervictimization only for boys (both before and during the pandemic). It is possible

that boys are exposed to more explicit forms of cyberbullying than girls, making the parental control more effective.

**528**

## **The importance of a whole school community approach in prevention and intervention against cyberbullying. An explorative study of collaboration between actors inside school**

Ida Sjursø, Hildegunn Fandrem

Norwegian Centre for Learning Environment and Behavioral Research in Education, University of Stavanger, Stavanger, Norway

### **Abstract (max 500 words)**

#### OBJECTIVE OF THE STUDY

The importance of collaboration with actors both inside and outside school to combat cyberbullying have been emphasized (Jahnsen et al., 2016). However, the research regarding this is rather scarce. The whole school community approach has a goal to promote shared values, beliefs and attitudes not accepting any form of bullying and harassment. Research has shown that this approach not only reduce traditional bullying, but also substantially reduces the levels of cyberbullying (O'Moore, 2014). The objective of this study was to explore challenges and opportunities among actors inside school combating cyberbullying

#### METHODOLOGY

A convenience sample was used from five schools in total, three primary schools and two lower secondary schools. They were selected from a specific diverse area regarding school size and population in a small municipality in Norway. The informants in the schools were 5 school principals, 5 main teachers, 2 school nurses and 2 leaders of the afterschool program. Semi-structured interviews were used to collect the informant's perspective regarding experiences with prevention and intervention against cyberbullying with a special focus on challenges and opportunities for collaboration among different professions within the school. Separate interview guides were developed for the different informants groups with the main questions regarding cyberbullying in general, and possible cases they have been involved in, with focus on intervention, prevention, and collaboration. The interviews were transcribed using verbatim transcript and analyzed using Nvivo 12.

#### RESULTS

Preliminary results showed a great potential for collaboration between different employees within school. The results revealed a great willingness to collaborate especially from the perspective of the school nurses. However, some challenges regarding the collaboration were presented, e.g., the

commitment of confidentiality since not all information can be shared between school nurse and the other staff. Most of the principals emphasized the importance of having a good collaboration also with several actors within the school, but the school nurses were seldom mentioned by this group. To establish a good collaborating environment, it is necessary having established a common definition of cyberbullying. Nevertheless, the preliminary results showed that the definition of cyberbullying varied also within the same school and cyberbullying was not mentioned in some of the school anti bullying plans.

## CONCLUSION

The whole school community approach has been emphasized as a useful strategy that can substantially reduce the cyberbullying prevalence (O'Moore, 2014). This study focused on the collaboration within the school context showing that there is potential for a better collaboration among the different professions inside the school community. There are, however, some challenges, as for example the aspect of confidentiality, different definitions of cyberbullying and a lack of cyberbullying being included in the school anti bullying plans. Although some informants described a good collaboration within school there seems to be a potential for a greater collaboration also within the school context.

529

## Cooperation to Overcome Cyberbullying: A Systematic Scoping Review

Martyna Onyszko<sup>1</sup>, Simona C. S. Caravita<sup>1</sup>, Serap Keles<sup>2</sup>, May Irene Furenes<sup>2</sup>, Hildegunn Fandrem<sup>1</sup>

<sup>1</sup>Norwegian Centre for Learning Environment and Behavioral Research in Education, University of Stavanger, Stavanger, Norway. <sup>2</sup>The Knowledge Centre for Education, University of Stavanger, Stavanger, Norway

### Abstract (max 500 words)

#### OBJECTIVE OF THE STUDY

There is a wide range of evidence on cyberbullying, however, research on collaborative practices to prevent its prevalence is scarce. The research on bullying suggests that integrative approaches with holistic collaboration towards cyberbullying, involving all stakeholders in the school community and other agencies (social services, health care, law enforcement and other relevant partners), may bear best results. Such an ecological approach includes both prevention and interventions to combat this phenomenon in a collaborative, systemic manner. Yet, the practitioners and policy makers are not equipped with enough evidence as to what constitutes effective cooperation to combat this complex issue. Aim of this systematic scoping review is providing an overview of available body of research on cooperation to overcome cyberbullying within educational context worldwide. We addressed this main research question:

1. What characterizes empirical research on the topic of cooperation on cyberbullying?

Additionally, a series of sub-questions has been devised:

1. What key emerging themes regarding cooperation on cyberbullying may be identified?

2a) What types of cooperation are described?

2b) Which actors are involved in the cooperation?

2c) What level of prevention or intervention is described?

1. What characterizes (in)effective cooperation on cyberbullying?

## METHODOLOGY

The systematic scoping review (preregistered in the OSF) follows Arksey and O'Malley's (2005) methodological framework for scoping reviews, including the following stages: detecting eligible studies, study selection, data extraction and synthesis, and reporting of the findings. A systematic literature search will be conducted in national and international databases, such as ERIC, PsycINFO, Scopus, SocINDEX, and Web of Science. Additionally, citation chaining will be used. The search syntax will include all words related to "cyberbullying", "cooperation" and "education" domains, combined by the Boolean operator 'AND', and will further be limited in line with the inclusion/exclusion criteria. The inclusion criteria are set a priori in terms of topic (studies focusing on cooperation to prevent or stop cyberbullying), target group (children and teenagers in school age - grade 1-13, parents and caregivers, teachers, school staff, school owner, professionals working towards children), study type (empirical research with quantitative, qualitative or mixed-method design), publication type (published articles from peer-reviewed journals, grey literature, books, book chapters, published doctoral theses), and language (English, Norwegian, Danish, Swedish). EPPI-reviewer will be used for independent double screening and data extraction. PRISMA guidelines will be followed in reporting the study results.

## EXPECTED RESULTS

The expected results will provide insight into the characteristics of cooperation to combat cyberbullying in school communities and with a wide range of partners. Ways in which schools may integrate work of different sectors to create supporting environment for students and reduce the prevalence of cyberbullying will be described.

## CONCLUSION

At the conference, preliminary findings of the review will be presented. The future interventions towards cyberbullying should involve a holistic approach where many agencies collaborate for the increased welfare of students. The results will be used to inform practitioners and policy makers, devise context-dependent, research-based interventions in the future and add to the existing research field.

543

### **Long-term effects of the home literacy environment on reading development: Familial risk for dyslexia as a moderator**

Minna Torppa<sup>1</sup>, Kati Vasalampi<sup>1</sup>, Kenneth Eklund<sup>1</sup>, Pekka Niemi<sup>2</sup>

<sup>1</sup>University of Jyväskylä, Jyväskylä, Finland. <sup>2</sup>University of Turku, Turku, Finland

#### **Abstract (max 500 words)**

This study aimed to gain better understanding of the associations between literacy activities at home and long-term language and literacy development. We extended the home literacy environment (HLE) model of Sénéchal and LeFevre (Child Development [2002], Vol. 73, pp. 445–460) by including repeated assessments of shared reading, oral language, and reading comprehension development, including examination of familial risk for dyslexia as a moderator, and following development over time from ages 2 to 15 years. Of the 198 Finnish participants, 106 have familial risk for dyslexia due to parental dyslexia. Our path models include development in vocabulary (2–5.5 years), emerging literacy (5.5 years), reading fluency (8 and 9 years), and reading comprehension (8, 9, and 15 years) as well as shared book reading with parents (2, 4, 5, 8, and 9 years), teaching literacy at home (4.5 years), and reading motivation (8–9 years). The results supported the HLE model in that teaching literacy at home predicted stronger emerging literacy skills, whereas shared book reading predicted vocabulary development and reading motivation. Both emerging literacy and vocabulary predicted reading development. Familial risk for dyslexia was a significant moderator regarding several paths; vocabulary, reading fluency, and shared reading were stronger predictors of reading comprehension among children with familial risk for dyslexia, whereas reading motivation was a stronger predictor of reading comprehension among adolescents with no familial risk. The findings underline the importance of shared reading and suggest a long-standing impact of shared reading on reading development both directly and through oral language development and reading motivation.

544

### **Reading Development from Kindergarten to Age 18: The Role of Gender and Parental Education**

Mari Manu<sup>1</sup>, Minna Torppa<sup>1</sup>, Kati Vasalampi<sup>1</sup>, Marja-Kristiina Lerkkanen<sup>1</sup>, Anna-Maija Poikkeus<sup>1</sup>, Pekka Niemi<sup>2</sup>

<sup>1</sup>University of Jyväskylä, Jyväskylä, Finland. <sup>2</sup>University of Turku, Turku, Finland

#### **Abstract (max 500 words)**

The gender difference in reading achievement in favor of adolescent girls is a robust finding in the literature, but the evidence is mixed when considering younger children. The present study followed the

development of reading skills among Finnish children (N = 1,867) from kindergarten age (six years) to 18 years of age to determine the onset of gender differences and to identify the subskills which present gender differences. Additionally, associations between parents' educational levels and children's reading development from kindergarten to the end of comprehensive school were examined to determine whether the effect of parental education varied by child's gender. The results showed that girls outperformed boys in almost all prereading and reading skills from kindergarten age onwards. The gender difference in reading fluency increased steadily across the school years and remained evident also among 18-year-olds. In terms of reading comprehension, the gender difference was small but increased with age. Parents' education levels were associated with children's reading development and children of higher educated parents manifested the best performance. Interaction effects were found between child's gender and their fathers' education levels: lower education levels were associated with poorer PISA reading performance among boys, but not among girls. The results suggest that gender differences in reading performance have an early onset, they increase throughout the school years, and boys of fathers with low education are particularly at risk of falling behind in their development of reading comprehension skill.

**545**

### **Family factors and children's and adolescents' critical reading skills: A systematic review**

Maria Psyridou, Ruotsalainen Jenni, Mari Manu, Elizabeth Balch-Crystal, Emmi Ulvinen, Jenni Salminen, Leena Paakkari, Minna Torppa

University of Jyväskylä, Jyväskylä, Finland

#### **Abstract (max 500 words)**

One of the main challenges of our times is the wide and rapid spread of misinformation and disinformation. Therefore, critical reading is considered essential, and it is vital to identify factors that affect its development and foster them. Critical reading refers to the ability of the reader to identify, interpret and evaluate information from written texts that they encounter. Family (including home environment) plays a crucial role in critical reading. The aim of the current review is to synthesize the existing research on the relationship between family factors and critical reading development among children and adolescents. We also examine how critical reading skills and family factors were defined and measured in the studies. The electronic databases Web of Science, PubMed, ERIC, EBSCO (all databases) were searched, and 4,787 records were identified. To be considered for inclusion in the review, articles had to conform to the following criteria: a) to be written in English (with no restrictions on the language of the assessment itself), b) to report empirical data, c) to be published in a peer-reviewed journal, d) participants age was from 6/7 years old (Grade 1) until 17/18 (end of school), e) to assess critical reading, f) to include home environment measures, g) to assess the association between home environment and critical reading. The analysis is still ongoing. Family factors that are associated with children's and adolescents' critical reading skills as well as limitations and suggestions for future work are discussed.

546

## Home literacy environment for critical reading

Jenni Ruotsalainen<sup>1</sup>, Laura Kanninen<sup>2</sup>, Carita Kiili<sup>2</sup>, Minna Torppa<sup>1</sup>, Leena Paakkari<sup>1</sup>

<sup>1</sup>University of Jyväskylä, Jyväskylä, Finland. <sup>2</sup>Tampere University, Tampere, Finland

### Abstract (max 500 words)

Research on the home literacy environment that could support children's and adolescents' critical reading as well as how the home literacy environment might change as the child moves into adolescence is still limited. The aim of the study was to examine the structure of home literacy environment among the parents of children and adolescents of different ages. Based on expert views, a questionnaire on home literacy environment was developed and responses from parents of fourth ( $n_{G4} = 149$ ), sixth ( $n_{G6} = 213$ ), and eighth ( $n_{G8} = 226$ ) graders were gathered. First, exploratory and confirmatory factor analyses were run separately for each age group. Second, the associations between both child's and parent's gender, parents' education levels, reading materials at home and the factors were examined. Results showed that the factor structures differed between age groups. The model for parents of fourth graders included five factors, namely *epistemic practices*, *guidance in media use*, *argumentative practices*, *discussions on readings and topical issues*, and *valuing reliable epistemic practices*. In the model for parents of sixth graders, the factor of *discussions on readings and topical issues* was merged into the factor of *epistemic practices* resulting in four-factor model including factors for *epistemic practices*, *guidance in media use*, *argumentative practices*, and *valuing reliable epistemic practices*. Finally, a three-factor model was identified for the parents of eighth graders with factors for *epistemic and argumentative practices*, *guidance in media use*, and *valuing reliable epistemic practices*. The amount of reading material at home was positively associated with all or nearly all of the factors in each age group. Instead, a negative association was found between parent's education level and guidance in media use. The results suggest that home learning environment for critical reading seems to adapt to child's age. Furthermore, the results provide support for the importance of reading materials at home.

548

## Motivation to defend and defending behaviors in bullying: The mediating role of moral disengagement

Antonio Camacho, Ana Bravo, Rosario Ortega-Ruiz, Eva M. Romera

Universidad de Córdoba, Córdoba, Spain

### Abstract (max 500 words)



Objective of the study: Bystanders play a key role in the development and maintenance of bullying. Motivation to defend and moral disengagement have been analyzed as predictors of defense, but little is known about their interaction. According to self-determination theory, autonomous and controlled motivation have a different outcome on behavior and cognition. This is linked to social learning theory, which argued that moral transgressions are regulated by social sanctions and internalized self-sanctions, operating anticipatorily. The aim of the present study was to analyze the mediating role of moral disengagement in the association between motivation to defend and defending behaviors in bullying. Methodology: A total of 1,173 adolescents (45% girls; Mage = 12.99, SD = .84) in grades 7th and 8th at middle school participated in the study. The instruments used were Motivation to Defend Scale (three-factor structure: autonomous, introjected, and extrinsic motivation), Moral Disengagement Scale, and Defending Behaviors Scale (four-factor structure: reporting authority, comforting victims, aggressive defense, and assertive defense). The analysis conducted was a path analysis in Mplus. Results: Direct effects of motivation on defending behaviors were found. Specifically, autonomous motivation was positively associated with reporting authority and comforting victims. Introjected motivation predicted reporting authority and assertive defense. Extrinsic motivation to defend positively predicted reporting authority, aggressive and assertive defense. Moral disengagement was positively predicted by extrinsic motivation and negatively by autonomous motivation to defend. Moral disengagement was negatively associated with comforting victims and positively associated with aggressive defense. Indirect effects showed that moral disengagement mediated the association between autonomous and extrinsic motivation with comforting victims and aggressive defense. Conclusion: The findings of the study highlight the importance of motivation in promoting adolescent defending behaviors. Autonomous motivation is important for prosocial defending behaviors as opposed to external motivation. This finding is consistent with self-determination theory, which proposes that people motivated by internal values and goals tend to feel more engaged in their actions and have a greater sense of responsibility towards others. This is because autonomously motivated people tend to act in accordance with their moral values, and their behavior is based on a sense of personal integrity. Whereas adolescents who are highly motivated by rewards or avoiding punishment may feel less engaged in their actions and have a lower sense of responsibility towards others. As a result, they may adopt a more selfish perspective and less concern for the welfare of others, which may lead to and justify immoral behavior.

550

### **Individual and collective moral disengagement and their longitudinal links to pro-bullying, passive bystanding, and defending when witnessing school bullying in adolescence**

Björn Sjögren, Robert Thornberg

Linköping University, Linköping, Sweden

#### **Abstract (max 500 words)**

Objective of the study

Bullying has increasingly been recognized as a complex social phenomenon which involves not only those who victimize and those who get victimized but also bystanders. In this study, we assumed the participant role approach by focusing on pro-bullies, passive bystanders, and defenders of victims. We put a particular focus on the moral domain and, more specifically, on moral disengagement (MD). Previous research has found MD to be positively associated with pro-bullying and negatively associated with defending. However, most studies have had a cross-sectional design and, thus, are unable to discern developmental processes. Furthermore, despite theoretical and empirical support that MD operates both at individual and collective levels, most previous studies have confined their interest to the individual level. The aim of the present study was to investigate whether individual and collective MD in seventh grade were associated with bystander roles in eighth grade, and whether changes in individual and collective MD from seventh to eighth grade were associated with concomitant changes in the bystander roles.

### Methodology

We collected self-report questionnaire data at two time points, with one-year intervals, in seventh and eighth grade. The final sample included 1,361 Swedish students from 96 classrooms (53% girls, mean age7th grade = 13.62, SD7th grade = 0.35, mean age8th grade = 14.61, SD8th grade = 0.34). Both written informed parental consent and student assent were obtained from all participants. The questionnaires showed good internal consistency as suggested by Cronbach's  $\alpha$  between .85 and .96. Data were analyzed through three separate three-level regression models with pro-bullying, passive bystanding, and defending as the dependent variable. Measurement occasions constituted the first level, students formed the second level, and classrooms made up the third level. Gender and immigrant background were included as control variables.

### Results

In the final step of each regression model, individual MD was found to be a significant predictor. More specifically, individual MD in seventh grade predicted higher levels of pro-bullying and passive bystanding and lower levels of defending in eighth grade. Likewise, collective MD was a significant predictor of higher levels of pro-bullying and passive bystanding, but there was no significant association with defending. Furthermore, the cross-level interaction variable student-level change in individual MD (Grade  $\times$   $IMDt2 - IMDt1$ ) was found to be a significant predictor for all bystander roles. Students who increased in individual MD from seventh to eighth grade reported concomitant increases in pro-bullying and passive bystanding, whereas students who decreased in individual MD from seventh to eighth grade reported a concomitant decrease in defending.

### Conclusion

The findings sought to address the longitudinal link between MD and bystander behaviors in bullying among adolescents. The results suggest that MD plays a significant role in adolescents' bystander development as the study demonstrates a changeability of individual MD over time, and how this change was related to adolescents' changes in bystander behaviors. Further, the classroom peer context in terms of initial levels of collective MD were linked to pro-bullying and passive bystanding, but not to defending, over time.

551

### **Bidirectional associations between defending and victimization**

Sarah Malamut, Claire Garandeau, Christina Salmivalli

University of Turku, Turku, Finland

#### **Abstract (max 500 words)**

To reduce school bullying, many intervention efforts increasingly focus on utilizing peer bystanders. Indeed, several studies indicate that bystanders' defending of victimized peers may be associated with reduced levels of bullying in the peer group, as well as lower concurrent levels of negative adjustment for victimized youth (e.g., Ma & Chen, 2019). However, few youth do consistently defend presumably out of fear of becoming victimized themselves (Strindberg et al., 2020). Defending is widely described as a risky behavior in research on the topic and has indeed been found to be positively associated with victimization concurrently in some studies (e.g., Lambe et al., 2019). The limited longitudinal research has produced mixed findings regarding whether defending is (Huitsing et al., 2014) or is not (Malamut et al., 2021) positively associated with victimization over time. Furthermore, although preliminary support has been found for victimized youth being more likely to defend over time (Huitsing et al., 2014), it is unknown under which circumstances this is more likely to occur. The current study will examine the bidirectional associations between defending and victimization, while considering key individual-level (popularity) and classroom-level moderators (bullying and defending norms). We will also extend past research on this topic by separately considering three different types of defending (i.e., directly confronting the bully, comforting/supporting the victim, telling the teacher).

We will examine these questions among 3,470 Finnish youth (grades 4-9; Mage at T1 = 12.92; SD = 1.70) across 3 waves. On the individual level, we will use peer-reports of three types of defending, popularity, and self- and peer- reports of victimization. On the classroom level, we will consider classroom descriptive norms (average level of a behavior) and popularity norms (extent to which a behavior is associated with popularity) for bullying and defending. To answer these research questions, we will conduct cross-lagged panel models.

552

### **Longitudinal associations of individual and class moral identity with defending and passive bystanding behavior**

Tiziana Pozzoli, Gianluca Gini

University of Padova, Padova, Italy

#### **Abstract (max 500 words)**

Literature on school bullying has extensively documented its negative effects on students' mental health and psychological well-being. Efforts to address bullying have focused on encouraging students to act as defenders as a means of stopping peer victimization and improving victims' adjustment (Ma & Chen, 2019). However, bystanders may not only behave as defenders (i.e., standing up for victims by asserting themselves to aggressors, getting help from others, or showing support for victims; Ma et al., 2019), but they may also respond as passive bystanders, and thus remain neutral and keep out of the bullying process. Understanding factors that promotes or hinders students' defending and passive bystanding behavior when bullying occurs is passive is crucial for designing effective intervention programs.

To date, limited knowledge is available regarding the relative strength of moral correlates, both at the individual and class-level, in predicting bystanders' behavior over time. To address this gap, the present study tested the prospective associations of moral identity (i.e., self-importance of moral values) and perceived importance of moral values among peers and teachers with defending and passive bystanding behavior in a short-term longitudinal study.

The sample consisted of 943 young adolescents (47.4% females; Mage = 11.9 years, SD = .92) attending 41 classrooms in Italian public schools. Participants completed self-report measures of moral identity, perceived importance of moral values among peers and teachers in the fall, and defending and passive bystanding behavior in the fall and in the spring. Both behaviors and importance of moral values among peers and teachers were also included as class variables, by averaging the individual scores at T1 (Time 1) for each classroom.

Preliminary analyses showed that both defending and passive bystanding had moderate stability over one school year. Multilevel analysis indicated that, at the individual level, after controlling for the stability of defending and passive bystanding behavior, T2 (Time 2) defending was higher for students who reported higher moral identity ( $b = .09$ ,  $SE = .04$ ,  $p = .03$ ) and lower perception of importance of moral values among peers ( $b = -.14$ ,  $SE = .03$ ,  $p < .01$ ) at T1. For bystanding behavior, lower moral identity ( $b = -.14$ ,  $SE = .06$ ,  $p = .02$ ) and perceived importance of moral values among teachers ( $b = -.25$ ,  $SE = .04$ ,  $p < .001$ ) at T1 predicted behavior at T2.

At the class-level, T1 class behavior (defending vs passive bystanding) explained between-class variability in the same behavior at T2. Concerning class peer and teacher importance of moral values, preliminary analyses showed mixed results that will be subject of further investigation.

How these results expand previous research on morality and non-aggressive bystander behavior and their potential implications for prevention and intervention programs will be discussed.

**560**

## **Positive Youth Development in the Context of Climate Change: Insights from the Role of Affect in Daily Life Experience**

Teresa Pereira

University of Minho, Braga, Portugal

**Abstract (max 500 words)**

Recent research reveals that youth report a high number of negative feelings about climate change and that climate change negatively impacts their daily life and functioning. Affects and emotions have been acknowledged as motivational drivers for climate action. From a developmental point of view, adolescence is considered a sensitive period for pivotal influences on developmental trajectories. Thus, a positive approach may be undertaken in the context of climate change to integrate positive and negative affect and foster adolescents' and emerging adults' roles as agents of change.

We explore how climate change is reflected in adolescents' and emerging adults' daily life experience and which variables may be promoted to ensure healthy developmental pathways. The aims of the study are threefold: a) to describe how climate change is reported in participants' daily life; b) to compare the daily life characteristics of the most and less engaged youth in climate action from our sample; c) to study the association between positive and negative affect and daily life activities and thoughts.

Data were collected from 110 Portuguese adolescents and emerging adults (16-24 years old, 80,9% female) over 7 seven days using the Experience Sampling Method. We gathered quantitative and qualitative information, respectively through Likert scales and open answers, concerning adolescents' psychological states (thoughts and positive and negative affect) and the contextual characteristics of momentary experience (activities, place, and company). We will analyze data at the between-person level (the average of each participant's momentary responses across 1 week) and the within-person level (multiple momentary observations for each individual). A total of 3944 moments are considered in this ongoing study, which integrates

both qualitative and quantitative analysis. Through content analysis, we categorized activities and thoughts. Frequencies, means, and standard deviations for each Likert scale will be generated to characterize the sample and compare youth profiles. Considering the nested nature of data (multiple observations nested within individuals), we will perform hierarchical multilevel modeling to test the association between positive and negative affect and activities and thoughts.

We expect to conclude the ongoing analysis and have the results of this research by the end of March 2023. So far, the results indicate that some participants report climate-related activities and thoughts across different moments of their daily life. These results will be further explored to compare youth profiles and decide on the variables included in the hierarchical multilevel models as potential moderators.

The overall results will inform about external (e.g., activities) and internal (e.g., thoughts and emotional states) characteristics related to youth perceptions of climate change. Discussion on results will highlight which factors need to be addressed in future research and intervention programs to promote positive youth development that can sustain youth positive behavioral contributions and healthy emotion regulation about climate changes in daily life.

561

## **My best friend cares for nature, so do I? A longitudinal exploration of adolescents and their best friends' environmental values, self-identity, personal norms and behavior**

Audra Balundė

Mykolas Romeris University, Vilnius, Lithuania

### **Abstract (max 500 words)**

Peers play an important role in adolescents' behavioral choices. Yet, little is known about how peers affect one's environmental behavior. Environmental behaviors aim to conserve the environment or not harm it. Initial cross-sectional studies suggest adolescents' and their friends' environmental attitudes and behaviors were related (Collado et al., 2017; Collado, Evans, et al., 2017). However, the question is whether this relationship emerges from simply repeating a friend's choices or are environmental behaviors driven by adolescents' and their friend's intrinsic motives. Environmental values, self-identity and personal norms are well-established factors of various environmental behaviors; they also are indicators of one's intrinsic motivation to conserve the environment (Bolderdijk et al., 2013; Lindenberg & Steg, 2007). If people's environmental behaviors are rooted in their intrinsic motivation, in that case, they act environmentally friendly because they want to do the right thing, not because others urge them to conserve the environment. One longitudinal study suggests that environmental values, self-identity and personal norms can drive adolescents' environmental behaviors (Balundė et al., 2021; presented at the International Conference on Environmental Psychology). However, given adolescents' susceptibility to peer influences, we aim to explore in a longitudinal setting to what extent adolescents' environmental behaviors are rooted in their intrinsic motivation vs. their best friend's intrinsic motivation and behavior. Specifically, we will test on four-time points to what extent best friends' environmental values, self-identity, personal norms and behavior are related. Next, we will explore how well they explain each other's environmental behavior. We will use structural equation modeling to calculate the results. The data is currently being collected in one administrative region in the eastern part of Lithuania in three schools (children from 4th to 7th grades). The data collection started in May 2022 and will end in May 2023. We will discuss these findings and their practical value for educational practices seeking to promote adolescents' environmental behavior.

562

## **Harnessing Adolescents' Desire for Peer Status to Promote their Pro-Environmental Behavior**

Judith van de Wetering

Utrecht University, Utrecht, Netherlands

### **Abstract (max 500 words)**

Shifting towards predominantly plant-based diets has strong potential to mitigate one of today's biggest challenges: climate change (Intergovernmental Panel on Climate Change, 2022). Adolescents have the potential to be frontrunners in this dietary transition. Many of them are already deeply concerned about climate change, more so than adults (United Nations Development Program, 2021). Moreover, their dietary choices may be particularly impactful, as they could subsequently affect their parents' diets (Liu et al., 2022; Žukauskienė et al., 2021). However, traditional interventions to promote behavior change typically show reduced effectiveness during adolescence (Yeager et al., 2018). In a preregistered randomized experiment, we tested whether adolescents can be encouraged to limit their meat consumption by harnessing their developmentally enhanced desire to gain peer status.

The desire for peer status peaks in middle adolescence (Crone & Dahl, 2012; Crone & Fuligni, 2019; Lafontana & Cilissen, 2010). Social norms can be a powerful tool to signal the status of a behavior, as they convey what peers do or approve of (Cialdini & Jacobson, 2021; Constantino et al., 2022). However, the low prevalence of vegetarianism may signal to adolescents that limiting meat consumption is against prevailing social norms (or just "uncool"). As such, communicating a static norm (i.e., "only a small percentage of your peers limit their meat consumption") may not motivate adolescents to change their diets. That is why, in the current experiment, we test the effectiveness of communicating a dynamic norm. A dynamic norm emphasizes that a fast-growing number of peers choose to limit their meat consumption. It signals the status of a behavior that is an increasing trend (Sparkman & Walton, 2017; Cheng et al., 2020).

In a preregistered, online between-subjects experiment with a nationally-representative sample, 400 Dutch adolescents (ages 12 to 17) were randomly assigned to one of four conditions. In the dynamic norm condition, presented information communicated that a fast-growing number of front-running peers choose to limit their meat consumption. In the static norm condition, the information communicated that only a small and stable number of peers choose to limit their meat consumption. In the control conditions, the information did not mention behavior of peers at all (i.e., educational control) or presented a dynamic norm about social media use (i.e., unrelated control).

Next, we assessed pro-environmental behavior. Participants took part in a lottery in which they could win a meal coupon for a fast-food restaurant. They selected a preferred meal coupon, either vegetarian or non-vegetarian. Using Bayesian informative hypothesis testing, we found there is a more than 99% chance that participants in the dynamic norm condition selected a vegetarian meal coupon 5.8 times more often than participants in the unrelated control condition. Contrary to our expectations, we did not find evidence that the dynamic norm condition motivated vegetarian choices more so than the static norm condition. Instead, exploratory analyses suggested a more than 99% chance that there participants in both the dynamic and static norm conditions selected a vegetarian meal more often than participants in the educational and unrelated control conditions.

**563**

### **Promoting Adolescents' Pro-Environmental Behavior via Motive-Alignment: A Cross-National Experiment**

Jenna Spitzer

Utrecht University, Utrecht, Netherlands

### **Abstract (max 500 words)**

Adolescents have the potential to be at the forefront of pro-environmental behavior change (Fisher, 2019; Bandura & Cherry, 2020), yet their day-to-day behaviors do not always reflect their high levels of concern about climate change (Olsson & Gericke, 2016; Lee et al., 2020). In this cross-national experiment, we aim to promote adolescent's pro-environmental behavior using a novel approach: motive-alignment. According to the sustainability motive-alignment hypothesis, adolescents will be driven to engage in pro-environmental behavior if they construe such behavior as aligned with their motives for autonomy and peer status – motives that are relevant to adolescents in their daily lives (Thomaes et al., 2023).

The motive-alignment hypothesis rests on the idea that motives drive behavior, and that people can be motivated to engage in behavior change if they see how new behaviors (e.g., pro-environmental behaviors) are relevant to what they already care about (Yeager et al. 2018). As adolescents are strongly motivated to express their autonomy and gain peer status (van Petegem et al., 2015; Crone & Dahl, 2012), this research evaluates whether presenting pro-environmental behavior as an opportunity to realize these core motives can increase adolescents' pro-environmental behavioral intentions.

In this cross-national, online experiment, 420 Dutch and Chinese adolescents (ages 16 to 17) will be randomly assigned to either a motive-alignment or a traditional (active control) intervention. In the motive-alignment condition, participants will read how adolescents have taken climate action into their own hands (signaling autonomy) and how pro-environmental behaviors are increasingly popular among youth (signaling status). In the control condition, participants will read information derived from current environmental education materials about the causes and consequences of climate change (Greenpeace, 2022). We will then ask adolescents which snack, out of equivalent options with diverse eco-labels, they would be inclined to select, and how much they would be inclined to donate to a youth-led environmental organization.

Data collection and analyses will take place in February 2023. We expect that adolescents in the motive-alignment condition will exhibit more pro-environmental behavioral intentions compared to adolescents in the control condition. In addition to testing these confirmatory hypotheses, we will explore cultural differences in the effect of the motive-alignment intervention. As research on motive-alignment interventions for adolescents has taken place only in Western countries (i.e., the United States and the Netherlands), this research presents an initial exploration of how motive-alignment operates differently across cultures.

By evaluating the motive-alignment approach, the present research can contribute to the creation of low-cost, scalable, and culturally sensitive interventions that help adolescents – a group well-positioned to catalyze societal change – act on their environmental concerns.



586

## From Effectiveness to Implementation: Sustainability of the Identity Project in the Norwegian Educational Context

Brit Oppedal<sup>1</sup>, Salman Türken<sup>2</sup>, Warsame Abdullahi Ali<sup>1</sup>, Hayat Abdu Adem<sup>3</sup>

<sup>1</sup>Norwegian Institute of Public Health, Oslo, Norway. <sup>2</sup>Oslo Metropolitan University, Oslo, Norway.

<sup>3</sup>University of Oslo, Oslo, Norway

### Abstract (max 500 words)

The Identity Project (IP) was developed in the U.S. as a universal school-based intervention to promote positive adaptation through strengthening the development of an important identity dimension for youth growing up in multicultural contexts, their ethnic-cultural identity (ECI). Lately, the IP has been culturally adapted and implemented in six European countries, including Norway, and support of its effectiveness in these new cultural settings is emerging. Yet, an intervention's effectiveness is only one of the factors that ensures its sustainability and transfer to implementation in ordinary school settings. Another important factor is the users' perception of the intervention as acceptable, i.e., their willingness to implement the intervention. However, while the feedback about the IP from experiment classrooms has been favorable, we lack systematic knowledge about its acceptability in European contexts. Hence, the overall aim of this study is to examine the acceptability of the IP among users in Norwegian multicultural highschools.

Harrison et al., (2016) have identified three dimensions of importance to acceptability per teachers' perception: a) suitability, i.e., favorable qualities of the intervention; b) perceived benefit, i.e., effectiveness of the intervention; and c) convenience i.e., lack of cost and resource, and discomfort experienced by the students. Most research on acceptability of school-based interventions is built on information from teachers. But as the students represent the target group of the intended changes of the IP, it is important to examine their experiences and if they overlap with their teachers'. In the present study we explore the acceptability of the IP among students in Norwegian multicultural highschools and triangulate their information with data from school personnel who delivered the intervention. More specifically, we examine: 1) What are the main aspects of IP acceptability according to the students who participated in the intervention? 2) Do the students' viewpoints regarding IP acceptability converge with those of the facilitators?

In Norway, the IP was implemented in six classrooms of three multicultural highschools, as part of a pilot study. The research team trained the classroom teachers and the schools' minority advisors (employed in schools specifically to prevent negative social control in the immigrant population) as IP facilitators. The study is based on individual interviews carried out with 17 students representing all six classrooms, and 10 IP facilitators (five teachers and five minority advisors) after they finished the IP. The semi-structured interview protocols were similar for, but adjusted to, the two groups and addressed individual, social, and structural factors promoting and preventing the implementation of the IP.

The interviews were audio-recorded, and subsequently transcribed. A first review of the transcripts suggests that both students and facilitators perceive the IP to promote supportive interpersonal relationships and inclusive classrooms, but there is a need for clarification around how participation in

the IP may be acknowledged. A systematic and detailed thematic analysis of the data will be conducted as recommended by Braun & Clarke (2006). The findings will be discussed considering the sustainability of the IP and a future scale up of its application across European multicultural countries and contexts.

589

## Efficacy of the Identity Project Intervention in Italy: A Randomized Controlled Trial

Chiara Ceccon<sup>1</sup>, Maja Schachner<sup>2</sup>, Francesca Lionetti<sup>3,4</sup>, Massimiliano Pastore<sup>1</sup>, Adriana Umana-Taylor<sup>5</sup>, Ughetta Moscardino<sup>1</sup>

<sup>1</sup>University of Padova, Padova, Italy. <sup>2</sup>Martin Luther-University Halle-Wittenberg, Halle, Germany.

<sup>3</sup>University of Chieti-D'Annunzio, Chieti, Italy. <sup>4</sup>Queen Mary University of London, London, United Kingdom. <sup>5</sup>Harvard University, Cambridge, USA

### Abstract (max 500 words)

Achieving a sense of clarity concerning one's own cultural identity is a crucial developmental task in adolescence, especially in ethnically diverse societies (Phinney, 1996; Umaña-Taylor, 2016). Indeed, previous research indicates that a positive cultural identity is linked to better outcomes in terms of psychological well-being, peer relationships, and academic performance (Rivas-Drake et al., 2014). To promote exploration and resolution processes involved in cultural identity formation, Umaña-Taylor and Douglass (2017) developed the Identity Project (IP), a school-based, 8-week curriculum designed to engage ethnic minoritized and majoritized students in reflections and activities concerning their heritage culture(s). Several studies have demonstrated efficacy of the IP among adolescents in the US (Sladek et al., 2020; Umaña-Taylor et al., 2018a, 2018b), and its recent implementation in Germany has yielded promising results (Juang et al., 2020). However, more research is warranted to ascertain whether this program is efficacious in other European countries characterized by different histories of immigration, socio-political climate, and interethnic relations. The current preregistered study aimed to address this gap by adapting and implementing the IP intervention in Italy, a recently receiving country representing a major point of entry for immigrants in the European Union. Using a randomized controlled trial, we 1) evaluated the efficacy of the IP, and 2) explored the role of students' immigrant background and environmental sensitivity (i.e., the ability to register, process, and respond to stimuli; Pluess, 2015) in moderating intervention efficacy.

Participants included 747 adolescents (Mage= 15 years, SD = .68, 53% girls, 31 of immigrant descent) attending 45 ethnically mixed classrooms within 6 secondary schools in Northeastern Italy. After being randomly assigned by classroom to an intervention (n = 382) and a waitlist control group (n = 365), students completed self-report measures of cultural identity and environmental sensitivity 1 week prior to the intervention (T0, pretest), 9 weeks after baseline (T1, posttest), and 13 weeks after baseline (T2, follow-up).

Consistent with the original study (Umaña-Taylor et al., 2018a), Bayesian analyses showed that levels of exploration increased among students in the intervention (vs control) group (Cohen's d = 0.18).

However, the expected ripple effect of exploration on resolution was not found. Results also indicated that in the intervention (vs control) group, more sensitive students reported greater exploration at posttest than their less sensitive counterparts. In addition, youth of immigrant descent with higher (vs. lower) levels of sensitivity to environmental influences showed more exploration at posttest.

Findings lend support to the efficacy of the Italian version of the IP in promoting cultural identity exploration processes, particularly among more sensitive adolescents of immigrant descent. The absence of a cascading effect in relation to resolution may reflect the general postponement of adult identity commitments observed in the Italian context (Crocetti et al., 2012), and thus requires further work to engage youth in reflections and activities leading to an increased awareness of how cultural identity fits into their larger sense of self.

**590**

### **Promoting Adolescents' Ethnic-Cultural Identity Exploration and Resolution: The implementation of the Identity Project in the Greek School Context**

Frosso Motti-Stefanidi, Anastasios Ntalachanis, Christina Tsigkou, Angeliki Zacharia, Vassilis Pavlopoulos

National and Kapodistrian University of Athens, Athens, Greece

#### **Abstract (max 500 words)**

The objective of the study is to examine the efficacy of an intervention developed in the USA, the Identity Project, which promotes ethnic-racial identity exploration and resolution among youth in multicultural classrooms (Umaña-Taylor & Douglass, 2017), implemented on an ethnically diverse group of adolescents in the Greek school context. Adolescents' ethnic identity formation, which is a key acculturative and developmental task, is informed by the process of exploration, whereby individuals explored their ethnic background, and the process of resolution, whereby individuals resolve the meaning this aspect of their identity has for them. Greece used to be the source of immigrants to other countries. This trend reversed in the early 1990s with the collapse of communist regimes in Eastern Europe, leading to many immigrants coming to Greece. This rapidly transformed the country into an immigrant receiving society challenging its cultural homogeneity. Today, Greece is a major entry and transition country for immigrants to Europe. Currently, over 10% of the country's population is of immigrant descent.

Based on the premise that identity is rooted in sociohistorical context, the Identity Project was adapted culturally and implemented in Greek schools (Juang et al. 2022). The Greek adaptation of the intervention involved two key changes. First, the term ethnic-racial identity was changed to ethnic-cultural identity. Importantly, a shorter version of the intervention was developed while keeping the goals for the sessions of the original intervention. The need to shorten the intervention was dictated by the permission process to enter schools required by the Greek Ministry of Education.

The adapted version of the Identity Project was implemented in two public high schools in Athens with a high percentage of immigrant-origin youth. All students, immigrant- and non-immigrant-origin, enrolled

in the 8th grade of Middle School (N = 205; Mage = 14 years; 40% immigrant-origin) took part. Eight classrooms of the 8th grade were equally divided into the treatment condition (i.e., Identity Project curriculum) and the control condition (i.e., Professional Guidance curriculum focusing on the development of skills related to decision making with respect to educational and professional goals; Sidiropoulou-Dimakakou et al., 2008). Each condition received 5, 90-minutes long, sessions delivered as part of a Life Skills required course.

To test the efficacy of the intervention, all the students were administered a battery of questionnaires one week prior to Session 1 and one week after session 5. Pre- and post-test data from the experimental and control groups on youth's ethnic and national identities (Umaña-Taylor & Taylor 2015) and global identity cohesion (Rosenthal et al., 1981) will be compared.

A key expectation is that between the pre- and post-test, both immigrant- and non-immigrant-origin youth in the treatment group will show greater exploration of both their ethnic and national identities compared to youth in the control group. Adapting and implementing the Identity Project will provide greater clarity on aspects of identity that are relevant to all youth living in Greece, which is increasingly becoming ethnically diverse.

**594**

### **Do autonomy and relatedness satisfaction in schools promote students' cultural identity development in the Identity Project? - The role of intrinsic motivation, teacher support and peer belonging**

Sophie Hölscher<sup>1</sup>, Maja Schachner<sup>1</sup>, Linda Juang<sup>2</sup>

<sup>1</sup>Martin Luther University Halle-Wittenberg, Halle, Germany. <sup>2</sup>University of Potsdam, Potsdam, Germany

#### **Abstract (max 500 words)**

A clearer sense of one's ethnic-racial identity, which has been achieved via meaningful exploration, promotes positive well-being in adolescents (Rivas-Drake et al., 2014). The Identity Project (Umaña-Taylor & Douglass, 2016), a school-based intervention that facilitates ethnic-racial or cultural identity exploration, has been implemented in schools across North America and Europe with differing outcomes (Juang et al., 2020; Umaña-Taylor et al., 2018). As identity formation has important ramifications for well-being, it is necessary to better understand the conditions in which the Identity Project and other interventions based on identity exploration are most likely to facilitate the best outcomes for students. Both theoretical and empirical research within self-determination theory (SDT; Ryan & Deci, 2000) highlight the importance of autonomy and relatedness satisfaction as an important prerequisite to engage in the process of identity formation (Flum & Blustein, 2000; Guay et al., 2003, Luyckx et al., 2009). They argue, that when the needs of autonomy and relatedness are satisfied, this provides adolescents with the energy necessary to engage in identity formation.

Therefore, linking the Identity Project theory of intervention (Umaña-Taylor & Douglass, 2017) and self-determination theory, this study investigates the role of basic need fulfilment in the school context, as a possible necessary condition for students to be able to explore and commit to their cultural identity. The current study uses a longitudinal, randomized wait-list control design. Data was collected in 18 classrooms across two German cities in the school year 2021–2022. The sample includes 337 seventh graders (Mage = 12.96 years, SD = .77, 48% female). Using latent profile cluster analysis, we will identify clusters reflecting patterns of change and stability of cultural identity exploration and commitment across three survey assessments (baseline, 9 weeks, 18 weeks) within the Identity Project.

We posit that autonomy and relatedness satisfaction, conceptualized through intrinsic motivation, teacher support of autonomy, teacher support of relatedness and peer belonging, will predict students' cultural identity exploration and commitment patterns. Students who feel autonomous and experience psychological freedom, and who are connected to and supported by a social network, may have more energy to explore different identity options as well as commit to a cultural identity. The study will be pre-registered before the authors access the data.

595

### **The power of relationships: Teacher-student and peer relationship quality can mitigate problems with language proficiency on academic adjustment among culturally diverse elementary school students**

Francesca Ialuna<sup>1</sup>, Sauro Civitillo<sup>2</sup>, Nele McElvany<sup>3</sup>, Birgit Leyendecker<sup>4</sup>, Philipp Jugert<sup>1</sup>

<sup>1</sup>University of Duisburg-Essen, Essen, Germany. <sup>2</sup>Utrecht University, Utrecht, Netherlands. <sup>3</sup>TU Dortmund University, Dortmund, Germany. <sup>4</sup>Ruhr University Bochum, Bochum, Germany

#### **Abstract (max 500 words)**

For immigrant and refugee students, academic adjustment can be undermined by different migration and acculturative challenges (i.e., learning the school language). According to the risk and resilience developmental perspective (Motti-Stefanidi & Masten, 2017), several factors can protect immigrant and refugee youth from these challenges, and promote their adjustment and development. The attachment and relational perspective (Juang et al., 2018) posits that warm and supportive relationships in the new context, such as at school, can play a significant role for the adjustment of immigrant and refugee youth.

Bringing both perspectives together, this preregistered study aims to examine to what extent positive relationships with teachers and peers foster the academic adjustment (i.e., achievement and belongingness) of students of different immigrant generations, in spite of the acculturative challenge of learning the school language (i.e., German).

The current study uses cross-sectional data from n = 47 elementary school classes in Germany. Participants (N = 278, Mage = 10.45, SD = .55) were fourth grade students of the first immigrant

generation (36.33%), second immigrant generation (39.57%) and non-immigrant (24.10%). Language proficiency was measured with a German vocabulary test. We assessed teacher-student, peer relationship quality and school belongingness with a paper-and-pencil questionnaire. Academic achievement was assessed by a reading comprehension test and by students' Grade Point Average (GPA).

Multilevel analyses showed that higher levels of teacher-student relationship quality significantly mitigated the negative effect of low German proficiency on reading comprehension. On the contrary, when teacher-student relationship was high, the negative effect of low German proficiency on GPA increased. Teacher-student relationship quality did not significantly moderate the effect of German proficiency on school belongingness.

Concerning relationship with peers, we found that the negative effect of low levels of German proficiency on school belongingness was significantly reduced when peer relationship quality was high. The moderating effect of peer relationship on GPA and reading comprehension was not significant. All analyses controlled for students' socioeconomic status and cultural capital.

In an exploratory analysis, we further examine associations and moderation effects comparing students of the first, of the second immigrant generation and non-immigrant students.

Findings support evidence on the importance of school relationships quality for the academic adjustment of culturally diverse students, expanding these results to immigrant and refugee students at the end of the elementary school.

596

## **Doing Well in School is Key? Testing Longitudinal Associations of School Functioning, Parental and Friend Support, and Acculturation Orientations among Moroccan-Dutch Adolescents**

Jana Vietze<sup>1</sup>, Linda Juang<sup>2</sup>, Maja Schachner<sup>3</sup>, Wim Meeus<sup>4</sup>, Susan Branje<sup>4</sup>

<sup>1</sup>Erasmus University Rotterdam, Rotterdam, Netherlands. <sup>2</sup>University of Potsdam, Potsdam, Germany.

<sup>3</sup>Martin Luther University Halle-Wittenberg, Halle, Germany. <sup>4</sup>Utrecht University, Utrecht, Netherlands

### **Abstract (max 500 words)**

Positive functioning in school entails feeling connected to other school members (i.e., relationships with teachers and students) as well as individual academic achievement (i.e., school performance) and is an important indicator of adolescents' sociocultural adjustment. During adolescents, school functioning may predict but also result from changes in the quality of close relationships, including parents and peers. For cultural minority adolescents, these changes are accompanied by acculturation processes, meaning how adolescents emphasize their heritage, ethnic culture, and the mainstream culture in which they live. Still, we need to better understand how normative developmental processes and acculturative

processes interrelate over time, if they are predictors or results of positive school functioning, and if changes over time can be better explained by within-person changes or between-person differences. This three-wave longitudinal study examines bidirectional effects between adolescents' school functioning, perceived relational support of parents and the best friend, and acculturation orientations towards the heritage and mainstream culture.

We surveyed 112 Moroccan-Dutch adolescents ( $M_{age} = 15.25$ ,  $SD = 0.53$  at T1; 56.8% female) over three consecutive years during annual home visits. This data collection was part of the ongoing longitudinal project Research on Adolescent Development and Relationships (RADAR). Cross-lagged path analyses in Mplus revealed that school functioning positively predicted perceived best friend support and adolescents' Dutch orientation but not vice versa. There were no longitudinal relations between school functioning and perceived parental support or Moroccan orientation. As additional finding, there was a small positive correlation between perceived parental support and Moroccan orientation, but again no significant longitudinal relation.

Findings are discussed regarding the potential of positive school functioning for Moroccan-Dutch adolescents regarding relational belonging in proximal social environments, such as the family and peers. Importantly, we discuss the possible role of positive school functioning for cultural belonging in more distal social environments, such as the mainstream society and culture.

**597**

### **How do cultural diversity climate and teacher-student relationship impact on academic engagement? Testing the mediating and moderating role of emotional awareness**

Chiara Ceccon<sup>1</sup>, Francesca Ialuna<sup>2</sup>, Irene Mammarella<sup>1</sup>, Ughetta Moscardino<sup>1</sup>

<sup>1</sup>University of Padova, Padova, Italy. <sup>2</sup>University of Duisburg-Essen, Essen, Germany

#### **Abstract (max 500 words)**

The adjustment and inclusion of immigrant-descent youth into the school system represents a pivotal challenge also in recent receiving countries like Italy, where preexisting socio-economic disparities and the educational gap were exacerbated by the COVID-19 pandemic (MIUR, 2022). Extant research underlines how contextual and interpersonal features of the school environment might be key in this adaptation process. For instance, the perception of a classroom climate that promotes intergroup contact (i.e., endorsing equality and inclusion) and values diverse cultural backgrounds as resources (i.e., promoting cultural pluralism) has been associated with positive psychosocial outcomes, e.g. better school achievement, academic and social self-concept, and life satisfaction (Schachner et al., 2016, 2019). Studies also evidence how supportive student-teacher relationships foster positive behavioral and emotional adjustment as well as learning outcomes, including school achievement and engagement (Sointu et al., 2017; Varga, 2017). However, less is known about psychological processes that may play a role in the relation between these contextual variables and school adjustment.

Emotional awareness is an attentional process that encompasses monitoring, recognizing, and distinguishing one's emotions (Rieffe et al., 2008). This construct becomes increasingly important during early adolescence, and it appears to be a crucial factor for interpersonal functioning and psychosocial adjustment (Trentacosta & Fine, 2010). Moreover, research documents positive associations between emotional intelligence and academic success during this developmental period (Marquez et al., 2006). Despite this promising evidence, there is a lack of studies focusing on emotional awareness among diverse youth in the school context, and its interplay with other environmental and interpersonal assets. Given the limited knowledge in the literature, we were interested in investigating whether emotional awareness could explain and/or account for individual differences in the relation among these assets. In this longitudinal study, we will explore the moderating and mediating role of emotional awareness in the association between school environment variables, namely student-teacher relationship and classroom cultural diversity climate (i.e., promotion of equality and inclusion, and of cultural pluralism), and students' academic engagement.

Participants were 128 early adolescents (Mage = 12.10, SD = 0.91, 56% female-identifying) attending a multicultural middle school in Italy. Half of the sample were first (11.72%) and second generation immigrant students (42.19%), while 46.09% were non-immigrant students. We administered self-report surveys at two time points, approximately six months apart (W1 = December 2020/January 2021, W2 = May 2021).

Preliminary analyses using structural equation modeling showed that the perceptions of a classroom climate promoting equality and inclusion and cultural pluralism at T1 did not significantly predict students' academic engagement at T2, but predicted higher emotional awareness at T2. Positive teacher-student relationship at T1 increased students' emotional awareness and academic engagement at T2. Furthermore, we explore the mediating and moderating role of emotional awareness and examine differences between students with and without an immigrant background.

Results can shed light on how psychological processes, such as emotional awareness, when considered in a combined fashion with contextual resources, may contribute to school adjustment among culturally diverse youth.

**598**

## **Teachers' Implementation of the Identity Project Associated with Increases in Students' Ethnic-Racial Identity Exploration**

Adriana Umaña-Taylor<sup>1</sup>, Michael Sladek<sup>2</sup>, Maria Dalal Safa<sup>3</sup>

<sup>1</sup>Harvard University, Cambridge, USA. <sup>2</sup>University of Oklahoma, Norman, USA. <sup>3</sup>University of North Carolina – Chapel Hill, Chapel Hill, USA

### **Abstract (max 500 words)**

Identity formation is a developmental process that has significant consequences for youth adjustment (Erikson, 1968). Among ethnic-racial minoritized youth, exploring their ethnic-racial identity (ERI) and



gaining a sense of clarity regarding this aspect of their identity can promote positive youth development (Umaña-Taylor & Rivas-Drake, 2021). The Identity Project is a school-based intervention program that provides adolescents with tools and strategies for engaging in ERI development (Umaña-Taylor & Douglass, 2017). The curriculum draws on culturally sustaining teaching practices that emphasize the value of embedding students' identities into the classroom (Gay, 2013; Ladson-Billings, 1995; Paris, 2012). Findings from a randomized controlled trial supported the efficacy of the Identity Project when delivered by researchers (Umaña-Taylor et al., 2018); however, effectiveness of the program when delivered by teachers is unknown. As such, the current pre-registered study examined changes in adolescents' ERI exploration as a function of their 9th grade History teachers' implementation of the Identity Project. Because intervention effects could be modified by students' experiences with family ethnic socialization (i.e., FES; Sladek et al., 2021) and other important sociodemographic factors (i.e., student gender, generational status, and student and teacher ethnic-racial background; Umaña-Taylor & Douglass, 2017), we examined each of these as covariates of change in ERI exploration.

Participants included 180 adolescents (42.2% male, 50.6% female, 7.1% other; Mage = 14.11, SD = 0.33; 38.3% Latino, 33.9% White, 15.0% Black, 9.4% Asian American, 3.3% Other) recruited from 9th grade U.S. History classrooms in an ethnoracially diverse public high school where trained teachers implemented the Identity Project. After obtaining parental consent and youth assent, students completed online surveys before the Identity Project (i.e., pretest, W1) and after the final Identity Project session – approximately 12 weeks later (i.e., posttest, W2). Surveys included measures of ERI (Douglass & Umaña-Taylor, 2015) and family ethnic socialization (Umaña-Taylor et al., 2004). Students received \$15 for each survey.

We tested hypotheses using a latent difference score (LDS) model (McArdle & Hamagami, 2001) within a structural equation modeling framework with FIML estimation. An LDS approach uses latent variable modeling to obtain reliable estimates of intra-individual change across two occasions and addresses measurement error issues that are introduced when relying on observed difference scores to test change between two repeated measures.

ERI exploration significantly increased from W1 to W2 ( $\Delta = 0.54$  (0.14),  $p < .001$ ), which did not vary based on W1 FES ( $b = -0.11$  (0.08),  $p = .18$ ), student-teacher ethnic-racial match/mismatch ( $b = -0.03$  (0.15),  $p = .83$ ), gender ( $b = -0.14$  (0.15),  $p = .35$ ), generational status ( $b = 0.03$  (0.04),  $p = .55$ ), or ethnic-racial background ( $b = -0.10$  (0.23),  $p = .66$ ). There was significant variability in change in ERI ( $\sigma^2 = 0.80$  (0.09),  $p < .001$ ); furthermore, students who started out with lower ERI exploration demonstrated a significantly steeper increase ( $\text{cov}(\text{intercept}, \Delta) = -0.37$  (0.05),  $p < .001$ ). Findings provide initial support for the effectiveness of the Identity Project intervention when delivered by teachers.

606

## **Social Needs and Bullying Perpetration: The Moderating Effect of Social Position in the Peer Group**

Ana Bravo, Antonio Camacho, Rosario Ortega-Ruiz, Eva Romera

University of Cordoba, Cordoba, Spain

**Abstract (max 500 words)**

Adjustment to the peer group plays a key role in well-being and development during adolescence. Teenagers actively try to feel as members of their peer groups and adjust their behaviors and attitudes to promote their social status. However, there are differences between adolescents in their efforts to adjust to peer groups. In the study of bullying, a social group phenomenon, it has been identified that a need for popularity may influence the development of this type of aggressive behavior, while the effect of the need to belong is less clear. Moreover, few studies have explored whether the profile based on social position could moderate the influence of these social needs on the development of bullying behaviors. Objective: The present study aims to describe the effects of both social needs on bullying perpetration, and to explore whether social profiles within the group (friendship, rejection, and popularity) moderate this association. Methodology: A total of 2,008 adolescents (45.8% girls) aged 11 to 17 (M = 13.10, SD = 1.05) participated in the two-time longitudinal study (six-months apart) over one school year. To answer the research questions, first a latent class analysis was conducted to assign adolescents to different social profiles based on their friendship, rejection, and popularity levels at the beginning of the school year. Second, moderation and simple slope analyses were conducted in PROCESS. Results: Class analysis found 3-classes as the best model solution: a group composed of most of the participants, showed high friendship levels (80%); another showed high rejection levels (7%); and a last one with high friendship and popularity levels (12%). Both moderation models found that there were no direct effects of the need for popularity and belongingness on perpetration, but there was a moderating effect of the types of social profiles. Simple slope analyses for need for popularity found a significant effect in the high rejection group, showing that high need for popularity predicted greater involvement in bullying behavior. While simple slope analyses for the need to belong found a significant effect on perpetration in the high rejection group and high friendship and popularity group. This effect was positive for adolescents with high rejection, as high need to belong was associated with high perpetration. While adolescents with high friendship and popularity levels the effect was negative, as high need to belong was associated with less aggressive behavior. Conclusion: Taken together, these results suggest that future bullying prevention programs should not only pay attention to promote closeness and positive affective relationships but should also offer strategies and resources that allow adolescents to find ways to satisfy both needs based on prosocial and moral behaviors.

607

**Bullying Perpetrators Do Not Suffer From Internalizing Problems: The Role of Fulfilled Status Goals**

Claire Garandeau<sup>1</sup>, Sarah Malamut<sup>1</sup>, Tessa Lansu<sup>2</sup>, Lydia Laninga-Wijnen<sup>1</sup>

<sup>1</sup>University of Turku, Turku, Finland. <sup>2</sup>Radboud University, Nijmegen, Netherlands

**Abstract (max 500 words)**

Involvement in bullying is often described as a risk factor for psychological maladjustment for targets and perpetrators. Whereas strong evidence exists that victimization leads to internalizing difficulties, evidence of a positive association between bullying perpetration and internalizing problems is generally

limited to self-reported bullying and/or to studies not controlling for victimization. This is problematic because a) self-reported bullying is not strongly correlated with peer-reported bullying, which relies on a higher number of informants and has distinct psychological correlates, and b) those who bully and are also victimized are especially maladjusted and have a different profile from “pure bullies.”

We argue that peer-reported bullying perpetrators who are not victimized should be protected from internalizing problems, because bullying – unlike victimization - is positively associated with being popular and having a strong desire for popularity. We test the following hypotheses in an adolescent sample: 1) Controlling for victimization, bullying will be negatively associated with anxiety and depressive symptoms; 2) bullying will be positively associated with popularity and popularity goals; 3) the negative association between bullying and internalizing problems will be mediated by high popularity.

Data was collected in the Fall of 2022 among 4022 Finnish adolescents (49.6% boys; Mage = 13.79, SD = 0.95). Peer nominations were used to assess bullying perpetration (3 items;  $\alpha = .87$ ) and victimization (4 items,  $\alpha = .71$ ). Popularity was assessed with peer ratings, i.e., participants rated how popular they perceived each of their classmates to be, on a scale from 0 (not at all) to 6 (really). Self-reported anxiety (6 items,  $\alpha = .89$ ) and depression (5 items;  $\alpha = .86$ ) were measured with the 11-item version of the RCADS (Radez et al., 2021). Popularity goals were assessed with 4 items ( $\alpha = .70$ ) of the Social Goals Questionnaire (Kiefer & Ryan, 2008).

Concurrent analyses were conducted with four regression models predicting anxiety, depression, popularity, and popularity goals. In each model, the predictors were age, sex, peer-reported victimization and peer-reported bullying. Longitudinal analyses will be conducted with data collected in Spring 2023.

Results indicated that victimization was positively associated with anxiety,  $p = <.001$ , depression,  $p = <.001$ , negatively associated with popularity,  $p = <.001$ , and had no significant link with popularity goals. Bullying perpetration was negatively associated with anxiety,  $p = .027$ , and not significantly associated with depression. Bullying was positively associated with popularity,  $p = <.001$ , and popularity goals,  $p = .002$ . Our hypothesis that bullying would be associated with lower internalizing symptoms was supported for anxiety. To test whether this effect might be explained by popularity, we added popularity as a predictor in the model. Popularity was negatively associated with anxiety,  $p = .003$ , and the association between bullying and anxiety became non-significant, suggesting that bullying perpetrators' lower anxiety is partly due to their high popularity.

Our study shows that, when bullying is peer-reported and victimization is controlled for, perpetrators are not more at risk for internalizing difficulties. Actually, bullying others was associated with lower anxiety, which was partly explained by perpetrators' high popularity.

**608**

## **Benefits of Bullying? A Test of the Evolutionary Hypothesis in three Cohorts**

Tina Kretschmer, Chaim La Roi, Rozemarijn Van der Ploeg, Rene Veenstra

University of Groningen, Groningen, Netherlands

### **Abstract (max 500 words)**

**Background:** The evolutionary hypothesis of bullying suggests that perpetration carries an evolutionary advantage in terms of health and reproductive success. Specifically, perpetration is considered instrumental to forming a “pecking order”. Once established, hierarchies prevent constant power battles and can facilitate group stability. In such a hierarchy, bullies’ dominance prevents them from becoming targets, which could be accompanied by health benefits such as lower stress levels than among those lower in the hierarchy. With respect to reproductive outcomes, male bullies are more dominant, display physical strength and attain more material resources and female bullies are more attractive - traits that might contribute to a higher social status and greater opportunities for mating and reproduction (Volk et al., 2012). Indeed, conform to a frequently high position in the social hierarchy, bullies are more likely to date, have sex, and report a greater number of partners in adolescence and early adulthood (e.g., Farrell & Vaillancourt, 2019). Bullies appear to be at an advantage in an evolutionary sense as they are sexually attractive to a greater number of potential partners, which should increase their reproductive opportunities. Taken together, bullying might be beneficial through averting stress-related somatic problems and simplifying the processes of dating and mating but systematic longitudinal research into adult outcomes of bullying that would point at adaptation is lacking. **Methods:** We tested the evolutionary hypothesis in the National Child Development Study (n = 4998 male, n = 4831 female), British Cohort Study 1970 (n = 4261 male, n = 4432 female), and Tracking Adolescents’ Individual Lives Survey (n = 486 male, n = 521 female), where bullying was assessed in adolescence (NCDS, BCS70: age 16, TRAILS: age 14) and outcomes in adulthood. **Results:** NCDS. In NCDS, individuals who were rated as bullies by parents and teachers at age 16 reported poorer health at age 55 and had more children, whereas bullying was not associated with number of partners. In BCS70, perpetrators reported lower health in their early forties. Bullying perpetration was not associated with number of partners or children. In TRAILS, perpetration in early adolescence was associated with age at first sex in both men and women: bullies had their first sex earlier than non-bullies but bullying was not related to the other outcomes. **Conclusion:** Our data lend partial support to an evolutionary advantage of bullying perpetration but understanding concrete mechanisms requires further research with robust assessments of bullying, ideally from multiple reporters and using refined measures.

609

### **Criminal Convictions of Different Subtypes of Adolescent Bullies as Young Adults**

Tiina Turunen, Sarah Malamut, Christina Salmivalli

University of Turku, Turku, Finland

### **Abstract (max 500 words)**

Bullying perpetration has previously been linked to adverse long-term outcomes, such as internalizing problems, antisocial behavior, lower educational attainment, substance use, and offending. However, adolescent bullies can differ from each other in key ways. For example, some bullies differ in peer

status: some are popular leaders among their peers, whereas others are highly rejected and victimized. Concerningly, previous research has completely ignored heterogeneity of bullying perpetrators when examining their later criminal convictions.

We examined how different subtypes of adolescent bullying perpetrators differ from each other and from non-bullies in criminal convictions in young adulthood. The study utilizes a large-scale longitudinal dataset, in which survey answers from 2008-2009 (n= 10,886 adolescents, age 13-15, 3 waves) have been combined with Finnish register data up to year 2019 (age 24-26).

In adolescence, 2095 (20.3%) participants scored 0.5 SD above their same sex classroom mean in peer-reported bullying. Among them, four distinct subgroups based on peer status variables (popularity, likeability, rejection, victimization) were identified with latent profile analysis. Average bullies (29.7% of all perpetrators) were close to the total sample average in all variables. Popular bullies (40.8%) were high in popularity and likeability, and low in rejection and victimization. Popular-rejected bullies (16.3%) were high in popularity, low in likeability, and high in rejection and victimization. Bully-victims (13.2%) were low in popularity and likeability, and high in rejection and victimization.

Results indicate that 7.7% of non-bullies, 18% of average bullies, 18.5% of popular bullies, 28.1% of popular-rejected bullies, and 22.9% of bully-victims had one or more conviction. All bully subtypes were more likely to have a criminal conviction than non-bullies. Further, popular-rejected bullies were more likely than other subtypes to have a criminal conviction. All bully subtypes also had more criminal convictions than non-bullies (M=0.4). Among subtypes, popular-rejected bullies had more convictions (M=2.1) than all other bully groups (Ms=1.0-1.4).

Results suggest that school age bullying perpetration is associated with criminal convictions later in life. There are differences between bully subtypes: the group of perpetrators that was viewed by peers in adolescence as popular, but also as rejected and victimized, seems most likely to be convicted by mid-twenties. Results will also be presented regarding differences in the types of convictions (e.g. violent vs. non-violent offending) between the subtypes.

**632**

## **Fathers and Mothers' Challenging Behaviors, Nurturance and Restrictiveness, and Father Involvement**

Lígia Monteiro, Carolina Santos, Maria Costa

Instituto Universitário de Lisboa (Iscte); Cis-Iul, Lisboa, Portugal

### **Abstract (max 500 words)**

Parental challenging behaviors (behaviors that elicit risky and daring behaviors, going beyond physical rough play, and including verbal and socio-emotional components), and play as a context, tend to be more associated with fathers, than with mothers, traditionally viewed as the main caregivers and nurturers. This study aimed to explore in a Portuguese sample of nuclear families: 1) the perceptions of

fathers' and mothers' challenging parenting behaviors, similarities, and specificities; 2) explore if these behaviors were associated with nurturance/restrictive parenting practices for each parent. Finally, we wanted to explore if father involvement was associated with his challenging and/or nurturance behaviors, and if that differed in terms of his involvement in care, teaching/discipline, and play, while controlling for sociodemographic variables.

Participants: Data is still being collected; we expect to reach 200 couples. Preliminary data is presented for 84 were couples. Mothers and fathers' education levels ranged from high-school - university level, all parents worked. Target-children were preschoolers, 41 were girls. Instrument/Procedure: Both mothers and fathers independently completed the "Challenging Parenting Behavior Questionnaire" (Majdandzi et al., 2008; Monteiro et al.), (alphas  $>.68$ ); the "Child Rearing Practices Report questionnaire" (Rickel & Biasatti, 1982; Ribeiro et al., 2021), (alphas  $>.70$ ), and the "Parental Involvement Questionnaire: Childcare and Socialization Activities" (Monteiro et al., 2008). A composite measure was calculated for father involvement by averaging parent's reports, due to high ICC. Alphas were all  $>.67$ .

Results: Descriptive statistics for all measures for both parents are presented in Table 1, for the existing data. Mothers and fathers' education were significantly associated with several of the domains of challenging behaviors, parenting practices and father involvement. Testing for differences in parenting challenging behaviors, we found that fathers reported significant higher rough and tumble behaviors ( $p=.01$ ), whereas mother's reported higher social daring behaviors ( $p=.00$ ). As for the child's sex, no significant differences were found for mothers, while for fathers' differences were found for social daring behaviors ( $p=.04$ ), with higher scores for girls. Bivariate associations are presented in Table 2. Mother's and father's rough and tumble, risk encouragement, and social daring behaviors were positively and significantly associated with nurturance. Father's modeling behaviors were positively associated with his restrictiveness practices, whereas rough and tumble behaviors were associated with higher involvement in all dimensions. Father's nurturance was associated with higher involvement in direct care. No associations were found for involvement and restrictiveness practices. Results will be discussed in terms of parenting behaviors, gender stereotypes, father involvement, and the idea that fathers challenging behaviors with nurturance potentially promote children's socio-emotional outcomes.

633

## Analyzing the Relationship between Parental Warmth and Parental Involvement Using the Actor-Partner Interdependence Model

F. Kubra Aytac

<sup>1</sup>The Ohio State University, Columbus, USA

### Abstract (max 500 words)

Parental warmth is associated with accepting, caring, and supportive parenting behaviors (Rothenberg, 2020). Previous research revealed a significant positive association between parental warmth and child outcomes (Ogg & Anthony, 2020), including fewer internalizing and externalizing problems and higher academic achievement. However, the literature on the relationship between warmth and involvement is

limited, especially for under-represented samples. Also, religiosity has been associated with specific gender beliefs and attitudes in parenting, such that stronger religious beliefs among couples predict a more traditional division of labor in household tasks, including childcare (Gaunt, 2008). Thus, this study aims to explore the relationship between parental warmth and parental involvement by controlling religiosity in a collectivistic culture.

Two hundred and forty-six Turkish couples ( $N = 182$ ) with at least one child between 3 and 5-years-old participated in this study. Participants completed an online survey including questions on demographic information, Eigna Minnen Beträffande Uppfostran Parent Form (EMBU-P; Castro et al., 1997), and Parental Involvement Scale (Monteiro et al., 2008). Descriptive statistics and intercorrelations among the study variables were computed. The data were analyzed using Actor-Partner Interdependence Models (APIM) in a structural equation modeling framework with IBM SPSS AMOS 21.0. The model included actor effects (which estimated the effect of each individual's parental warmth on their own reports of parental involvement) and partner effects (which estimated the effect of each individual's parental warmth on their partner's parental involvement). Mothers' and fathers' religiosity were controlled in each model. The fit of the hypothesized structural model and the significance of individual paths were tested. Model fit was assessed using multiple indices: the chi-square test, which indicates adequate fit if non-significant; the root-mean-square error of approximation (RMSEA; values  $< .06$  are acceptable); and the Comparative Fit Index (values  $> .95$  are acceptable; Hu & Bentler (1999).

The model fit the data well,  $\chi^2(7) = 5.216$ ,  $p = .157$ , RMSEA = .039, CFI = .759. Mothers' warmth was significantly positively associated with their reports of parental involvement,  $\beta = .166$ ,  $p < .001$  (actor effect). Also, mothers' religiosity was significantly positively associated with their reports of parental involvement,  $\beta = .134$ ,  $p < .05$  (actor effect). Fathers' religiosity was positively associated with fathers' parental warmth ( $\beta = .13$ ,  $p < .05$ ). Also, the relationship between mothers' warmth and father's involvement (partner effect) was close to significant ( $\beta = -.113$ ,  $p = .07$ ). However, paternal warmth was not significantly related to neither paternal nor maternal involvement. Also, contrary to mothers, fathers' religiosity was not significantly related to paternal involvement (see Figure 1).

Results supported the significance of the religiosity of couples in defining parental roles and parents' warmth toward their children (DeMaris et al., 2011). Also, parental warmth was a significant predictor for just mothers, which suggests that there are other mechanisms associated with fathers' involvement. Considering fathers' indisputable role in children's development (Cabrera et al., 2007), enduring efforts to explore the different factors limiting or promoting the father's involvement is essential, especially for cultures like Turkey where traditional gender roles persist.

**634**

### **Co-parenting, maternal gatekeeping, and father's involvement in families with preschool aged children in an Andean city in Peru**

Gabriela Apolinario, [Magaly Noblega](#)

Pontifical Catholic University of Peru, Lima, Peru

### Abstract (max 500 words)

Father's involvement in childrearing has been described concerning dyadic (e.g., co-parenting, Campbell, 2022) and maternal (e.g., gatekeeping, Schoppe-Sullivan & Altenburger, 2019) variables. However, the characteristics of the dynamics established between maternal, paternal, and child behaviors have received little attention in the Latin-American context. So, the present study proposes the following research questions: What are the relationships between co-parenting, maternal gatekeeping, and father's involvement (relative to the mother)? Next, we want to know if mother's gatekeeping mediates the relationship between the co-parenting's dimensions and father's involvement. In this regard, it is postulated that gatekeeping (conceptualized as mother's behavior), would be an important and tangible process through which co-parenting affects father's participation in childrearing (Schoppe-Sullivan et al., 2008).

Method: Participants were 128 parental dyads co-residents in Peru (Tarma), with preschool aged children. Mothers answered to the Coparenting Questionnaire (CQ, Margolin, 1992), both mothers and fathers answered the Parental Regulation Inventory (PRI, Van Egeren, 2000), and the Parental Involvement Scale: Care and Socialization Activities (PIS, Monteiro et al., 2008; Nóbrega et al., 2022). Agreement between reports of parents within the couple, measured by intra class correlation, was acceptable across two domains of PRI (.62 and .69), and higher for the domains of PIS (between .71 to .86), therefore, aggregate measures were computed by averaging fathers' and mothers' reports. Regarding internal reliability, Cronbach's alphas for the three fathers' CQ's scales reported by mothers were between .64 and .73, for the two PRI's scales were between .78 and .87, and for five PIS's scales were between .61 and .81.

Results showed that father's involvement, relative to the mother's, in teaching/discipline and outdoor leisure activities were significantly and positively associated with father's cooperation ( $r=.260$ ,  $p=.003$  and  $r=.196$ ,  $p=.029$  respectively). The dimensions of father's co-parenting were significantly associated with the dimensions of encouragement and discouragement of maternal gatekeeping ( $.243 < |r| < .511$ ). Only the dimension of maternal discouragement was significantly associated with the father's participation in indirect care ( $r=-.181$ ,  $p=.043$ ), in teaching/discipline ( $r=-.284$ ,  $p=.001$ ), and outdoor leisure ( $r=-.237$ ,  $p=.008$ ). Regarding the second research question, only the discouragement dimension of maternal gatekeeping showed a mediating role in some relationships. Father's cooperation had a significant indirect effect on father's participation in children's teaching/discipline through mother's discouragement ( $b=.042$ , 95% CI=[.006, .089]) and a direct effect ( $b=.149$ ,  $t=2.351$ ,  $p=.020$ ). This area of father's involvement was also indirectly influenced by father's conflict through mother's discouragement ( $b=-.058$ , 95% CI=[-.122, -.014]). Finally, father's cooperation and conflict only had an indirect effect on father's participation in outdoor leisure activities through maternal discouragement ( $b=.033$ , 95% CI=[.001, .081];  $b=-.045$ , 95% CI=[-.110, -.003] respectively). Results will be discussed considering gender role theories and current conceptualizations of parental-child dynamics.

635

### Being a Father after Separation

Johanna Terävä



University of Jyväskylä, Jyväskylä, Finland

### **Abstract (max 500 words)**

During recent decades, fathers' participation in family daily life has increased, and the importance of the father-child relationship for the well-being of both father and child has been confirmed in many international studies. But what is post-separation fatherhood and involvement like when parents have separated? Nowadays, the ending of their couple relationship challenges parents to think about modifying and restructuring their family dynamics, including their custodial arrangements, parental roles, and individual relationship with each child. In Finland, after separation, the mother commonly remains the primary caregiver and hence the children end up living with her. What, then, is the fathers' role? Very little research exists on the experiences of divorced fathers in Finland.

This study investigated how separated / divorced men construct themselves as fathers and the worries they have as fathers in this situation.

Individual interviews with 24 divorced fathers (ages 29 - 57) were conducted during the years 2015-2019 in collaboration with two Finnish national child welfare NGOs. At the time of interview all the fathers had been or were being supported by one or other NGO. The fathers had one to five children, 17 fathers had joint custody with their child's mother and 4 mothers, and 3 fathers were single parents. The fathers' educational level varied from elementary to higher education, with most having received a vocational education. All but six fathers were employed at the time of interview. The research data were treated confidentially, and each participant gave their informed consent. The study was constructionist in orientation and applied qualitative content analysis and some discourse analytical elements.

The preliminary analysis yielded three substantive categories: caregiver, educator, and worrier. In their thick descriptions, the fathers described themselves as close to their children and as caregivers and nurturers who are present, loving and take care of their child's well-being by satisfying basic the child's emotional and physical needs. Some fathers reported not being able to be with their children as much as they would like. Many fathers described themselves as educators, emphasizing the importance of sticking to boundaries, rules and routines and making children responsible. Imparting skills, knowledge and morals was also mentioned as important. The fathers also reported many worries, concerning their own ability to cope, conflicts with the child's mother, the child's health and safety, upbringing situations, financial matters, and difficulties related to time use.

636

### **Talking about vs. Talking to My Child: A Cross-Cultural Study on the Congruence between Emotional Valence of Parents' Mind-Mindedness and Parenting Behaviours**

Zhenlin Wang<sup>1</sup>, Claire Hughes<sup>2</sup>

<sup>1</sup>The Education University of Hong Kong, Hong Kong, Hong Kong. <sup>2</sup>University of Cambridge, Cambridge, United Kingdom

### **Abstract (max 500 words)**

**Background/Objective:** Parenting beliefs and practices vary across cultures (Chen et al., 2019). How parents talk about their children in the five minute speech sample (FMSS) reflects parents' construal of their children's mental states, emotionality, and relational schemas (Sher-Censor, 2015). How parents talk to their children in interactive tasks, however, is an indicator of parent-child mutuality and parental scaffolding in live interactions. Whether or not parents describe their children positively does not necessarily reflect their parenting quality. Studies have demonstrated that while expressions of criticism in parents' FMSS were associated with rejection in some cultures, it could indicate nurturing and responsible parenting in others (Cheng, 2002; Deater-Deckard & Dodge, 1997). In this study, we focus on positivity and negativity in parental FMSS and during live interaction with their children and examine the congruence between the two types of speeches across cultures.

**Methods:** We apply the Family affective Attitude Rating Scales (FMSS-FAARS; Bullock et al., 2005) and code the positive and negative relational schemas in the FMSS, and the Parent-Child Interaction System or PARCHISY (Deater-Deckard et al., 1997) to code positive or negative parenting in an Etch-A-Sketch task. The study has several objectives: 1 Do the relational schemas in the FMSS apply to the Chinese culture?; 2 Are there cross cultural differences in relational schemas in the FMSS?; 3 Are there cross cultural differences in parenting practices in the Etch-A-Sketch task?; 4 Do parents' positive relational schemas correlate with their positive parenting in the Etch-A-Sketch task, and vis versa? And last but not least, 5 are there cross cultural differences in the associations between relational schemas in the FMSS and parenting practices in the Etch-A-Sketch task?

**Expected results:** Explorative in nature, we expect that Hong Kong and Chinese parents demonstrate a lesser degree of congruence between their relational schemas and parenting practices compared with their British counterparts.

638

## **A Cross-Cultural Examination of Associations between Parental Mind-Mindedness and Child Executive Function in Hong Kong and the United Kingdom**

Laure Lu Chen<sup>1</sup>, Jean Anne Heng<sup>1</sup>, Zhenlin Wang<sup>2</sup>, Claire Hughes<sup>1</sup>

<sup>1</sup>University of Cambridge, Cambridge, United Kingdom. <sup>2</sup>The Education University of Hong Kong, Hong Kong, Hong Kong

### **Abstract (max 500 words)**

**Objective:** To date, few studies have examined cross-cultural differences in parents' mind-mindedness, with little to no studies investigating how these differences may be associated with child outcomes

across cultural sites. Given that parent mind-mindedness has shown significant links with children's positive outcomes, it is important to understand if this association holds across cultures. This study leverages data from the United Kingdom and Hong Kong to examine the relationship between parental mind-mindedness and executive function in young children.

**Methods:** Participants included 240 parent-child dyads (child Mean age = 5.02; SD = .316; 120 girls) in Hong Kong and 260 parent-child counterparts (child Mean age = 5.40; SD = .310; 135 girls) in the United Kingdom. Parents first completed a five-minute speech sample, which was then scored for mind-mindedness based on a well-developed codebook. Children completed three tasks reflecting different aspects of executive function, including working memory, attentional flexibility, and inhibitory control, during a Zoom-based testing session. We will first conduct a multigroup latent profile analysis to identify patterns of parent mind-mindedness in Hong Kong and the UK. Then, multinomial logistic regression will be applied to examine the link between mind-mindedness and executive function. We will include the following covariates of child gender, child verbal ability and family socioeconomic status in the regression model.

**Expected results:** Given the exploratory nature of the data, we do not make any directional predictions of the number of patterns of parental mind-mindedness. However, we hypothesize that the proportion of parents engaging in positive mind-mindedness talk in the UK would be higher than that in HK. Next, we expect that children whose parents are in a positive-mind-mindedness-oriented group would perform better on executive function tasks as compared to the children whose parents are in other groups. We also assume that the link between positive mind-mindedness and EF is stronger in the UK context than on the HK site.

**Conclusion:** This study will add to the growing literature on cross-cultural work examining links between parent mind-mindedness and child outcomes by using a multigroup person-centred approach to identify the sub-group differences in parent mind-mindedness, before examining its links with children's performance on executive function tasks.

639

## How Mind-Mindedness and Theory of Mind Interact Matters to Child Perceived Social Competence

Siu Ching Wong<sup>1</sup>, Laure Lu Chen<sup>2</sup>, Jean Anne Heng<sup>2</sup>, Claire Hughes<sup>2</sup>

<sup>1</sup>University of Hong Kong, Cambridge, United Kingdom. <sup>2</sup>University of Cambridge, Cambridge, United Kingdom

### Abstract (max 500 words)

**OBJECTIVE** Parental mind-mindedness has been shown to predict child Theory of Mind (ToM), which has also been found to be associated with child social competence. A recent study found that parental mind-mindedness has an indirect effect on children's socio-emotional development via ToM (Yang et al., 2022). However, the association between parental mind-mindedness and child social competence is less

explored albeit the evidence that parental mind-mindedness may stimulate child social competence by improving their socio-cognitive development (e.g., ToM). The current study aims to investigate the potential associations between parental mind-mindedness, child ToM and child perceived social competence.

**METHODOLOGY** 240 Hong Kong kindergarten children (Mean age = 60.27 months, SD = 3.80 months, 52.2% girls) completed online Zoom visits with trained researchers, during which they completed a series of tasks including a battery of ToM tasks as well as the self-reported social competence. Parents of child participants completed a five-minute speech sample task, which was then transcribed and coded for mind-mindedness according to Meins and Fernyhough's manual (2015). To examine the effects of parental mind-mindedness on child perceived social competence, a linear regression model will be conducted. Then we will include child ToM to identify if its interaction with parental mind-mindedness significantly influences child perceived social competence.

**EXPECTED RESULTS** We expect both parental mind-mindedness and child ToM to be associated with child perceived social competence. Specifically, a higher level of parental mind-mindedness is expected to associate with a higher level of perceived social competence, and child ToM might partially contribute to the association between them, controlling for children's characteristics (e.g., age, gender, internalising and externalising symptoms).

**CONCLUSION** The current study expands existing research to a less explored aspect of mind-mindedness and highlights (1) its correlation to children's early social competence and (2) the contribution of ToM in this association. The potential results may suggest that family and school interventions targeting parental mind-mindedness and child ToM may help enhance the child perceived social competence, which is central to children's well-being.

640

## Parental Mind-Mindedness and Child Problem Behaviours: The Role of Parents' Well-Being

Xiaozi Gao<sup>1</sup>, Zhenlin Wang<sup>1</sup>, Claire Hughes<sup>2</sup>, Siu Ching Wong<sup>2</sup>

<sup>1</sup>The Education University of Hong Kong, Hong Kong, Hong Kong. <sup>2</sup>University of Cambridge, Cambridge, United Kingdom

### Abstract (max 500 words)

#### Objective

Research has consistently shown that parental MM predicts higher quality parent-child relationships as well as favourable social and cognitive outcomes in children (Aldrich et al., 2021; McMahon & Bernier, 2017). However, findings have also shown that the negative associations between MM and children's problem behaviours were equivocal (Camisasca et al., 2018; Colonesi et al., 2019; Hughes et al., 2017). Other factors, such as parents' well-being, may be at play. Prior evidence indicates that parental MM is

associated with fewer child externalising behaviours of parents with higher levels of parenting distress and less internalising behaviours among parents of low parenting distress (Hobby et al., 2022). However, Dollberg et al. (2021) found that parents' anxiety only moderates the relations between MM and child externalising but not internalizing behaviours. These conflicting findings motivate the premise of our current study, which is to examine the moderating role of parents' well-being on the relationship between parental MM and child problem behaviours.

### **Methodology**

240 children from Hong Kong were recruited to the study, along with their parents and teachers in Hong Kong. Parent mind-mindedness was coded from transcriptions of the five-minute speech sample based on Meins and Fernyhough's (2015) coding manual. Parents' well-being was assessed using the Kessler-10 (Kessler et al., 2002), the Patient Health Questionnaire-9 (Kroenke & Spitzer, 2002), and the Generalized Anxiety Disorder-7 scale (Spitzer et al., 2006). A composite score based on the three scales will be used. Parent and teacher ratings of child behaviour will be obtained using the Strength and Difficulties Questionnaire (SDQ). Given that the current sample is a low-risk population, we will use the broader subscales of externalizing and internalizing behaviour based on the SDQ (Goodman et al., 2010).

### **Expected Results**

We expect to find a moderating effect of parents' well-being on the association between MM and problem behaviours. Specifically, parental MM would relate to less externalizing behaviours among parents with lower levels of self-reported well-being. Given the mixed prior findings about internalizing behaviours, we did not have a specific hypothesis regarding internalising behaviours.

### **Conclusion**

This study contributes to the literature by shedding light on the moderating role of parents' well-being and child problem behaviours. Using both parents' and teachers' reports of problem behaviours, the study adds evidence that parental MM relates to children's real problem behaviours, not just their perception of child behavioural outcomes.

**661**

## **Can Kindergarten experiences moderate effects of early risk classes on middle childhood behavioural and academic outcomes?**

Katharina Haag<sup>1</sup>, Mari Vaage Wang<sup>2,1</sup>, Helga Ask<sup>1</sup>, Nina Alexandersen<sup>1</sup>, Henrik Daae Zachrisson<sup>2</sup>, Tyler Watts<sup>3</sup>, Ragnhild Eek Brandlistuen<sup>1</sup>

<sup>1</sup>Norwegian Institute of Public Health, Oslo, Norway. <sup>2</sup>University of Oslo, Oslo, Norway. <sup>3</sup>Columbia University, New York, USA

**Abstract (max 500 words)**

**Objective:** Previous US-based research has identified various groups of children (here termed “classes”) that experience different constellations of early life risk factors. Such classes have also been linked differentially to later life academic and mental health outcomes. However, it is not yet clear whether similar associations exist in a strong welfare context such as in Norway. Furthermore, few studies have investigated potential moderators of such relationships. Positive experiences in kindergarten (close student-teacher relationships, exposure to structured pre-academic activities) may be able to buffer early risks, but evidence is mixed on whether all children profit equally from attending high-quality kindergarten.

**Methods:** Data from the Norwegian Mother, Father and Child Cohort study (n= 7478) and associated Norwegian registry data. Latent class analyses will be performed using demographic, pregnancy/birth, family and child factors, as well as polygenic scores to establish early risk classes. Classes will then be linked to parent-rated academic performance and mental health at 8 years, as well as National Test scores in Norwegian and Maths and registry-based diagnoses of any mental health disorder at 11 years, using Wald’s tests and associated contrasts. Latent class moderation analyses will be performed to investigate whether extent of structured pre-academic activities and student-teacher closeness mediate the established associations differently for different classes.

**Results:** Preliminary results indicate the presence of a “low risk” class, alongside several risk classes: 1) a “resource risk class” defined by low parental education and socio-economic status, which performs poorer academically than the low risk class, 2) a “family psychological risk class” defined by low parental relationship satisfaction and elevated parental mental health problems, with children showing predominantly behavioural problems in middle childhood, and 3) a class with developmental difficulties, demonstrating higher behavioural and academic problems compared to the low risk class. Latent class moderation analyses and will be implemented in a next step.

**Conclusions:** The discussion will focus on the implications of the presence of the various risk classes in a Norwegian welfare state context and will explore to what extent Kindergarten factors are able to buffer against negative later life outcomes in a country with almost universal Kindergarten access.

662

**Bullying victimization, internalizing and externalizing problems: The impact of teacher-child relations in ECEC**

Marie Aurora Nordahl<sup>1</sup>, Thormod Idsøe<sup>1</sup>, Mari Vaage Wang<sup>1,2</sup>, Ragnhild Eek Brandlistuen<sup>2</sup>, Tracy Vaillancourt<sup>3</sup>

<sup>1</sup>University of Oslo, Oslo, Norway. <sup>2</sup>Norwegian Institute of Public Health, Oslo, Norway. <sup>3</sup>University of Ottawa, Ottawa, Canada

**Abstract (max 500 words)**

**Objective:** High quality teacher-child relationships have been shown to protect school- aged children from bullying, as well from externalizing and internalizing symptoms. Less is known about these relations in younger children who are in early childhood education and care (ECEC). A few studies suggest that teachers' competence and discipline methods predict bullying in ECEC, but less is known about the protective role of ECEC teacher-child relations for subsequent bullying victimization and externalizing and internalizing problems. Our aim is to investigate the extent to which teacher-child relations in ECEC at the age of 5 are associated with bullying victimization, internalizing and externalizing symptoms at age 5 and age of 8.

**Method:** The sample was drawn from the longitudinal Norwegian Mother and Child Cohort Study (MoBa), that has collected population-based data on health and development for 114,500 children. Bullying victimization at 5 years was measured using the mothers' ratings of the statement "My child is teased/bullied by other children" in the past 2 months. The response categories were "never," "sometimes" or "often." Bullying victimization at 8 years was measured using the mothers' responses to the question "In the past 12 months, has your child been teased/bullied by other children?" The response categories were "never," "seldom," "two/three times a month," "once a week" or "many times a week." Internalizing symptoms at 5 years were measured with the subscale of the Child Behavior Checklist (CBCL). Internalizing symptoms at 8 years were measured with four items from the Screen for Child Anxiety Related Emotional Disorders and 11 items from the Short Mood and Feelings Questionnaire. Externalizing symptoms at 5 years was measured with seven items from the CBCL, and at 8 years with the Rating Scale for Disruptive Behavioral Disorders. Preschool teachers reported teacher-child relations in ECEC at age 5 (Student-Teacher Relationship Scale) in a subsample of 7500 children.

**Expected results:** Structural equation modelling (SEM) in Mplus with latent variables for internalizing and externalizing symptoms that will reduce measurement bias will be used. Based on our a priori considerations, a model will be tested to investigate to what extent teacher-child relations in ECEC at the age of 5 are associated with bullying victimization and internalizing symptoms and externalizing symptoms reported at age 5 and age of 8.

**Conclusion:** The results will make it possible to investigate whether teacher-child relations in ECEC are associated with bullying victimization, externalizing symptoms, and internalizing symptoms, and whether it predicts these factors when the children are age of 8.

**667**

## **Do Social-Emotional Intervention Impacts Persist at Higher Rates than Cognitive Impacts? A Meta-Analysis of Educational RCTs with Long-Term Follow-up**

Emma Hart<sup>1</sup>, Drew Bailey<sup>2</sup>, Tyler Watts<sup>1</sup>

<sup>1</sup>Columbia University, New York, USA. <sup>2</sup>University of California, Irvine, Irvine, USA

### **Abstract (max 500 words)**

**Objective:**

Intervention effect fadeout has been noted as an issue affecting ECE interventions (Bailey et al., 2017) and educational interventions more broadly (Bailey et al., 2020). It is unclear, however, whether this pattern exists for social-emotional skills, as most empirical work on fadeout has focused on cognitive skills (Abenavoli, 2019). Many researchers have argued that social-emotional skills may be more fundamental for determining adult success (e.g., Heckman & Kautz, 2012). Indeed, social-emotional skill impacts may endure differently than cognitive skills.

#### Methodology:

Thus, the current meta-analysis investigated whether educational treatment impacts on social-emotional skills demonstrated greater long-term persistence than impacts on cognitive skills. 426 papers were drawn from eight published meta-analyses on educational interventions. 89 interventions met our inclusion criteria (RCTs with cognitive or social-emotional outcomes and follow-ups on the same students at least 6 months after post-test) and were double coded. In total, 923 post-tests and 1,526 follow-ups were coded. To avoid issues related to reporting biases (see Bailey et al., 2020), the sample was limited to studies that reported impact estimates for the same construct using the same measure at post-test and at least one follow-up. These criteria produced 263 cognitive outcome groupings (i.e., language and literacy, math, achievement, and cognition) and 189 social-emotional outcome groupings (i.e., social-emotional, externalizing, internalizing, criminality, and substance use).

Follow-up impacts were then regressed on post-test impacts producing two key parameters: 1) a slope term indicating how post-test impact magnitude predicted follow-up impact magnitude (i.e., post-test “persistence rate”), 2) an intercept term indicating the effect of factors not captured in the post-test impact that the intervention impacted and which predicted follow-up impacts (i.e., “unmeasured mediators”).

#### Results:

Figures 1 and 2 display the descriptive effect size trajectories for social-emotional and cognitive skills. These show that RCTs had positive impacts at post-test that generally faded across follow-ups. For both cognitive and social-emotional outcomes, effects for studies with larger samples hovered closer to null than studies with smaller samples. The estimates from our regression models are presented in Table 1. Overall, we observed evidence of fadeout: post-test impacts were predictive of relatively short-run follow-up (at 6- to 12-months after post-test) at a rate of approximately 50%, and became less predictive at subsequent follow-up waves (greater than 1 year after post-test). There were few differences in the persistence rates between the two types of outcomes (see interaction in Column 3). Interestingly, we observed small unmeasured mediator effects (i.e., intercept effects) for social-emotional, but not cognitive, outcomes.

#### Conclusion:

Together, these results suggest that theory purporting that social-emotional skills exhibit greater long-run persistence, and function overtime in dramatically different ways than cognitive skills, may be too simplistic. Indeed, our results demonstrated similar persistence rates for both social-emotional skills and cognitive skills. These results are preliminary, and upcoming analyses will examine whether intervention characteristics (i.e., early childhood vs. adolescent focus) moderate fadeout patterns. We expect that



this work can make a substantial contribution to both the ECE intervention literature and broader education literature.

**699**

### **Links of daycare center green space to the development of attention deficit hyperactivity disorder: A population based cohort study.**

Vidar Ulset

University of Oslo, Oslo, Norway

#### **Abstract (max 500 words)**

Attention-deficit/hyperactivity disorder is a common developmental disorder that is associated with a range of long-term impairments, and knowledge about early life predictors are critically needed. Previous studies have found that outdoor time in daycare is linked with better cognitive functioning and less symptoms of inattention-hyperactivity in normal samples, and that residential green space is linked with lower risk of developing ADHD. However, less is known about whether daycare centre's closeness to green space is linked with clinically diagnosed ADHD, and for whom and when exposure to nature is beneficial. The aim of this study is to examine if exposure to green spaces in daycare is linked with ADHD diagnosis, and if such associations are moderated by polygenetic risk and sociodemographic factors. The present study will use data from the Norwegian Mother and Child Cohort Study in combination with geodata (Normalized. The study consists of 114000 pregnancies recruited from 1999 to 2009 from a total of 50 hospitals around Norway. Information on health health, daycare center characteristics, sociodemographic characteristics and aspects of child and health was collected by questionnaires. We use the normalized difference vegetation index (NDVI) as a measure of vegetation greenness surrounding each daycare center address in a quadratic area of 500x500m in which the daycare centre is located in the center of the quadrature. We expect to find higher risk of developing ADHD for children attending daycare centers located in areas with sparse green vegetation, adjusted for a range of possible confounding factors.

**739**

### **The Healthy Context Paradox at a National-Level: Is the association of victimisation with lower health and wellbeing higher when the level of victimization at a national level is lower?**

Peter Smith<sup>1</sup>, Rhysvana Agyekum-Hene<sup>1</sup>, Christina Salmivalli<sup>2</sup>

<sup>1</sup>University of London, London, United Kingdom. <sup>2</sup>University of Turku, Turku, Finland

**Abstract (max 500 words)**

**Background:** Recent research has highlighted the healthy context paradox (HCP), namely that the association between victimization and psychological and social adjustment worsens in social contexts with lower prevalence of victimisation. Previous research exploring this phenomenon has done so in relation to classroom-level victimisation. The main aim of the present study was to investigate whether the HCP is applicable on a much wider scale, at national level.

**Method:** We used data from the HBSC 2013/2014 survey related to peer victimisation and 5 measures of health and wellbeing of 11-, 13- and 15-year-old boys and girls from 40 countries in Europe and North America.

**Results:** Initial analysis confirmed a within-country correlation between higher levels of victimisation and poorer health and wellbeing, consistent for all measures and all countries. Subsequent analysis compared the magnitude of these correlations with the prevalence of victimization, across countries. A mixed pattern of findings was found. There was evidence of an HCP effect for the measure of counting on friends, but no effect for liking school or life satisfaction, and an opposite effect for feeling low and health.

**Conclusion:** While the findings suggest that the HCP may not be applicable at a national level, some suggestions for further research are made.