

## **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 K. Smith<sup>1</sup> Rhysvana Agyekum-Hene<sup>1</sup> Christina Salmivalli<sup>2</sup>

1 Department of Psychology, Goldsmiths, University of London, U.K.

2 INVEST Flagship Research Unit and the Department of Psychology and Speech-Language Pathology, University of Turku, Finland

### Abstract

**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.

## **Unraveling The Healthy Context Paradox: Bidirectional Within-Person and Between-Person Variations of Victimization and Psychosocial Maladjustment in Healthier Classrooms**

Laninga-Wijnen, L., Yanagida, T., Garandeau, C. F., Malamut, S. T., Veenstra, R., & Salmivalli, C.

A major goal of school-based anti-bullying programs is to prevent and diminish levels of victimization within classrooms. Even though many students may profit from a context that - on average - is healthier, paradoxically, this may not be true for those who remain or become victimized. Victims in such healthy contexts may experience even more psychological problems (i.e., depressive symptoms, anxiety, low self-esteem) than victims in less healthy contexts – a phenomenon referred to as the healthy context paradox. Even though research on the healthy context paradox has been expanding, two important points need to be clarified. First, in order to be certain about the existence of a healthy context paradox (Do victims develop more psychological problems over time in healthier classrooms?), it is important to examine this while controlling for an alternative scenario: are psychologically maladjusted youth more likely to become victimized in healthier classrooms? Furthermore, as previous research has mostly focused on between-person changes, it is unknown whether the healthy context paradox also manifests itself in relative and absolute within-person associations between victimization and adjustment. Therefore, the current study examined whether bidirectional within- and between-person changes in victimization and psychological functioning varied as a function of classroom levels of victimization.

Across one school year, three questionnaires (in October, January, and April, academic year 2020-2021) were administered to  $n = 3,470$  Finnish 4th to 9th grade students, including self-reported victimization, depressive symptoms, self-esteem, and anxiety. Three types of multi-level models (i.e., cross-lagged panel models, random-intercept cross-lagged panel models, and latent change score models) were run for each indicator of psychological adjustment separately. Both on the relative between- and absolute within-person level, the healthy context paradox quite consistently emerged, and in only one direction: in classrooms with lower levels of victimization, victims had greater psychological problems, but youth with greater psychological problems were not more likely to become victimized. On the relative within-person level, classroom average levels of victimization moderated the effect of victimization on self-esteem but not on depressive symptoms or anxiety.

## Mechanisms potentially underlying the Healthy Context Paradox: An examination of stable victims

Tessa Lansu, Yvonne van den Berg, Rozemarijn van der Ploeg, Sabine Stoltz, Bram Orobio de Castro

### ABSTRACT

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 Garandeau 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).

Keywords:

Healthy-Context-Paradox, victimization, well-being, mechanisms

# **Title: Gene-environment interplay in adolescents' psychological development**

## **Integrative statement**

Psychological development, from school performance to mental health, has traditionally been conceptualized and studied in terms of environmental effects. However, research has shown that genetics also play a role in most aspects of psychological development, and that genetic and environmental factors are not independent from each other. Therefore, a more comprehensive approach to studying psychological development should consider both genes and environments, and their interplay.

This symposium brings together researchers who are investigating gene-environment interplay in adolescents' development, with a focus on cognitive functioning, academic achievement, and mental health. The four talks will use cutting-edge methodologies and multiple biological measures to provide new insights into the complexity of psychological development during adolescence.

The first talk (Raffington) explores the link between socially stratified epigenetic profiles and cognitive functioning in children and adolescents. The second talk (van Bergen) investigates the causal nature of the link between grit, self-control, and academic achievement in an adolescent twin sample. The third talk (Malanchini) investigates the interplay between genetics and the family environment in academic development. The fourth talk (Rimfeld) examines the association between educational experiences and mental health from childhood to young adulthood.

**Chair:** Margherita Malanchini, PhD

**Keywords:** Gene-environment interplay; adolescence; cognitive development; academic achievement; students' mental health

## **Individual Abstracts**

### ***Talk 1 (Presenter: Laurel Raffington)***

**Authors:** Raffington<sup>1,2,3</sup>, L., Tanksley<sup>1,2</sup>, P.T., Sabhlok<sup>1</sup>, A., Vinnik<sup>1</sup>, L., Mallard<sup>1</sup>, T., King<sup>1,4</sup>, L.S., Goosby<sup>2,5</sup>, B., \*Harden<sup>1,2</sup>, K.P., & \*Tucker-Drob<sup>1,2</sup>, E.M.

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<sup>1</sup>Department of Psychology, University of Texas at Austin, Austin, TX, USA.

<sup>2</sup>Population Research Center, The University of Texas at Austin, Austin, TX, USA

<sup>3</sup>Max Planck Research Group Biosocial; Max Planck Institute for Human Development, Berlin, Germany

<sup>4</sup>Department of Psychiatry and Behavioral Sciences, Tulane University School of Medicine, New Orleans, LA, USA

<sup>5</sup>Department of Sociology, University of Texas at Austin, Austin, TX 78712

**Title:** Socially Stratified Epigenetic Profiles Are Associated With Cognitive Functioning in Children and Adolescents

**Objective:** Children’s cognitive functioning and educational performance are socially stratified. Social inequality, including classism and racism, may operate partly via epigenetic mechanisms that modulate neurocognitive development. New advances of genome-wide technology and “omic” approaches have now quantified molecular signatures of a host of exposures, biological processes, and phenotypes that can be used to investigate the etiology of social disparities in life course development.

**Methodology:** Following preregistered analyses of data from 1,183 8- to 19-year-olds from the Texas Twin Project, we examined whether salivary DNA-methylation measures derived from adult discovery studies trained on inflammation, cognitive function, and the pace of biological aging are (a) stratified by major dimensions of social inequality and (b) associated with cognitive functions in children and adolescents

**Results:** We found that children growing up in more socioeconomically disadvantaged families and neighborhoods and children from marginalized racial/ethnic groups exhibit DNA-methylation profiles that, in previous studies of adults, were indicative of higher chronic inflammation, lower cognitive functioning, and faster pace of biological aging. Socioeconomic disadvantage statistically accounted for some, but not all, of the differences between racial/ethnic groups in DNA-methylation profiles. Furthermore, children’s salivary DNA-methylation profiles were associated with their performance on in-laboratory tests of cognitive and academic skills, including processing speed, general executive function, perceptual reasoning, verbal comprehension, reading, and math. Notably, DNA-methylation profiles of cognitive performance explained 11.1% of the variation in math performance.

**Conclusion:** Given that the DNA-methylation measures we examined were originally developed in adults, our results suggest that children show molecular signatures that reflect the early life social determinants of lifelong disparities in health and cognition. Our findings are consistent with observations that racial and ethnic disparities leave biological traces in the first two decades of life and reflect multiple dimensions of social inequality.

**Keywords:** DNA-methylation; epigenetics; cognition; children; socioeconomic status; racism

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## ***Talk 2 (Presenter: Elsje van Bergen)***

**Authors:** Elsje van Bergen<sup>1,2,3</sup> Sofieke T. Kevenaar<sup>1,2,3</sup> Albertine J. Oldehinkel<sup>4</sup> Dorret I. Boomsma<sup>1,3,5</sup> Conor V. Dolan<sup>1</sup>

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## **Title: The non-cognitive variables grit and self-control predict school performance: strongly genetic, weakly causal**

**Objective:** Self-control and grit are often cited as predictors of school performance, but little research has investigated whether this relationship is causal. We examined the causal nature of this association using the classical twin design. Specifically, we evaluated the direct impact of self-control and grit on school performance, while controlling for shared genetic or environmental factors that may affect all three traits (i.e., confounding).

**Methodology:** Teachers of 4,891 Dutch 12-year-old twin pairs (of which 3,837 were complete pairs) completed a survey about school performance (grades), self-control (ASEBA self-control scale), and the perseverance aspect of grit. We used a twin model to regress school performance on self-control and grit to establish the phenotypic, putatively causal, regression relationship. To assess the contribution of confounding to this regression relationship, we added genetic or environmental confounding (i.e., influences common to the three phenotypes). We controlled for sex, parental SES, and rater effect of the teachers.

**Results:** Self-control and grit explained 28.4% of the school-performance variance in the phenotypic regression analysis (assuming no confounding). However, allowing for additive genetic confounding revealed that the association was largely attributable to genetic influences that the three traits share. In the presence of genetic pleiotropy, the phenotypic regression of school performance on self-control and grit only accounted for 4.4%.

**Conclusions:** The association between self-control and grit as predictors of school performance is largely attributable to genetic confounding, and to a lesser extent, direct effects of self-control and grit on school performance, which are putatively causal.

**Keywords:** school performance, academic achievement, non-cognitive skills, heritability, environmental influences

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### ***Talk 3 (Presenter: Margherita Malanchini)***

**Authors:** Quan Zhou<sup>1</sup>, Agnieszka Gidziela<sup>1</sup>, Andrea Allegrini<sup>2,3</sup>, Rosa Cheesman<sup>2,4</sup>, Jasmin Wertz<sup>5</sup>, Robert Plomin<sup>2</sup>, Kaili Rimfeld<sup>2,6</sup> & Margherita Malanchini<sup>1,2</sup>

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**Title: Do family environments mediate the pathway from genotype to observed variation in academic achievement? A developmental investigation.**

**Objective:** Academic achievement is partly heritable and highly polygenic. However, the pathway from genotype to its phenotypic expression is likely to be mediated or moderated by environmental exposures. The environmental factors linking individuals' genetic propensities to manifest differences in academic achievement over development have not been systematically investigated. We systematically investigated the role of multiple aspects of the family environment in mediating the polygenic score (PGS) prediction of academic achievement throughout compulsory education.

**Methodology:** We included data on academic achievement (teaching ratings and exam scores) and family environments (including family socioeconomic status, parenting and home environments) collected from the twins and their parents at ages 7, 9, 12 and 16, as well as geocoded indices of neighbourhood quality. We constructed PGSs for educational attainment, cognitive, and noncognitive skills.

**Results:** Three core findings emerged. First, we found that several aspects of the family environment, but not the wider neighbourhood context, consistently mediated the PGS prediction of academic achievement over development, indexing widespread gene-environment correlation. Second, we found that family environments were more robustly linked to noncognitive genetic effects on academic achievement than to cognitive PGS effects. This is particularly striking when considering the comparatively weaker predictive power of the noncognitive PGS. Third, we conducted 1-1-1 multi-level mediation analyses to separate between-family effects (also capturing passive gene-environment correlation) from within-family effects. We found that the mediating role of family environments was nearly exclusively observed for between-family PGS effects, which suggests that family environmental contexts shape academic development largely via passive gene-environment correlation processes.

**Conclusions:** We provide evidence for the important role that aspects of the family environment, such as SES, supportive parenting and stimulating home environments play at every stage of academic development. Our results suggest that parents shape environments that foster their children's academic development largely based on their genetic disposition towards noncognitive skills, through a complex process of passive gene-environment



correlation. These complex processes should be considered and controlled for when investigating child development and learning, and when developing interventions.

**Keywords:** gene-environment correlation, family environment, neighbourhood quality, academic achievement, polygenic scores

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#### **Talk 4 (Presenter: Kaili Rimfeld)**

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#### **Title: The associations between educational experiences and mental health from childhood to young adulthood**

**Objective:** Mental health problems are on the rise, with over 10.3 million reported cases of mental ill health in the UK each year. Mental illness starts early in life, with most cases emerging by adolescence. The earlier symptoms begin, the worse the outcomes are. Childline, a free counselling service for children in the UK, reported that children's primary concern was stress and anxiety related to school performance. However, studies exploring the association between school environment and young people's mental health remain scarce. Here we aim to clarify the links between educational experiences and mental health, considering both subjective and objective school environmental factors using data from the UK and Sweden.

**Methodology:** We use data from the Twins Early Development Study (TEDS; N~ 6500 pairs, ages 7-21) and replicate the findings using the Child and Adolescent Twin Study in Sweden (CATSS; N~3500, ages 7-21). Both subjective (e.g., self, parent- and teacher-reported classroom environment) and objective (e.g., national register data on school quality) measures are used. We use twin analyses and multivariate Cholesky to assess the aetiology of educational experiences and psychopathology and their covariance. Multiple regression and prediction modelling (elastic net) will estimate the prediction of mental health from school experiences contemporaneously and over time, controlling for genetic predisposition (29 adult psychiatric polygenic scores), mental health before school and socioeconomic status.

**Results:** Our previous report, using the TEDS sample, shows that subjective parent-, teacher-, and twin-reported educational experiences are significantly and substantially associated with mental health ( $r \sim .25$ ). Highest associations were observed between classroom environment and mental health ( $r = .41$ ) and lowest between class size and mental health ( $r = .03$ ). These educational experiences are associated with psychopathology additively, explaining up to 50% of the variance in mental health, suggesting that these experiences might pose a cumulative

risk for mental health. The associations remain significant and substantial even after controlling for 29 adult psychiatric polygenic scores and mental health before school. The analysis plan using the objective school environmental measures and the replication in CATSS has been pre-registered in OSF, and the analyses are ongoing.

**Conclusions:** We expect that the objective reports will predict less variance than the subjective ones, suggesting personalized approaches as more promising avenues for school-based programs of early intervention and prevention of mental health problems.

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## **The Future of Developmental Psychological Interventions**

Invited symposium for ECDP 2023

Submitted January 2023

Chair: Patty Leijten

Speakers: Judith van de Wetering, Christina Bauer, Katherine Venturo-Conerly, Patty Leijten

## **Integrative Statement**

Many developmental psychological interventions for our youth today are highly similar to the interventions that we used several decades ago. In most subdisciplines, interventions therefore have not become more effective over time.

This symposium brings together researchers who break with the traditions in their field of what developmental psychological interventions should look like, and adopt novel approaches to the design and evaluation of interventions. They strive to increase the positive impact of our interventions by aligning interventions with youths' motives (Presentation #1), by capitalizing on their strengths (Presentation #2), by unpacking interventions into flexible modules (Presentation #3), and by altering the course of how we evaluate interventions such that we actually improve interventions over time (Presentation #4).

With speakers from different countries (Austria, Netherlands, United States), different career stages (PhD student, postdoc, associate professor), and different disciplines (adolescent psychology, clinical psychology, and motivation psychology), this symposium reflects on the history of intervention research in developmental psychology and on our hopes for its future.

## **Harnessing Adolescents' Autonomy Motive to Promote Pro-Environmental Engagement**

Judith van de Wetering,<sup>1</sup> Stathis Grapsas,<sup>1</sup> Astrid Poorthuis,<sup>1</sup> & Sander Thomaes<sup>1</sup>

<sup>1</sup>Utrecht University, the Netherlands

Most adolescents are concerned about climate change. Yet, adolescents are less likely than both younger children and adults to engage in pro-environmental behavior (Otto & Kaiser, 2014; UNDP, 2021). How can we enhance traditional interventions to help adolescents act on their environmental concerns? The current study tests whether adolescents' pro-environmental behavior can be promoted by harnessing their autonomy motive.

Today's rate of climate change is unprecedented and increases the risk on extreme weather events, water scarcity, and food insecurity years from now (IPCC, 2022; UNICEF, 2021). Yet, traditional interventions that emphasize such long-term horizons may not optimally tap into adolescents' potential for pro-environmental change, because adolescents are particularly driven to act upon concerns salient to them in the here and now (Crone & Dahl, 2012; Kollmuss & Agyeman, 2010; Thomaes et al., 2022; Yeager et al., 2018). Also, educational interventions often are somewhat prescriptive to the extent that they tell adolescents how to behave in ways that help limit climate change, whereas adolescents are motivated to make autonomous decisions (Rodríguez-Meirinhos et al., 2020). Building on recent insights (Bryan et al., 2016; Galla et al., 2021; Yeager et al., 2018), we propose that traditional interventions will be more effective if they communicate that pro-environmental behavior can be immediately rewarding, by satisfying adolescents' developmentally enhanced desire for autonomy. We implemented autonomy-aligning techniques, rooted in two related but distinct conceptualizations of the autonomy motive: a desire to experience volition to behave in accordance with one's values and self-views (Deci & Ryan, 2000), and a tendency to rebel against authorities (Darling et al., 2008; van Petegem et al., 2015).

In this preregistered randomized experiment, adolescent secondary school students in the Netherlands ( $N = 319$ , ages 12-17, 57.7% girls, predominantly indicating Dutch or bicultural identities) were randomly assigned to one of four conditions in which they viewed a variation of a campaign-style video about deforestation. In the control condition, the video was educational and presented information about the environmental impact of deforestation. In the experimental conditions, this information was followed by explicit encouragement to engage in pro-environmental behavior. In two motive-aligning conditions, the video used autonomy-supportive language (e.g., "if you want...") to frame pro-environmental behavior either as an opportunity to take a stand against food companies that cover up and do too little to limit their environmental harm (i.e., rebellion-alignment condition), or as an autonomous expression of personal values (i.e., volition-alignment condition). In one motive-misaligning condition, the video framed pro-environmental behavior as mandatory, using prescriptive language that fails to acknowledge adolescents' autonomy. Next, participants were provided

the opportunity to donate part of their participation fee to environmental charity, and to sign an ostensible petition.

Compared to the control condition, rebellion-alignment increased adolescents' self-reported behavior intentions and the likelihood that they would sign the petition. Conversely, misalignment decreased the likelihood that they would donate. Effect sizes were small to medium. These findings add to emerging evidence that harnessing adolescents' developmentally enhanced motives can effectively promote behavior change.

*Presentation #2*

**Resourceful Agents, not Weak Victims: Reframing Marginalized Students' Identity Boosts their Long-term Engagement and Performance**

Christina Bauer,<sup>1</sup> Veronika Job,<sup>1</sup> Nicole Stephens,<sup>2</sup> & Gregory Walton<sup>3</sup>

<sup>1</sup>University of Vienna, Austria, <sup>2</sup>Northwestern University, USA, <sup>3</sup>Stanford University, USA.

“I feel—‘oh, look at yourself how low you are now, you used to be a normal person’... I have never had any kind of complexes in my life, but [being a refugee] has become a social complex”

—Bosnian refugee in an interview (Timotijevic & Breakwell, 2000, p. 367)

“On the way to Europe a lot of things happened unexpectedly. So I had to learn to adapt to the

situation, embrace changes and always roll with the punches. . . . This was an eye-opener and a beginning for a personal . . . revolution that [led] to liberation and personal growth.”

—Syrian refugee participant's response to our identity-reframing intervention

Diverse marginalized groups such as refugees or first-generation students are commonly portrayed as deficient, lacking in strength, skills, or intellectual potential. These stigmatizing narratives can impair students' confidence in their own abilities and hinder them in the successful pursuit of their goals.

Countering this stigma and downstream consequences, we developed a brief (~10 minutes) intervention that, through reading and writing exercises, highlights the strengths and skills members of marginalized groups show. Intervention exercises specifically highlight i) how individuals' background-specific experiences helped them acquire important skills such as perseverance and the ability to cope with adversity, and ii) how these skills can help them succeed in pursuing their goals. This message is delivered to students by a university as a highly relevant institution for students.

We tested the intervention's effects with members of two very different marginalized groups: refugees and first-generation college students. Overall, we conducted four experiments – two of them randomized controlled field trials (RCTs) - including active control conditions letting students reflect on how study tips can help them succeed.

Results overall show that the intervention boosts marginalized students' confidence, engagement and performance long-term.

First, in two online studies with 93 refugees and 223 first-generation students, we show the intervention to enhance individuals' confidence in their ability to succeed academically. Second, in an RCT with 533 refugees entering an online university in Europe, we show the intervention to boost students' behavioral engagement long-term. Over one calendar year, refugee students randomized to participate in the intervention condition engaged 23% more in the online learning environment than did refugee students in the control condition. Last, in another RCT with 462 first-generation and 312 continuing-generation students in the US, we show the intervention to boost first-generation students' course performance over one semester. In doing so, the intervention closed the social class achievement gap in this course.

Overall, results highlight how current deficit-oriented narratives about marginalized students may perpetuate inequality and how reframing individuals' identity as strong and resourceful can help marginalized individuals realize their potential.

## **Selecting Treatment Elements to Personalize Youth Psychotherapies: Scoping Review and Future Directions**

Katherine Venturo-Conerly,<sup>1</sup> Rachel Reynolds,<sup>1</sup> Emma Hill,<sup>2</sup>  
Malia Clark,<sup>1</sup> Olivia Fitzpatrick,<sup>1</sup> John Weisz<sup>1</sup>

<sup>1</sup>Harvard University, USA. <sup>2</sup>Simmons University, USA

**Objective:** In clinical practice, most clinicians report that they select appropriate treatment elements (e.g., exposure, cognitive restructuring) for each client using their clinical judgment. Many clinicians report having a mental “menu” of treatment elements from which they select to personalize treatments (Schottenbauer et al., 2007). Modular youth psychotherapies (i.e., flexible psychotherapies consisting of distinct treatment components that may be arranged in various combinations and permutations to suit each client) can be conceptualized as a formalized version of this menu of treatment elements (Venturo-Conerly et al., in press). Modular youth psychotherapies have become increasingly popular over the last few decades, perhaps because of several advantageous features, including: 1) their flexibility which facilitates personalizing, and 2) increased clinician satisfaction when using modular relative to linear psychotherapies (Chorpita et al., 2015). The clinician decision-making required for personalized selection and ordering of treatment elements in modular youth psychotherapy, however, can be complex. The objective of this presentation is to describe: 1) existing decision-making guidance in modular youth psychotherapies, and 2) initial steps toward building a science of data-driven decision-making guidance in modular youth psychotherapies.

**Methodology:** A systematic search of PsycINFO and PubMed was run to identify all modular youth psychotherapy protocols. Decision-making guidance in 20 modular youth psychotherapy protocols, described in 67 peer-reviewed articles, were assessed by two independent researchers. Additionally, data from three RCTs (Harmon et al., 2021; Weisz et al., 2018; Weisz, Thomassin, et al., 2020) of MATCH (Modular Approach to Therapy for Anxiety, Depression, Trauma, and Conduct Problems; Chorpita & Weisz, 2009) were pooled to analyse short-term element-outcome associations ( $N=413$ ). Mixed-effects analyses, separating within-person and between-person effects and controlling for time, were used to assess associations between use of each youth psychotherapy element and symptom scores at the closest subsequent timepoint.

**Results:** All modular youth psychotherapy protocols recommended using clinical judgement to guide decision making. Additionally, almost all protocols (95%) recommended using baseline assessment, and 65% recommended using measurement-based care. Guidance very often involved narrative module descriptions (90%), sometimes therapies included decision-flow diagrams (35%) or references to prior research (25%); one therapy provided an online algorithmic decision tool, and 40% of therapies proposed seeking client input. Although

meta-analyses support statistical models outperforming clinical judgment (Ægisdóttir et al., 2006; Meehl, 1954, 1986), no modular psychotherapies to date have used statistical models of past data to derive decision guidance.

Preliminary analyses of treatment element-outcome associations demonstrate that, in the short-term, certain youth psychotherapy elements significantly ( $p < .05$ ) predict better symptom scores across several outcomes (i.e., planning for the future, relaxation strategies, and practicing positive opposites of unhelpful behaviours). Others had no significant short-term effects (i.e., cognitive restructuring, increasing motivation, and problem solving), and one predicted relatively weaker short-term symptom scores (i.e., psychoeducation/getting acquainted).

**Conclusions:** These findings may guide future directions in personalizing youth psychotherapy elements, such as: building decision supports that incorporate client perspectives, investigating how to improve clinical judgment, continuing to build statistical models of archival treatment data, and studying how to balance clinical judgment with statistical methods.



**What Got us Here Will not Get us There:  
40 Years of Research on Parenting Programmes for Disruptive Child Behaviour**

Patty Leijten

University of Amsterdam

**Objective.** Shaping the future of our interventions requires that we understand their past. The first randomized evaluations of parenting programmes to reduce disruptive child behaviour (i.e., opposition, defiance, and aggression) were published in the late 1970s and early 1980s. These studies marked a paradigm shift from psychodynamic play-therapy techniques to supporting parents to redirect children's behaviour based on operant and social learning theory principles. In the following decades, over 200 randomized trials would be published. What progress have we made in these decades, in terms of research quality and intervention effectiveness? What will our future look like if we continue on the same path?

**Methods.** We use data from a recently updated (Sept 2022) registered systematic literature review (PROSPERO 2019 CRD42019141844) of randomized trials of parenting programs based on social learning theory principles. We include 239 eligible randomized trials and use cumulative meta-analysis in Stata to examine time trends in research quality and intervention effects.

**Results.** Preliminary results suggest some increase in research quality over time. For example, sample sizes have increased and trials more often include active control conditions (e.g., care as usual instead of a waitlist). In addition, we see a steady increase in representation of non-WEIRD countries. Some developments are, however, less positive, such as less use of blinded outcome measures over time. In terms of intervention effects, the magnitude of prevention effects seems unchanged while the magnitude of treatment effects seems to decrease. Final results will be known in the Spring of 2023.

**Conclusion.** This study helps us estimate where the field seems to be heading if the observed time trends in research on parenting programmes for disruptive child behaviour would continue. Alternative paths (e.g., an elemental approach to evaluating prevention programs and synthesizing pre-existing rather than generating new evidence) will be critically discussed.

SYMPOSIUM: Understanding cross-national differences in the nature and prevalence of school bullying

Convened by Peter K Smith

Goldsmiths, University of London, U.K.

### **Behavioral and psychosocial determinants of bullying victimization among Polish and Spanish adolescents.**

Marta Malinowska-Cieślik Department of Environmental Health, Faculty of Health Sciences, Jagiellonian University Medical College, Krakow, Poland marta.malinowska-cieslik@uj.edu.pl

Concepción Moreno-Maldonado Department of Developmental and Educational Psychology, Universidad de Sevilla, Spain. moreno\_c@us.e

Francisco Rivera Department of Experimental Psychology, Universidad de Sevilla, Spain. franciscorivera@us.es

Carmen Moreno Department of Developmental and Educational Psychology, Universidad de Sevilla, Spain. mcmoreno@us.es.

**Background:** Bullying victimization is one of the most common adverse experience in school-aged children. The results of the HBSC-WHO collaborative study in 2018 showed large cross-national variation in bullying victimization rates, including gender variation. In the international ranking Poland occupied very unfavorable position (22.8% victims) compared to Spain (9.9% victims). Objective: The study aimed to assess differences in behavioral and psychosocial determinants of bullying victimization among Polish and Spanish adolescents, with special attention to gender differences. **Methods:** The study sample was composed of 9,537 adolescents (51.5% females) from Poland and Spain, aged 11, 13, and 15 years-old, mean age of 13.6 years. Bullying victimization was measured by question adapted from the Olweus Bully/Victim Questionnaire. Number of students who have been bullied at least once in last two months was 1,688 (17.5%). The following peer violence predictors were analyzed: demographic (age, gender, family structure), socioeconomic status measured with the Family Affluence Scale-III, health-related behaviors (physical activity, smoking, getting drunk), mental health and wellbeing indicators (psychosomatic complaints and life satisfaction), relationships with parents (communication with mother and father), and school related factors (school satisfaction and school stress). Descriptive statistics and chi-square test were used to examine differences in the prevalence of bullying victimization and in all the examined variables. Logistic regression analyses were conducted to examine the association between behavioral and psychosocial determinants, and the risk of being bullied by country, and by gender. **Results:** Bullying victimization was more than 2.5 times prevalent in Polish than in Spanish adolescents (OR = 2.689; CI = 2.335,

3.097). Male gender, younger age, non-intact family were associated with higher risk of victimization. Students who smoked, with frequent subjective health complaints, low life satisfaction, difficult communication with father, lower school satisfaction and higher school pressure were more at risk to become a victim. Significant similarities and differences were found among Spanish and Polish girls and boys. In both countries younger age was significant only for boys, whereas non-traditional family structure was significant only for girls. Communication with father was significant for Polish, and communication with mother for Spanish girls. School related factors appeared to be associated with victimization in Polish students. School satisfaction both in girls and boys, and school stress in girls only. Daily physical activity appeared to be protective factor in Spanish boys only. **Conclusions:** Differences in behavioral and psychosocial determinants of school bullying victimization among adolescents from two very different countries, such as Poland and Spain, might indicate the influence of different socio-cultural norms and school policies. The results highlight the relevance of specific country and gender measures in school bullying prevention programs.

Keywords: adolescent, bullying, victimization, Poland, Spain, gender

### **The relationship between peer and sibling bullying: Ethnic and cross-cultural effects and differences in relation to familial and psychopathological factors**

Muthanna Samara<sup>1</sup>, Aiman El Asam<sup>1</sup>, Mahitab Sherif<sup>1</sup>, Sara Hammuda<sup>1</sup>, Bruna Nascimento<sup>2</sup> and Hisham Morsi<sup>3</sup>

<sup>1</sup> Department of Psychology, Kingston University London, Penrhyn Road, Kingston-Upon-Thames, KT1 2EE UK

<sup>2</sup> Brunel University London, UK.

<sup>3</sup> Hamad Medical Corporation (HMC), Doha, Qatar

**Objectives:** the objective of this study is to assess psychological, social and cultural factors that are related to sibling and peer bullying (traditional and cyber) in secondary schools in the UK and in Qatar.

**Methodology:** Around 1,800 children in the UK and 2,500 children in Qatar took part in the study (ages 10-15 years). Various tools in relation to psychological wellbeing; friendship quality; strengths/difficulties; health/psychosomatic problems; internet addiction; alcohol and substance misuse; and depression and anxiety were collected from children and their parents. Ethnic groups differences and cultural differences will be taken into account as moderators.

**Results:** Victimization by siblings showed positive relationships with behavioural and emotional problems, health and psychosomatic problems, and internet addiction. Cyber and traditional bullying have been found to be related to sibling bullying differently. Also, sibling bullying was predicted by different factors (e.g., family size, number of siblings, negative parent-child relationship, negative atmosphere at home) in both countries. Overall, victimization by siblings was positively correlated with victimization by peers and both were related increased behavioural, health and psychosomatic problems, and internet addiction more than those who are involved in only one type of bullying and/or victimisation. The above results are different according to specific culture and ethnic group. Each cultural group have a different profiles of risk factors and consequences for bullying and/or victimisation.

**Conclusion:** The results are discussed from the perspective of the ecological model specifically the cultural sphere. The study will inform practitioners, parents, and schools to understand the mechanisms and nature of sibling and peer bullying taking into account the cultural aspect and specific ethnic group belonging. This will help in designing suitable interventions to tackle both sibling and peer bullying.

### **How does an individual student's experience of victimization or perpetration of bullying affect the effectiveness of bullying prevention education?**

Minako Ito (Nara Women's University, Japan)

Yuichi Toda (Osaka Kyoiku University, Japan)

Since the enactment of the Anti-Bullying Measures Promotion Act in 2013 (the Act), the recognition of bullying in Japanese schools has become a two-step process, aiming "not overlooking subtle bullying" and "eliminating serious bullying cases". However, the situation may not be improved. **Objective** The purpose of this study was to examine the bullying experiences and attitudes of children who have experienced school life mostly after the implementation of the Act. **Methodology** Participants were 226 junior high and 207 high school students. The questionnaire includes: 1) experience of victimisation and perpetration, 2) feelings and behaviour at the time of victimization/perpetration, 3) attitude concerning bullying (Toyama and Yu, 2020), which consists of two factors: Denying Bullying (DB) and Moral Disengagement (MD) on ijime. **Results** Based on bullied/perpetrated experience, participants were grouped into 58 pure victim, 56 pure perpetrator, 75 bully-victim, and 191 non-committed. Among the victimized children, nearly half of the children thought about getting even. This was particularly true of the bully-victims. However, the most common response was 'I will put up with it', selected by three out of four respondents. The stronger the desire to get back at the bully, the less on DB and more on MD. About 80% of the perpetrators thought that the victims were also at fault. While many were non-

leading perpetrators, more than 10% were active perpetrators, saying that they found it interesting to see the other person in trouble. Active perpetrating attitudes were negatively correlated with DB and positively correlated with MD. **Conclusion** The high number of students who persevere victimisation may be somewhat related to Japanese national character, but on the other hand, many students have a desire to get back at the bully. There was also a tendency for many students to justify themselves by claiming that the other party was also at fault when they were involved in bullying. In South Korea, there are national reports of a clear decrease in bullying following the enactment of the law (Oh, 2020). Although simple comparisons cannot be made with national-level statistics in Japan due to shifting definitions of bullying, discourses of a clear decrease in bullying after the enactment of the law have not been heard in Japan. Whether this is due to cultural differences or other factors needs to be examined.

DISCUSSANT

Peter K Smith

Goldsmiths, University of London, U.K.

## **SYMPOSIUM TITLE**

Reimagining Human Positive Potential: Interventions for Every Child's Social-Emotional Development

## **INTEGRATIVE STATEMENT**

This symposium brings together diverse intervention strategies and approaches aimed at promoting children's social-emotional development in various settings and populations facing differing levels of adversity. The first presentation focuses on practitioner training in Germany to nurture child social-emotional development. The second presentation discusses a new social-emotional training for refugee families and services providers in Canada. The third presentation describes how preschool teacher training can enhance social-emotional capacities in shy-inhibited children in Portugal. The fourth presentation shows how prosociality can be nurtured in children affected by intergroup conflict across the world. Together, the interventions demonstrate ways to promote positive human potential in every child.

## **SYMPOSIUM CHAIR**

Tina Malti, Alexander von Humboldt Professor, Leipzig University and Professor of Psychology and Director, Center for Child Development, Mental Health, and Policy, University of Toronto

## **KEYWORDS**

Social-emotional development; human potential; interventions; flourishing

## **Abstract 1**

### **Preschool teachers' emotion coaching and co-regulation as a key to children's social-emotional development**

Joscha Kärtner, University of Münster, [j.kaertner@uni-muenster.de](mailto:j.kaertner@uni-muenster.de)

The current study focuses on preschool teachers' role in supporting children during emotionally challenging episodes during everyday interaction in the preschool setting. It proposes a model of emotion regulation that describes how teachers' initial emotion coaching (i.e., mirroring, labeling, and exploration of emotions) and co-regulation (i.e., offering or supporting the generation or execution of emotion regulation strategies), first, supports preschool children's self-regulation of emotion and, second, leads, together with teacher's to agreeable endings of emotionally challenging episodes. Based on the same model, we developed a teacher training that aims at supporting teachers' emotion coaching and co-regulation capacities and first results of the evaluation study will be presented.

The study is based on extensive video observations in preschools both before and about 3 months after the training. The correlational analyses before the training are based on extensive video observations from 19 classrooms and a total of 389 episodes with teacher interventions ( $n = 48$  teachers) following children's expression of anger or sadness ( $n = 213$  children aged 2-6 years old). Multilevel regression analyses show, first, that both teachers' initial emotion coaching and

demanding co-regulation (i.e., through meta-cognitive prompts) were associated with children's independent self-regulation,  $b = 1.01$   $SE = 0.41$  and  $b = 1.02$   $SE = 0.51$ , respectively,  $ps < .05$ ). In a separate analysis, initial emotion coaching was significantly associated with teachers' co-regulation fit ( $b = 0.55$   $SE = 0.10$ ,  $p < .001$ ), which, in turn, was associated with more agreeable endings of emotionally challenging episodes as indexed by a composite score of reassurance of children's agreement and implementation of these regulation strategies ( $b = 0.63$   $SE = 0.04$ ,  $p < .001$ ). In the talk, I will furthermore present first results of the evaluation study. In these analyses we test, whether the teacher training led to increased levels of emotion coaching and developmentally facilitative co-regulation after the training and compared to a waitlist control-group. Overall, the correlational findings on the episode-level show that both emotion coaching and co-regulation, especially demanding co-regulation of emotions, fosters children's self-regulation and more agreeable endings. More generally, the ways in which preschool teachers structure children's emotional experience and behavior have important implications for children's emotional development, which provides opportunities for teachers and teacher training to support children's positive development.

## Abstract 2

### **Project RAISE: A Social-Emotional Training Framework for Refugee Families and Service Providers**

Tina Malti, University of Toronto and Leipzig University, [tina.malti@utoronto.ca](mailto:tina.malti@utoronto.ca)

Refugee children are often exposed to adversities that significantly threaten their healthy development. Promoting refugee children's social-emotional capacities may be an opportune, strengths-based avenue to nurture their resilience, coping strategies, and mental health outcomes amidst these risks. Further, supporting caregivers' and service providers' capacities to provide strengths-based care may result in more sustainable, caring environments for refugee children. However, limited culturally adapted initiatives exist that aim to promote social-emotional capacities and mental health in refugee children, caregivers, and service providers. The current pilot study assessed the feasibility and efficacy of social-emotional training for refugee caregivers of children aged 2–12 years and service providers who support refugees. The objectives of the current study were threefold. Fifty Middle Eastern refugee caregivers ( $n = 26$ ) of children aged 2–12 years and service providers ( $n = 24$ ) were recruited using convenience sampling and participated in the training. Training sessions were delivered virtually via a learning management system and involved a combination of asynchronous (video-based) and synchronous (virtual live group) sessions. Caregivers and service providers reported their understanding of social-emotional concepts and mental health at pre-, post-, and 2-months post-training, and reported their use of training strategies at post-training. Caregivers reported on their children's social-emotional capacities and mental health through a pre-survey, a series of post-surveys, and a 2-month follow-up survey. Caregivers' and service providers' knowledge of social-emotional concepts increased from pre- to post-training, and service providers' knowledge increase was sustained at the two-month follow-up. Caregivers and service providers both reported high levels of strategy use as well. Further, children's social-emotional development (i.e., emotion regulation and sadness over wrongdoing) improved after the training.

The findings highlight the potential of strengths-based, culturally adapted initiatives to support refugee caregivers' and service providers' abilities to provide high-quality social-emotional care to refugee children.

### Abstract 3

#### **Development of a new intervention program for preschool teachers targeted at behavioral inhibition during the preschool years.**

Maryse Guedes<sup>1</sup>, Manuela Verissimo<sup>1</sup>, Susana Tereno<sup>2</sup>, Kenneth H. Rubin<sup>3</sup>, António J. Santos<sup>1</sup>

<sup>1</sup>William James Center for Research, ISPA – Instituto Universitário, Lisbon, Portugal. .

<sup>2</sup>Centre de Recherche sur les Fonctionnements et les Dysfonctionnements Psychologiques, Université de Rouen, France

<sup>3</sup>University of Maryland, College Park, USA

Worldwide, anxiety disorders are the most prevalent mental health disorders (Rehm & Shield, 2019). Intervening in the early risk factors for anxiety, such as shy-inhibited behaviors (Sandström et al., 2020), during the preschool years is crucial (Chronis-Tuscano et al., 2018). To date, developmental theory, and research on the transactional influences between child and key socialization agents (Rubin et al., 2009) that explain differential risk and resilience among inhibited preschoolers sustained the design of a few effective interventions targeted at parents (Bayer et al., 2020), inhibited preschoolers outside preschool (Coplan et al., 2010) or both (Chronis-Tuscano et al., 2015, 2022). The bioecological developmental framework (Bronfenbrenner & Morris, 2006) and existing limitations in the scope of the few available teacher-led socioemotional learning intervention (O'Connor et al., 2014, 2018) support the need of new translational research studies to answer unmet needs in anxiety prevention in early education and care settings. This study aimed to describe the development of a new teacher-based intervention program targeted at shy-inhibited behaviors during the preschool years. The development of the preliminary version of the new intervention program followed a multi-stage and multi-method approach. Needs assessment was based on a literature review and two empirical studies conducted with preschool teachers and children. Preschool teachers completed the *Child Behavior Vignettes* ( $n = 107$ ) and were individually interviewed ( $n = 30$ ) to examine their beliefs, emotions, and behaviors toward shy-inhibited behaviors. Preschool children were individually interviewed, using the *Interview Attributions for Child Social Behaviors* ( $n = 174$ ) to examine their attitudes and responses toward shy-inhibited behaviors. Literature review highlighted the need for teacher interventions that combine developmentally grounded psychoeducational activities with *on-job* professional development. Our empirical findings showed that preschool teachers reported more positive emotions, less proactive behavioral responses, and beliefs concerning the impact of shy-inhibited behaviors in the peer group when compared with aggressive behaviors. However, preschool teachers reported being more prone to worry and perceive a negative impact of shy-inhibited behaviors in academic performance when compared with unsociable behaviors. Furthermore, preschool teachers perceived that they were less prepared to manage shy-inhibited behaviors than the remaining social behaviors. The thematic analysis of qualitative interviews showed that preschool teachers were aware of useful evidence-based strategies to manage shy-inhibited behaviors but needed guidance to implement them in more effective way in the



classroom. With respect to children's perspectives, our empirical findings showed that preschool children were more likely to appreciate shy-inhibited peers than aggressive peers. Nevertheless, preschool children perceived shy-inhibited and unsociable peers had comparable intentionality, motivation to play and negative impact in the classroom and reported a similar affiliative preference toward them. Our findings supported the development of a new intervention program combining psychoeducational and *coaching* sessions in the classroom to enhance teachers' knowledge, adaptive beliefs, emotion-regulation skills, and responsiveness toward shy-inhibited behaviors and to promote the socioemotional skills of shy-inhibited children in the peer group. The acceptability of the newly developed intervention program needs to be examined before its dissemination.

## **Abstract 4**

### **Generation peace: Prosocial behaviour in conflict-affected settings**

Laura K. Tayler, School of Psychology, University College Dublin, [laura.taylor@ucd.ie](mailto:laura.taylor@ucd.ie)

*Objective:* The persistence of intergroup conflict around the world creates an urgency for research on child development in such settings. Complementing the existing knowledge about internalizing and externalizing developmental outcomes, this talk shifts the focus to children's prosocial behaviors, and more specifically, introduces the Developmental Peacebuilding Model ([DPM; Taylor, 2020](#)). The DPM makes two main contributions. First, the DPM integrates a developmental intergroup framework and socio-ecological perspective, with a peacebuilding paradigm, to examine the *target* and *type* of children's prosocial behavior in settings of intergroup conflict. Second, DPM outlines how children's outgroup prosocial behaviors, which promote constructive change at different levels of the social ecology, can be understood as peacebuilding and fostering social cohesion. *Methodology / Results:* The results of past and on-going research in the Helping Kids! Lab will be shared. These include findings from over 1,000 children across Colombia, Croatia, Kosovo, Israel, Northern Ireland, and the Republic of North Macedonia. Preliminary findings from new qualitative, research with adolescents and young adults in Colombia, Israel, Northern Ireland and Switzerland will also be shared. *Conclusion:* The talk concludes with the DPM's implications for research and global policy, specifically the United Nations' Youth, Peace and Security agenda.

ECDP Symposium 2023

Title

Peer Relations in Long-term Developmental Perspective

Integrative Statement (170 words)

Research on peer relationships is driven and motivated by the assumption that peer relationships earlier in life have important implications for social adjustment, health, and well-being later in life (Bukowski, Laursen, & Rubin, 2018). This idea is also known as “the developmental significance of peer relationships” (Hartup, 1996, 2021), which states that youth who do well socially in interactions with peers early in life, will have healthier and happier lives later on, whereas those who are rejected, excluded, or victimized are more likely to encounter difficulties later in life (Bukowski et al., 2018; Parker & Asher, 1987). Yet, the explanations for the associations between early and later social success can be complex and the number of prospective longitudinal studies with follow-up data of childhood and adolescent peer relations into adulthood is limited. The papers in the current symposium contribute to this emerging knowledge by examining associations between measures of peer relationships in childhood and/or adolescence (popularity, leadership, shyness and social withdrawal, peer victimization) and outcomes and (mal)adjustment in (young) adulthood.

Chair Details

Antonius H. N. (Toon) Cillessen  
Professor and Chair of Developmental Psychology  
Behavioural Science Institute  
Radboud University  
Thomas van Aquinostraat 4  
6525 GD Nijmegen  
The Netherlands  
[toon.cillessen@ru.nl](mailto:toon.cillessen@ru.nl)  
+31 6 31132448

Keywords (3-5)

popularity, leadership, shyness, victimization, longitudinal

# Differences in Implications of Childhood and Adolescent Popularity for Social Behavior and Status

## Indicators in Young Adulthood

Nina Chmielowice-Szymanski & Tessa A. M. Lansu

Research on peer relations is driven by the assumption that peer relations early in life have important implications for later development. Yet, few prospective longitudinal studies have examined long-term outcomes of peer relations in childhood and adolescence. We argue that being popular impacts social behavior and status indicators in young adulthood through three processes; skills popular youth already possess, opportunities they have to practice those skills, and peer feedback on what behavior leads to social success. Therefore, this study examined how childhood and adolescent popularity predict social behavior and status indicators in young adulthood. We expected that being popular in childhood or adolescence had different implications for social behavior and status indicators in young adulthood. We also tested whether the investigated associations were curvilinear.

Participants were 120 young adults from the Nijmegen Longitudinal Study. Sociometric assessments of popularity took place in their classrooms in childhood (age 9) and adolescence (12, 13 and 16). In young adulthood (age 24), they completed self-report measures of proactive relational aggression, dominance, prestige, prosocial behavior and income. Moreover, longitudinal participants interacted online with unfamiliar peers ( $n = 204$ ) who were newly invited to the study. In groups of four, they participated in a 2-hour online session that included several tasks to elicit a broad range of behaviors; a cooperative task, a competitive task, dyadic discussions and a group discussion. After this session, participants rated each other's dominance, influence, skillful leadership, engagement, and positive behavior.

Results (see Table 1) showed that childhood popularity was predominantly associated with positive, prosocial behaviors. A curvilinear association characterized by an inverted U-shape indicated that young adults who were average on childhood popularity scored highest on prosocial behavior. Curvilinear associations characterized by an inverted J-shape indicated that young adults who were low on childhood popularity score lower on prestige and engagement. Childhood popularity was also negatively associated with proactive relational aggression and dominance and positively associated with prosocial

behavior. Adolescent popularity was mainly associated with forceful social behaviors and status indicators. A curvilinear association characterized by a J-shape indicated that young adults who were highly popular in adolescence score higher on dominance and have a higher income. Moreover, adolescent popularity was positively associated with proactive relational aggression.

In sum, popularity in childhood and adolescence predicted social behaviors and status indicators 15 years later in young adulthood. Whereas being popular childhood mainly predicts positive, prosocial behavior in young adulthood, being popular in adolescence predicts more forceful behaviors and status indicators. These differences in what behaviors are longitudinally associated with childhood and adolescent popularity are similar to differences in concurrent behavioral correlates of childhood and adolescent popularity.

**Table 1**

*Regressions predicting social behavior and status indicators from popularity including a quadratic term to represent curvilinear associations*

	Childhood		Adolescent		<i>R</i> <sup>2</sup>
	Popularity	Popularity <sup>2</sup>	Popularity	Popularity <sup>2</sup>	
Proactive relational aggression <sup>a</sup> (self)	-0.31*	0.03	0.28*	0.09	.09
Dominance (self)	-0.21*	-0.22	0.37**	0.18*	.15
Dominance (peer)	0.15	-0.31*	0.19	0.14	.18
Influence (peer)	0.08	-0.19	0.14	-0.12	.09
Income	-0.08	-0.21	0.26*	0.27**	.14
Prosocial behavior (self)	0.20	-0.36*	-0.11	0.07	.16
Prestige (self)	0.34**	-0.52**	0.04	0.19*	.40
Skillful leadership (peer)	0.13	0.15	0.10	-0.22*	.09
Engagement (peer)	0.42**	-0.43*	0	-0.05	.39
Positive behavior (peer)	0.35**	0	-0.15	-0.13	.10

*Note.* \*\* =  $p < .01$ ; \* =  $p < .05$

## Leadership in Early Adolescence: Types and Implications for Adult Development

Jamie R. Fehribach & William J. Burk

**Introduction.** Leadership in adolescence is a dawning area of investigation in developmental psychology. This is important not only to understand concurrent (social) functioning in adolescence, but also to examine the implications of leadership in the adolescent peer group for later developmental outcomes and (social) functioning in (young) adulthood. Research has previously focused on formal leadership in adult populations, such as being the captain of a team or a supervisor in a work-context. Informal leadership, where the leader is not explicitly elected but implicitly known in a social group, has yet to be understood, especially during adolescence. In the current study, we first sought to understand the spread of leader-types: we divided our leaders by peer preference, ranging from liked to mixed leaders – a group which includes both disliked as well as neither-liked-nor-disliked and both-liked-and-disliked (referred to from now on as controversial) leaders. We also wanted to explore whether there were any differences between the leader-types at baseline (middle school). Finally, we were interested in uncovering whether there was an impact of being seen as a leader by the peer group in middle school on anxiety, depression, and job satisfaction post-high school in emerging adulthood. Gender was examined as a moderating factor.

**Method.** Data from the Manchester Youth Study, a longitudinal research initiative collected between 1995 and 2007, was used. The initial sample consisted of 662 (49% female) participants (see table 1). Leaders were identified via peer nomination. Leadership-type was created based on preference score (liked leaders defined as being  $> 0.5$  SD from the mean on preference score; mixed leaders defined as being  $< 0.5$  SD from the mean on preference score). We then analyzed the relationship between leadership-type and post-high school outcomes (anxiety, depression, and job satisfaction). Due to dropout, this analysis included 209 participants. Further statistical investigation is planned to better define the mixed leaders, in order to identify the disliked leaders separate from the controversial leaders. At this point we will re-examine any differences in post-high school outcomes.

**Results.** Concurrent differences between leaders and (liked) non-leaders were found. Liked leaders had more friends than mixed leaders. Liked leaders were also less relationally aggressive than mixed leaders and both liked and mixed non-leaders. Gender differences were also found (see table 3): regardless of leadership-type, female leaders were more cooperative than male leaders. Post-high school, all leaders were significantly less depressed than all non-leaders. Female leaders (regardless of type) were more satisfied with their jobs than liked non-leaders. No differences were found on post-high school anxiety between the groups. We expect that difference in post-high school outcome variables may change once we have split the mixed leaders into disliked and controversial leaders.

**Conclusions.** Differences can be seen between leaders and non-leaders both in and after adolescence. Differences between leaders divided by leadership-type were less clear, likely due to small sample size. Current results are also limited by not distinguishing the mixed leader group, though we hope to uncover more as we continue our analyses with controversial and disliked leaders distinguished. Further research into the differences between liked versus disliked adolescent leaders, as well as on their future mental health and (social) functioning and adjustment in adulthood, is needed.

	Time Point 1 (Middle School)			Time Point 2 (Post-High School)		
	Female	Male	Total	Female	Male	Total
Liked Leader	29	26	55	16	7	23
Mixed Leader	30	12	42	13	4	17
Liked Non-Leader	33	31	64	11	9	20
Mixed Non-Leader	232	271	501	94	55	149
<i>Total Sample</i>			<b>662</b>			<b>209</b>

*Table 1. Number of participants per leader-type at both time-points.*

	Liked leaders	Mixed Leaders	Liked	Mixed Non-leaders
Anxiety	1.8 [0.6, 3.0]	1.1 [-0.4, 2.7]	2.2 [1.0, 3.4]	2.4 [1.9, 2.8]
Depression	1.1 [1.0, 1.3]	1.1 [1.0, 1.4]	1.3 [1.1, 1.4]	1.4 [1.3, 1.4]
Job satisfaction				
Females	5.8 [5.0-6.6]	5.8 [5.1, 6.5]	4.4 [3.6-5.2]	5.3 [5.0-5.5]
Males	4.8 [3.8-5.8]	6.0 [4.7-7.4]	5.4 [4.5-6.4]	4.9 [4.5-5.3]

*Table 2. Mean-level differences between the leadership groups on early adult outcomes.*

## Shyness, negative peer experiences, and later social cognition: A 15-year longitudinal study

Mallory A. Millett & Yvonne H. M. van den Berg

Shyness is a subtype of social withdrawal characterized by conflicting motivations to both approach and avoid social interaction (Asendorpf, 1990). When studied concurrently (vs. longitudinally), it has been associated with a number of social, emotional, and cognitive difficulties (Coplan et al., 2013). One unique correlate of shyness (as compared to other types of social withdrawal) is its association with negative social cognitions. Shy children as young as four years-old have been shown to interpret more social threat than is present (LoBue & Perez-Edgar, 2014), and this cognitive bias has also been found in shy adolescents (Koken et al., 2016) and emerging adults (Ooi, 2018). However, not all shy children end up as shy emerging adults (Tang et al., 2017), and thus the question remains as to whether these associations still exist when examined longitudinally. Hence, the first aim of this study was to test whether there are lasting cognitive repercussions of childhood shyness by examining whether childhood shyness predicts negative social cognitions (rejection sensitivity and fear of negative evaluation) in emerging adulthood.

Additionally, negative social cognitions are often exacerbated and maintained by negative experiences with peers (London et al., 2007). As shy children make up a specific group of individuals who are at risk for experiencing peer difficulties (Cillessen et al., 1992), we also examine whether negative peer experiences throughout adolescence moderate the associations between childhood shyness and negative social cognitions in emerging adulthood.

Participants for this study were 109 emerging adults from the Nijmegen Longitudinal Study, an ongoing study that has followed 129 individuals in the Netherlands since 1998 when they were 15 months old. Shyness was measured by sociometric peer nominations at age 9 while negative peer experiences were measured through self-reports of victimization combined across ages 12, 13 and 16. Finally, rejection sensitivity and fear of negative evaluation were measured at age 21 using the Adult Rejection Sensitivity Questionnaire and the Brief Fear of Negative Evaluation Scale.

Preliminary regression models show that childhood shyness did not predict emerging adult fear of negative evaluation or rejection sensitivity (see Table 1). However, adolescent negative peer experiences positively predicted rejection sensitivity in emerging adulthood ( $\beta = .27, p = .009$ ). Additionally, the interaction between shyness and negative peer experiences did not significantly predict either outcome.

These findings support Tang and colleagues work (2017) that shows that not all shy children experience lasting consequences into emerging adulthood. Indeed, their work suggests that it is those individuals who *increase* in shyness from childhood to adolescence that may be the most at risk for peer difficulties and later maladjustment. Thus, in the future we plan to also examine whether shyness in adolescence predicts negative social cognitions in emerging adulthood. We also plan to test these analyses in an SEM framework and to include sensitivity analyses examining whether findings are different when using peer reports (rather than self-reports) of victimization.

## **Peer victimization in early adolescence and adult maladjustment**

Tina Kretschmer (University of Groningen), Tessa Kaufman (Utrecht University), Rozemarijn van der Ploeg (University of Groningen)

**Background and objective of the study:** Studies report associations between peer victimization and concurrent and later internalizing maladjustment. Often, however, the time lag between assessments of victimization and maladjustment is short, which prevents conclusions about adult maladjustment. Moreover, effect sizes vary which could be a result of different studies examining victimization as reported by different actors. Victims identified by others are often highly visible and occupy a poor position in the peer group, whereas self-reported victims have negative self-perceptions and feel excluded, potentially even without others' awareness. Self-reported victimization often includes references to past experiences whereas victimization as reported by others captures one's more stable reputation or refers to current situations. Comparing effects across multiple reporters adds to our understanding of whose perception of peer victimization is most relevant for lasting difficulties. **Methodology:** Longitudinal data from the TRacking Adolescents' Individual Lives Survey, a prospective cohort study of Dutch adolescents followed from age 11 to age 29 (baseline  $n = 2,229$ ) were used. Peer victimization was assessed at age 11 from adolescents themselves, their parents, teachers, and peers. Withdrawal, anxiety, thought problems, and somatic complaints were assessed from parents at age 22 and from target participants at ages 22 and 29. Regression models were computed, first unadjusted, and subsequently controlling for baseline maladjustment, family socioeconomic status and structure, and sex. **Results:** Self-, parent-, and teacher-reported peer victimization were associated with maladjustment in unadjusted models. Parent- and to a large extent also teacher-reported victimization predicted maladjustment also in adjusted models. Peer-reported victimization was not associated with later maladjustment. The pattern of results remained the same regardless of who reported on maladjustment symptoms and also in robustness checks using peer victimization assessed at age 13. **Conclusions:** Results clarify the long reach of negative peer experiences in adolescence on later



development and adjustment, though it appears that associations are more stable when bullying was not reported by adolescents themselves but by their parents. Parent-reported peer victimization has played a minor role in bullying research because parents are usually not present when victimization occurs at school. However, adolescents sharing victimization experiences with parents might be an indicator of severity such that adolescents confide in their parents only when the situation at school has become particularly bad. As such, researchers and professionals should be alerted especially when parents note that their child is bullied as this might be particularly indicative of problems later on.

## References

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