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Z-proso

2nd International Seminar

Cordoba - Spain
6-8 February 2020

The Zurich Project on the Social Development from Childhood to Adulthood

The Zurich Project on the Social Development from Childhood to Adulthood (z-proso) is an internationally important longitudinal study that investigates the life-course of 1,675 children since their admission to the first year of Zurich's primary schools in the autumn of 2004. z-proso studies the social development of children and youths, with a particular focus

on aggressive and delinquent behaviour, but also of prosocial characteristics. In doing so, it investigates how individual, family, school and situational factors work together in the development of aggression and other problem behaviour. Children have been regularly followed since 2004 and the eight wave of data collection was carried out in 2018 at age 20.

MAIN OBJECTIVES OF Z-PROSO

The Zurich Study on the Social Development from Childhood to Adulthood was initiated by Prof. M. Eisner (University of Cambridge, University of Zurich) and is currently led in cooperation with Prof. M. Shanahan and Dr. D. Ribeaud (both University of Zurich). It is affiliated with the Jacobs Center for Productive Youth Development of the University of Zurich and financially supported by the Swiss National Science Foundation as a national research infrastructure. The Study has three principal objectives:



HIGH-QUALITY RESEARCH

z-proso contributes to a better understanding of behavioural problems in children and young adults through interdisciplinary research excellence.



CAPACITY BUILDING

Through its international network, z-proso inspires early career researchers in Switzerland and abroad to address innovative questions while supporting them in their academic development.



KNOWLEDGE TRANSFER WITH IMPACT

z-proso works with local, national and international policymakers to develop more effective strategies to promote psychosocial health and reduce violence.



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WORKSHOP PROGRAMME

6th - 8th February 2020
Cordoba (Spain)

Thursday, February 6th, 2020

16:00 – 20:00 (Sala de Juntas)

University of Córdoba, Facultad de Ciencias de la Educación
Avda. San Alberto Magno s/n. 14004. Córdoba (Spain)

16:00 – 16:15 Welcome and Introduction to the z-proso

Manuel P. Eisner, University of Cambridge & University of Zurich

Denis Ribeaud, University of Zurich

16.15-16.45 z-proso research since 2018: an overview

Manuel P. Eisner, University of Cambridge & University of Zurich

16:45 – 17:15 Introduction round of the participants

17:15 – 17:45 *Changes in violent situations from early adolescence into adulthood*

Margit Averdijk, University of Zurich

17:45 – 18:15 Coffee Break

18:15 – 18:45 *z-proso around the world: Assessing measurement invariance of legal cynicism in São Paulo, Zurich, and Montevideo*

Amy Nivette, University of Utrecht

18:45 – 19:15 *Does school punishment have any impact on later antisocial behaviour? A combination of propensity score matching and group-based modelling*

Sara Valdebenito, University of Cambridge

19:15 – 19.35 Discussion

21:00 – Dinner



Friday, February 7th 2020

9:45–19:00(Sala de Juntas)

University of Córdoba, Facultad de Ciencias de la Educación

Avda. San Alberto Magno s/n. 14004. Córdoba (Spain)

9:45-10:15 *High prevalence and early onsets: Legal and illegal substance use in an urban cohort of young adults in Switzerland*

Boris Quednow, University of Zurich

10:15 – 10:45 *Frequent teenage cannabis: Prevalence across adolescence and links with young adult outcomes in an urban cohort*

Lilly Shanahan, University of Zurich

10:45 – 11:15 *Cannabis use in children of immigrant and native parents in an urban sample in Switzerland*

Laura Bechtiger, University of Zurich

11:15 – 11:45 *The association between specific substance use and prosocial behaviour in young adulthood*

Josua Zimmermann, University of Zurich

11:45 – 12:15 Coffee Break

12:15-12:45 *Pretexts and excuses. Testing a transactional model of moral neutralisation of aggression and aggressive behaviour from late childhood to early adulthood*

Manuel P. Eisner, University of Cambridge & University of Zurich

Lu Liu, University of Cambridge

12:45 – 13:15 *Childhood risk factors for and early adult outcomes of self-, other-, and dual-harm during adolescence*

Annekatriin Steinhoff, University of Zurich

13:15 – 13:45 *An item-response theory model to explain teen dating violence*

Ana Martina Greco & Noemi Pereda, University of Barcelona

13:45 – 14:15 *Early childhood predictors of teen dating violence involvement at age 17: The role of victimization experiences and parenting practices*

Noemi Pereda & Ana Martina Greco, University of Barcelona

14:15 – 15:15 Lunch Break

15:15 – 15:45 *Validation of an expanded version of the Violent Ideations Scale (the VIS-X)*

Carlota Urruela Cortés, Autonomous University of Madrid



15:45 – 16:15 *Teacher-student relationships in childhood predicting adolescent delinquency up to age 17 - a propensity score matching approach*

Ingrid Obsuth, University of Edinburgh

16:15 – 16:45 *Sexual preference/orientation and mental health across adolescence*

Urs Hepp, Integrierte Psychiatrie Winterthur/Zürcher Unterland & University of Bern

16:45 – 17:15 Coffee Break

17:15 – 17:45 *The impact of developmental trajectories of peer victimization on the neurobiology of social decision-making*

Todd Hare & Ana Cubillo, University of Zurich

17:45 – 18:15 *Childhood risk factors for adolescent offending: A cross-national comparison based on official records in London, Pittsburgh and Zurich*

Izabela Zych, University of Cordoba

18:15 – 18:45 *Childhood risk and protective factors as predictors of adolescent bullying roles*

Vicente J. Lorent, University of Cordoba

18:45 – 19:15 Final discussion

21:00 – Dinner

Saturday, February 8th 2020

University of Córdoba, Facultad de Filosofía y Letras (Botica)

Plaza Cardenal Salazar, 14003, Córdoba (Spain)

10:00 - 13:00 *Final conclusions from the workshop and future directions*

13:00 - Sightseeing activities (a visit in the mosque/cathedral and the old city centre)



PRESENTATION ABSTRACTS

z-proso research since 2018: an overview

Manuel P. Eisner

University of Cambridge, UK and University of Zurich, Switzerland

In this introductory presentation, the director of the project will provide a selective overview of the main findings emerging from z-proso research published in 2018 and 2019. It will help participants to better understand what has been achieved, and what new areas are emerging within the z-proso research network.

Changes in violent situations from early adolescence into adulthood

Margit Averdijk¹, Denis Ribeaud¹, & Manuel Eisner^{1,2}

¹University of Zurich, Switzerland

² University of Cambridge, UK

Both the situational and life course dynamics of violence play an important role in explaining crime. Situational theories posit that characteristics of the immediate context of potentially conflictive situations influence their outcome. Life course theories posit that changes in life circumstances as people age influence their criminal behaviour. In this study, we join both perspectives by looking at how the characteristics of violent situations change as people get older. Specifically, we examine situations of assault with injury from early adolescence into early adulthood (z-proso). We use data from the Zurich Project on the Social Development from Childhood into Adulthood. Participants who admitted to having assaulted and injured another person received follow-up questions detailing the circumstances of these incidents. Data collected include the spatiotemporal contexts of violence, the presence of others, victim characteristics, perceived motivations, weapon use, alcohol consumption, and disclosure. This presentation describes how these characteristics of violent situations change between age 11 and 20.

Keywords: violence and aggression, situational analysis, life course criminology, longitudinal assessment, situational theory of crime

z-proso around the world: Assessing measurement invariance of legal cynicism in São Paulo, Zurich, and Montevideo

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The concept of legal cynicism has become increasingly prominent in research on adolescents as a mechanism that contributes to the delegitimation of the law and justification of rule-breaking behaviours. However, researchers have drawn attention to measurement issues with the legal cynicism scale, as studies often report only borderline or tolerable reliability statistics (i.e. Cronbach's alpha < 0.60). This may indicate that there is significant variation in how individuals are interpreting and responding to items across populations, which in turn inhibits meaningful comparisons of results. This paper therefore takes the first step to assessing measurement invariance of legal cynicism as a key legal attitudinal construct among adolescents. Specifically, this paper evaluates measurement invariance of legal cynicism among adolescents (aged 15) in three different languages and social contexts: São Paulo (Brazil), Montevideo (Uruguay), and Zurich (Switzerland).

Does school punishment have any impact on later antisocial behaviour? A combination of propensity score matching and group-based modelling

Sara Valdebenito¹, Manuel Eisner^{1,2}, & Denis Ribeaud²

¹University of Cambridge, United Kingdom

²University of Zurich, Switzerland

Criminologists have extensively studied the effects of punishment. While deterrence theory argues that punishment can have a dissuasive effect on antisocial behaviour, defiance theory proposes that under certain circumstances, punishment can increase the prevalence of future offending. Previous findings suggest that punishment by schools may have adverse outcomes; however, research is still far from establishing causality, given the lack of studies controlling for confounding factors. The present piece of research aims to test the effect of school punishment in later antisocial behaviour. The analysis is based on data from 1390 school children drawn from the first six waves of the Zurich Project on the Social Development of Children (z-proso). Previous research testing the effect of school punishment has been primarily based on cross-sectional designs, facing limitations to address the control of confounding factors when examining the effect. To deal with extant limitations, we propose a combination of Propensity Score Matching (PSM) and Group-Based Modelling (GBM). After matching on 25 variables (i.e. demographic, behavioural and developmental latent trajectories variables), the results showed that children punished in schools had statistically significantly higher aggressive behaviour ($M=2.14$) at age 15 compared to participants who were not punished ($M=1.80$), $t(260) = -3.90, p < .001$. Similarly, punished pupils scored significantly higher on delinquent behaviour ($M=1.22$) compared with controls ($M=.78$), $t(259) = -2.24, p < .001$.

Pretexts and excuses. Testing a transactional model of moral neutralisation of aggression and aggressive behaviour from late childhood to early adulthood

Manuel P. Eisner^{1,2}, Denis Ribeaud², Aja Murray³, Amy Nivette⁴, Lu Liu¹

¹University of Cambridge, United Kingdom

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It has long been known that cognitive processes of neutralisation (Sykes and Matza, 1957) and moral disengagement (Bandura 1999) such as denial of responsibility, denial of injury, denial of the victim, condemnation of the condemners, and appeal to higher loyalties are associated with aggressive and, more generally, harmful behaviors. However, evidence is limited on whether such cognitive processes are best understood as excuses that retrospectively self-justify the breaking of moral obligations, or whether moral neutralisation prospectively prepares and facilitates harmful behaviour. Earlier work done on the basis of z-proso data (Ribeaud and Eisner, 2010) at age 11 provided initial evidence that the process may be bidirectional. However, the direction of effects may change during the transition from early adolescence to adulthood.

Moral neutralisation of violence has been measured in z-proso over five waves at ages 11,13,15, 17, and 20. In the paper we will present initial findings from an auto-regressive latent trajectory model with structured residuals (ALT-SR) of the relationship between moral neutralisation of aggression and aggressive behaviour

An item-response theory model to explain teen dating violence

Ana M. Greco¹, Noemí Pereda¹, Alberto Maydeu-Olivares¹, Denis Ribeaud², & Manuel P. Eisner^{2,3}

¹University of Barcelona, Spain

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Studies addressing teen dating violence tend to include only victims or perpetrators, or to focus in one particular type of violence. This has led to report contradictory findings, probably due to partial views of the phenomenon. Using the seventh wave of data from the Zurich Project on the Social Development of Children and Youths (z-proso) we propose an item response theory (IRT) model to describe the teen dating violence phenomenon considering all possible variances in terms of the overall tendency to violence, or the combined risk both to offend and to be victimized, the role of the participant in the violent act, the type of violence committed, and the specific violent behaviours occurring. We also analyse the differences between sexes to add some more evidence to this controversial variable when studying teen dating violence. Our IRT model was found to fit the data well. The variability of the overall tendency to violence, the contrast both in terms of role (i.e., victim vs. perpetrator) and in terms of type of violence (i.e., physical vs. controlling) and the specific behaviours of slapping and scratching, check the partner's mobile and ask whereabouts were found to be significant. When adding the effect of being female to the model, we did not find statistically significant effect. Findings suggest that when addressing teen dating violence, both from an academic or a professional perspective, these dimensions should be considered. We also aim to test further uses of the model.

Early childhood predictors of teen dating violence involvement at age 17: The role of victimization experiences and parenting practices

Noemí Pereda¹, Ana M. Greco¹, Denis Ribeaud², & Manuel P. Eisner^{2,3}

¹University of Barcelona, Spain

²University of Zurich, Switzerland

³University of Cambridge, UK

The frequency and serious consequences of teen dating violence underline the need to know the early predictors of involvement in violent romantic relationships. Using the first and seventh waves of data from the Zurich Project on the Social Development of Children and Youths (z-proso), we defined different profiles of adolescents according to their involvement in teen dating violence at age 17 through latent class analysis (LCA). Then we tested predictors of class membership at age 7. Three classes emerged: (a) adolescents not or slightly involved in teen dating violence, (b) adolescents perpetrating and being victims of controlling behaviours, and (c) adolescents perpetrating and being victims of both controlling behaviours and physical violence. Participants who were corporally punished and/or victims of bullying at age 7 were significantly more likely to belong to the controlling and physical violence profile, compared to children belonging to the non-violence class. Family structure and parent's level of education were also significant predictors for both LC. These results suggest that violence tend to occur in both directions and a certain chronicity of the effects of violent experiences at early childhood in the patterns of romantic relationships at 17 years old. Prevention programs should discourage caregivers from the use of corporal punishment and to decrease bullying behaviours from elementary school to also tackle teen dating violence prevalence in adolescence. Boys and girls are both victims and aggressors in dating relationships, which should be bared in mind when designing new interventions and further research in this area.

Validation of an expanded version of the Violent Ideations Scale (the VIS-X)

Carlota Urruela Cortés¹, Aja Murray², Manuel Eisner^{3,4}, & Denis Ribeaud⁴

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In 2016 Murray et al. designed and validated a multi-item instrument for the assessment of prevalence of violent ideations (VIs), the "Violent Ideations Scale" (VIS). This scale counts with 12 items, which include serious acts of physical violence, as well as acts with no physical harm component. The VIS was validated in a normative sample of N = 1,276 older Swiss adolescents, who were part of the z-proso Zurich study. Given the importance of sexual violence within the broader concept of VIs, the original VIS was expanded to include further items related to ideation of sexual violence. The ex-tended VIS was completed by participants in the latest wave of the z-proso study. This paper seeks to investigate the psychometric properties of the new expanded version of the Violent Ideations Scale (now VIS-X).

Teacher-student relationships in childhood predicting adolescent delinquency up to age 17 – a propensity score matching approach

Ingrid Obsuth¹, Aja Murray¹, Manuel Eisner^{2,3}, & Denis Ribeaud²

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Supportive relationships, particularly in hierarchical contexts, such as parent-child and teacher-student, have been demonstrated to be important not only for healthy development but also as protective factors in the face of difficulties. Research has also shown that it is the young persons' perspective on the quality of these relationships that is particularly important. In this paper we examined the impact of the quality of teacher-student relationships measured at age 10 on young people's delinquency at ages 13, 15, and 17 utilising a propensity-score matching methodology. The young people were matched on 106 characteristics, measured at ages 7 – 10, that may arguably predict both the quality of relationships and delinquency. The sample included 1483 (49.4 % female) adolescents who took part in the Zurich Project on Social Development of Children and Youths (z-proso). Following successful matching, our findings revealed that young people who reported to have a better relationship with their teacher at age 10, reported to engage in fewer delinquent acts at ages 13, 15 and 17, than their matched pairs who reported worse relationships. The analyses exploring these patterns on the matched sample based on the teacher-reported relationship did not reveal significant difference between those with a better teacher-reported relationship versus worse. Our findings suggest that when young people perceive to have a better relationship with their teachers this seems to serve as a protective factor against their engagement in delinquency up to seven years later. We also explored additional characteristics that may differentiate between the two groups and may offer some insights into the interpretation of our findings, e.g., delinquent peers, bond to current teacher.

Sexual preference/orientation and mental health across adolescence

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Integrierte Psychiatrie Winterthur-Zürcher Unterland, Switzerland

Research from various fields, including psychiatry and public health, suggests a higher risk for mental health problems, such as anxiety, depression, suicidal ideation and attempts in adult as well as adolescent individuals from sexual minorities. Because of the lack of Swiss data focusing on this topic across adolescence, the current paper investigates associations between sexual preference and aspects of mental health (internalized distress, suicidal ideation and self-injury) in adolescents at two time-points (17.5 yrs and 20.6 yrs). The sample of N = 1,108 adolescents stems from the ongoing z-proso longitudinal study, investigating the social development of children and youth in the city of Zurich, Switzerland. Preliminary analyses using chi-square tests suggest a significant association between sexual orientation, self-injury and suicidal ideation in female and male adolescents at both time-points under study (17.5 years of age and 20.6 years of age). Similarly, results of the factorial ANOVAs show a significant difference in internalized distress between LGB adolescents and heterosexual adolescents at 17.5 years of age and 20.6 years of age, such that LGB participants reported higher levels of anxiety and depression than their heterosexual peers did. Moreover, female adolescents reported higher levels of internalized distress than males at both time-points under study. Results will be discussed in the broader contexts of mental health and development.

The impact of developmental trajectories of peer victimization on the neurobiology of social decision-making

Ana Cubillo, Alex Junghans, Elena Silingardi, Justin Chumbley, Michael Shanahan, & Todd Hare

University of Zurich, Switzerland

Early life experiences of abuse and violence have been shown to have profound and lasting influence on the neurocognitive functions that drive behaviour. Thus, they have been associated with a range of negative outcomes in adult life, from higher incidence of psychiatric and physical disorders to increased criminal behaviour (Caspi et al., 2002, Moffitt et al., 2002, Turanovic and Pratt 2015). Recent work has focused specifically on the impact of adversity in the form of peer victimization. The evidence indicates that peer victimization alters the bodies inflammatory response in adolescence and adulthood (Copeland et al., 2014, Giletta et al., 2018), increases engagement neurodevelopment in risk-taking behaviours (Peake et al., 2013, Telzer et al., 2018), and leads to increased risk for physical and mental health difficulties over the lifespan (McDougall and Vaillancourt 2015, Hager and Leadbeater 2016). At the neural level, peer victimization has been shown to alter brain structure and function in neural networks underlying affective sensitivity, social monitoring or cognitive control (signalling potential self-regulation difficulties). These networks include regions such as the lateral and dorsal prefrontal cortex, ventral striatum, rostral ACC, amygdala and temporo-parietal junction regions (Quinlan et al., 2018, Telzer et al., 2018, McIver et al., 2019, Swartz et al., 2019, Telzer et al., 2019). Furthermore, changes in these regions have been associated with increased psychopathology (Quinlan et al., 2018, Telzer et al., 2019).

Our subproject with the z-proso sample aims to improve our understanding of if and how individual and life-course timing factors mediate or moderate the impact of adverse experiences on the development of typical and atypical social and self-regulatory skills. This study utilizes and combines multiple methodologies to examine behaviour, brain function, and other physiological processes in the light of specific life-course events. Data collection is still ongoing, and therefore, we will not report any definitive results. However, we will present an overview of the two substudies included in the zGIG project. Furthermore, we will provide a preliminary view of the current results from the behavioural paradigm participants complete while undergoing brain imaging. This task was designed to test aspects of social information processing including emotion perception, learning, value computation, and strategic self-regulation processes.

Keywords: victimization, neurodevelopmental processes, self-regulation, social information processing, fMRI

Childhood risk and protective factors as predictors of adolescent bullying roles

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This study shows longitudinal predictors of involvement in different bullying roles, including mental health, individual, family, peer and school predictors. The analyses are based on a longitudinal prospective study with 916 students followed up from ages 7 to 17 with 7 waves of data. Participants were selected through random sampling and were enrolled in 56 schools. Predictors were measured from ages 7 to 11 and involvement in bullying roles and trajectories from age 11 to 17. Predictors of bullying perpetration were gender, substance use, truancy, ADHD, moral neutralization, self-control, parental monitoring, corporal punishment, liking school, bond with teacher and classmates. Predictors of victimization were gender, substance use, truancy, internalizing problems, self-control, ADHD, bond to classmates, and social activities. Predictors of bully/victims were gender, divorced parents, substance use, internalizing problems, ADHD, sensation seeking, moral neutralization, self-control, corporal punishment, parental monitoring, liking school, bond to classmates, and social activities. Truancy was a risk factor for perpetration mostly in girls, low self-control was a risk factor for perpetration especially in boys. Truant children with high classmate bond were at high risk of perpetration. Low parental monitoring was a risk factor for perpetration in children who did not like school. Low social activities with peers was a risk factor for victimization in boys and substance use was a risk factor for victimization especially in children with low self-control. High classmate bond was protective against victimization in non-truant children and against being a bully/victim in children with high sensation seeking. Early intervention focused on risk and protective factors could possibly protect children from bullying.

Childhood risk factors for adolescent offending: A cross-national comparison based on official records in London, Pittsburgh and Zurich

Izabela Zych¹, David P. Farrington², Denis Ribeaud³ & Manuel P. Eisner^{2,3}

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Cross-national comparisons in criminology are especially important to discover the generalizability of findings across different geographic areas and time points. Nevertheless, the number of studies that include comparisons of results obtained in different longitudinal projects is low. To our knowledge, this is the first study that compares childhood risk factors for adolescent offending according to official records obtained in three longitudinal projects conducted in three different countries, including the Cambridge Study in Delinquent Development conducted in London, the Pittsburgh Youth Study conducted in the US and z-proso conducted in Zurich. This is the first comparison of a great variety of risk factors for offending measured in three different geographic areas and different generations. Risk factors included in the three studies are similar and were measured in a similar way. Several common risk factors were found in the three projects, and they seem to be generalizable across time and context. Common risk factors for offending included individual factors such as high impulsivity, attention deficit, and low school achievement. Childrearing risk factors included poor supervision, corporal discipline and parental conflict. Socioeconomic factors included low family income and divorced parents. Parental imprisonment was also a common risk factors among the three studies. Replicable childhood predictors of youth offending may be indicative of general causal mechanisms that should be targeted in prevention

ABSTRACTS OF ARTICLES PUBLISHED IN 2018-2019

Childhood Predictors of Violent Victimization at Age 17 Years: The Role of Early Social Behavioral Tendencies

Margit Averdijk¹, Denis Ribeaud¹, & Manuel Eisner^{1,2}

¹University of Zurich, Switzerland

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Objective To assess the relation between early social behavioral tendencies and the risk of violent victimization in late adolescence. **Study design** We analyzed 5 waves of data from the Zurich Project on the Social Development from Childhood into Adulthood (z-proso), a longitudinal sample of Swiss first graders (N = 1138). Early social behavioral tendencies were measured at age 7 years and included internalizing problems, externalizing behavior, prosocial behavior, negative peer relations, competent problem solving, dominance, and sensation seeking. Path analyses were conducted of the association between these tendencies and violent victimization at age 17 years, and mediation through intermediate victimization at ages 11, 13, and 15 years was examined. **Results** Several childhood social behavioral tendencies predicted victimization 10 years later. Though this was the case for both sexes, the number and type of significant risk factors differed. For male children, sensation seeking, externalizing behavior, high prosociality, and negative peer relations at age 7 years increased later victimization, whereas for female children, dominance and externalizing behavior were predictive. In addition, results showed that the relation between early risk factors and age 17 years victimization was mediated by intermediate victimization, showing that differences in victimization risk in early adolescence are carried forward into late adolescence. **Conclusions** Childhood social behavioral tendencies predict victimization 10 years later. Incorporating this finding into early prevention programs could reduce victimization over the life course.

Published in: **The Journal of Pediatrics** (2019), Vol. 208

The long-term effects of out-of-home placement in late adolescence: A propensity score matching analysis among Swiss youths

Margit Averdijk¹, Denis Ribeaud¹, & Manuel Eisner^{1,2}

¹University of Zurich, Switzerland

²University of Cambridge, United Kingdom

The aim of this study was to examine the outcomes of out-of-home placement in adolescence. We used data from a longitudinal study of Swiss youths and measured all outcomes, including externalising problem behaviour, anxiety and depression, education, and self-efficacy at age 17. Propensity score matching was used to reduce selection effects and multiple imputation to treat the missing values. The findings revealed that youths who were placed in out-of-home care come from disproportionately problematic backgrounds, which complicated their proper matching to youths who were not placed in out-of-home care. Outcome analyses including multiple robustness checks suggest that negative outcomes among youths who were placed in out-of-home care are not so much due to the placement itself, but largely to pre-existing difficulties present already before the placement.

Published in: **Longitudinal and Life Course Studies** (2018), Vol. 9

Longitudinal Risk Factors of Selling and Buying Sexual Services Among Youths in Switzerland

Margit Averdijk¹, Denis Ribeaud¹, & Manuel Eisner^{1,2}

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²University of Cambridge, United Kingdom

The aim of this study was to examine the longitudinal predictors of buying and selling sexual services among youths in a high-income country. We used data from Switzerland (target sample: $N = 1675$ children, 52% male), where no prior studies have examined the trading of sexual services among representative samples of youths. Selling and buying sexual services were measured using novel, three-item measures at age 17. The predictors were measured at ages 13 and 15. In the regressions, multiple imputation was used to treat the missing values. Two-year point prevalence estimates of selling sexual services were 2.5% for females and 1.5% for males. Prevalence estimates of buying sexual services were 0.0% for females and 5.4% for males. Findings from logistic regressions revealed some support for prior findings from cross-sectional studies in high income countries. New findings included evidence for prospective relations of having a disability, low generalized trust, and endorsing masculinity norms with trading sexual services. Follow-up models showed that the relations between pornography consumption and victimization with selling sexual services were gendered and stronger for females than for males.

Published in: **Archives of Sexual Behavior (2019)**

A practical guide to the analysis of non-response and attrition in longitudinal research using a real data example

Nora L Eisner¹, Aja L Murray², Manuel Eisner^{3,4} & Denis Ribeaud⁴

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Selective non-participation and attrition pose a ubiquitous threat to the validity of inferences drawn from observational longitudinal studies. We investigate various potential predictors for non-response and attrition of parents as well as young persons at different stages of a multi-informant study. Various phases of renewed consent from parents and young persons allowed for a unique comparison of factors that drive participation. The target sample consisted of 1675 children entering primary school at age seven in 2004. Seven waves of interviews, over the course of 10 years, measured levels of problem behavior as rated by children, parents, and teachers. In the initial study recruitment, where participation was driven by parental consent, non-response was highest amongst certain socially disadvantaged immigrant minority groups. There were fewer significant group differences at wave 5, when young people could be directly recruited into the study. Similarly, attrition was higher for some immigrant background groups. Methodological implications for future analyses are discussed.

Published in: **International Journal of Behavioral Development, Vol. 43**

Sex Trade Among Youth: A Global Review of the Prevalence, Contexts and Correlates of Transactional Sex Among the General Population of Youth

Maria Krisch¹, Margit Averdijk², Sara Valdebenito¹, & Manuel Eisner^{1,2}

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Transactional sex, the casual exchange of sexual favors for money or gifts, has been associated with negative outcomes and health risks, particularly among youth. This global review of the evidence explores trends of buying and selling sex among the general population of male and female youth across 28 countries. It compares the differences and similarities in prevalence rates between genders (male versus female), sex trading activities (selling versus buying), and country income groups (high-income versus low- and middle-income countries) and examines the relationships and situations surrounding transactional sex, and its correlates. The screening of reports resulted in the inclusion of 37 manuscripts (N = 120,447 participants), involving peer review and grey literature describing longitudinal and cross-sectional research across 7 high-income and 21 low- and middle-income countries. The review of prevalence rates suggests relatively low rates of transactional sex in high income countries (with selling and buying rates below 10% in all countries) and relatively high, although varying rates, in low- and middle-income countries (with selling and buying rates of 60% or higher in seven countries). Gender disaggregated data suggests that boys are more likely than girls to sell sex in high-income countries while the opposite seems to be true in low- and middle-income countries. The findings suggest that initial contact between sellers and buyers is most often established through friends, acquaintances, and dating websites. The age of onset is around 15 years, many sellers and buyers already know each other before trading sex, and they are often of a similar age. Money is the most commonly used form of compensation. Correlates of selling sex include involvement in other risky sexual behaviors, substance use, infection with sexually transmitted diseases, mental health problems, family break-up, and a history of victimization. No or mixed relations have been found with socioeconomic and educational status. The correlates of buying sex include promiscuity, substance use, violence perpetration and, to some extent, higher socioeconomic status. Recommendations for future research are discussed

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Validation of the English Language Version of the Violent Ideations Scale

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This study used a within-participant design to evaluate the concurrent validity and test–retest reliability of the Violent Ideations Scale in a general population, English-speaking opportunistic sample. Data from 116 adult participants (M age = 33.7, SD = 11.9, male = 30 [25.9%]) were used to compare scores on the Violent Ideations Scale and Aggression Questionnaire and responses to the Schedule of Imagined Violence. A subgroup of 27 participants (M age = 37.2, SD = 13.6, male = 8 [29.6%]) completed the Violent Ideations Scale on a second occasion, 2 weeks later. The Violent Ideations Scale was found to correlate significantly



with the Aggression Questionnaire subscale and total scores, with the strongest correlations being with physical aggression and total scores. Participants were more likely to be categorized as having experienced a violent ideation based on responses to the Violent Ideation Scale, compared with the Schedule of Imagined Violence, most likely due to the Schedule of Imagined Violence underestimating the prevalence of violent ideation. A significant, strong correlation was found between total Violent Ideations Scale scores at Time 1 and Time 2. Overall, the Violent Ideations Scale was found to have concurrent validity when compared with the Aggression Questionnaire and good test–retest reliability, suggesting that it would be suitable for use with a nonclinical, English-speaking sample.

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An Analysis of Response Shifts in Teacher Reports Associated with the Use of a Universal School-Based Intervention to Reduce Externalising Behaviour

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School-based psychosocial interventions are a widely used approach to prevent or reduce externalising behaviour. However, evaluating the effects of such interventions is complicated by the fact that the interventions may not only change the target behaviour, but also the way that informants report on that behaviour. For example, teachers may become more aware of bullying behaviour after delivering lessons on the topic, resulting in increased teacher reports of the behaviour. In this study, we used multi-group confirmatory factor analysis to evaluate whether teachers exposed to the Promoting Alternative Thinking Strategies (PATHS) intervention changed the way they reported on child externalising behaviour. Using data from the z-proso study (802 participants; 51% male; 69 teachers), teacher reports of aggressive behaviour, attention deficit hyperactivity disorder and nonaggressive conduct disorder symptoms were compared pre- and post- intervention and across the intervention and control conditions. There was no evidence that teacher reporting was affected by exposure to the intervention. This helps bolster the interpretation of intervention effects as reflecting changes in child behaviour, rather than in the manner of informant reporting.

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Within-person analysis of developmental cascades between externalising and internalising problems

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Background: In a large body of previous research, cross-lagged panel models (CLPMs) have been used to provide empirical support for developmental models that posit a cascade from externalising-to-internalising problems. These developmental models, however, arguably refer to within-person processes whereas CLPMs provide a difficult to- interpret blend of within- and between- person effects. **Methods:** We used autoregressive latent trajectory models with structured residuals (ALT-SR) to evaluate whether there is evidence for externalising-to-internalising cascades at the within-person level when disaggregating between- and within- person effects. We used eight waves of data (age 7–15) from the Zurich Project on Social Development from Childhood to Adulthood (z-proso). **Results:** ALT-SR fit better than the corresponding CLPMs. Using an ALT-SR, we found evidence for externalising-to-internalising cascades, consistent with previous CLPM studies. However, we also found some evidence for effects in the ALT-SR that were not apparent in the CLPM, including a negative effect of externalising on internalising problems in adolescence. In addition, a negative effect of internalising on externalising problems in adolescence was found in both the CLPM and ALT-SR. **Conclusions:** Within-person results were largely consistent with previous evidence from CLPMs; however, at the within-person level, externalising and internalising may negatively influence one another in adolescence.

Published in: **Journal of Child Psychology and Psychiatry**

Disaggregating Between and Within-Classroom Variation in Student Behavior: A Multilevel Factor Analysis of Teacher Ratings of Student Prosociality and Aggression

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Teacher ratings of student behaviors vary systematically both at the student and teacher/classroom level. Multilevel confirmatory factor analysis (MLCFA) can disaggregate between- and within teacher/ classroom variance, identify an optimal psychometric model at each level, and test correlates of the resulting dimensions. In this study, 250 teachers (37% males) rated an average of 4.02 students (51% males; aged 10 years at Time 1 and 11 years at Time 2) from a normative sample of Swiss youth. Substantial and unidimensional between-teacher variation in ratings of both prosociality and aggression were identified, and this was stable across time. These dimensions were not associated at the between-teacher/classroom level with teacher gender or teacher–student relationships, although they were associated with teacher–student relationships at the within-teacher/ classroom level. There was little between-teacher/classroom variation observed in student self-reports of prosocial and aggressive behavior, and multilevel CFA was not possible for these ratings. Future research should aim to identify sources of between-teacher/classroom variation. This should include factors that influence negative and positive teacher perceptions of and response biases related to student behavior as well as those that influence student behavior itself.

Published in: **Journal of Early Adolescence**

Testing the exacerbation and attenuation hypotheses of the role of anxiety in the relation between ADHD and reactive/proactive aggression: A 10-year longitudinal study

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Both anxiety and aggression commonly co-occur with ADHD symptoms. Two competing hypotheses describing the role of anxiety in aggression associated with ADHD symptoms have previously been advanced. The exacerbation hypothesis proposes that the presence of anxiety increases the risk of aggression in the context of ADHD symptoms. The attenuation hypothesis proposes that the presence of anxiety protects against aggression in the context of ADHD symptoms. We tested these hypotheses using moderated cross-lagged panel models in the Zurich project on social development from childhood to adulthood (z-proso) sample using both self-report (3 waves) and informant-report (8 waves) data spanning ages 7–17. We found evidence that anxiety protects against both reactive and proactive aggression; however, the effect was direct: there was no evidence for anxiety moderating the strength of ADHD symptom-aggression links. Results suggest that anxiety likely plays an important role in inhibiting aggression but does not interact with ADHD symptoms in the manner predicted by either the exacerbation or attenuation hypothesis.

Published in: **Psychiatry Research**

Evaluating Longitudinal Invariance in Dimensions of Mental Health Across Adolescence: An Analysis of the Social Behavior Questionnaire

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Measurement invariance over time (longitudinal invariance) is a core but seldom-tested assumption of many longitudinal studies on adolescent psychosocial development. In this study, we evaluated the longitudinal invariance of a brief measure of adolescent mental health: the Social Behavior Questionnaire (SBQ). The SBQ was administered to participants of the Zurich Project on the Social Development of Children and Youths in up to four waves spanning ages 11 to 17. Using a confirmatory factor analysis approach, metric invariance held for all constructs, but there were some violations of scalar and strict invariance. Overall, intercepts tended to increase over time while residual variances decreased. This suggests that participants may become more willing or able to identify and report on certain behaviors over time. The noninvariance was not practically significant in magnitude, except for the Anxiety dimension where artifactual increases over development would be liable to occur if invariance is not appropriately modeled. Overall, results support the utility of the SBQ as an omnibus measure of psychosocial health across adolescence.

Published in: **Assessment**

Outcomes of ADHD Symptoms in Late Adolescence: Are Developmental Subtypes Important?

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Substantial individual variation exists in the age of onset and course of ADHD symptoms over development. We evaluated whether, within this variation, meaningful developmental subtypes can be defined. Using growth mixture modeling in a community-based sample ($N = 1,571$), we analyzed ADHD symptom trajectories based on measures taken at ages 7, 8, 9, 10, 11, 13, and 15 years. We evaluated whether those showing developmental trajectories characterized by later onsets versus early onsets differed in terms of mental health and behavioral outcomes in late adolescence (age 17 years). The late onset category was best conceptualized as a milder subtype than early onset. The former was, however, more similar in outcomes to the latter than to the unaffected category, suggesting that later onsets are still associated with impairment. Considering diagnoses for those affected by ADHD symptoms but who do not meet current age of onset criteria may be important for ensuring that they receive appropriate support.

Published in: **Journal of Attention Disorders**

Disagreeing about development: An analysis of parent-teacher agreement in ADHD symptom trajectories across the elementary school years

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It is well-known that in cross-sectional analyses, agreement between informants is modest at best when rating attention-deficit/hyperactivity disorder and other disruptive behaviour disorder symptoms. We here aimed to develop recommendations for the use of multi-informant data in the context of longitudinal developmental analyses that examine symptom trajectories over time. Using parallel process modelling, we estimated parent-teacher agreement in inattention and hyperactivity/impulsivity symptom initial levels and slopes across the elementary school years (ages 7, 9, and 11) for a community sample of $n = 1,388$ youth. We also used these models to examine whether initial levels and slopes differed significantly across informants. Informant agreement was low to moderate and higher for inattention slopes ($r = .47$) than for hyperactivity/impulsivity slopes ($r = .23$). Parents and teachers reported opposite developmental trends for inattention with teachers reporting declines and parents reporting increases over time. Parents reported overall higher levels of hyperactivity/impulsivity, but there were no average informant differences in slopes. Of the options available, we recommend specifying separate but correlated factors for different informants in developmental analyses of attention-deficit/hyperactivity disorder. This can be achieved within latent growth curve and growth mixture models.

Published in: **International Journal of Methods in Psychiatric Research**

Quantifying the Strength of General Factors in Psychopathology: A Comparison of CFA with Maximum Likelihood Estimation, BSEM, and ESEM/EFA Bifactor Approaches

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Whether or not importance should be placed on an all-encompassing general factor of psychopathology (or p factor) in classifying, researching, diagnosing, and treating psychiatric disorders depends (among other issues) on the extent to which comorbidity is symptom-general rather than staying largely within the confines of narrower transdiagnostic factors such as internalizing and externalizing. In this study, we compared three methods of estimating p factor strength. We compared omega hierarchical and explained common variance calculated from confirmatory factor analysis (CFA) bifactor models with maximum likelihood (ML) estimation, from exploratory structural equation modeling=exploratory factor analysis models with a bifactor rotation, and from Bayesian structural equation modeling (BSEM) bifactor models. Our simulation results suggested that BSEM with small variance priors on secondary loadings might be the preferred option. However, CFA with ML also performed well provided secondary loadings were modeled. We provide two empirical examples of applying the three methodologies using a normative sample of youth (z-proso, $n = 1,286$) and a university counseling sample ($n = 359$).

Published in: **Journal of Personality Assessment**

Sex differences in ADHD trajectories across childhood and adolescence

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Previous studies have hinted at sex differences in developmental trajectories in ADHD symptoms; however, little is known about the nature or cause of these differences and their implications for clinical practice. We used growth mixture modelling in a community-ascertained cohort of $n = 1,571$ participants to study sex differences in ADHD symptom developmental trajectories across the elementary and secondary school years. Participants were measured at ages 7, 8, 9, 10, 11, 12, 13, and 15. We found that females were more likely to show large symptom increases in early adolescence while males were more likely to show elevated symptoms from childhood. For both males and females, early adolescence represented a period of vulnerability characterized by relatively sudden symptom increases. Females affected by hyperactivity/impulsivity may be more likely to be excluded from diagnosis due to current age of onset criteria. More attention should be paid to early adolescence as a period of risk for hyperactivity/impulsivity symptom onset or worsening.

Published in: **Developmental Science**

Should We Subtype ADHD According to the Context in Which Symptoms Occur? Criterion Validity of Recognising Context-Based ADHD Presentations

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ADHD symptoms show considerable individual variation in the contexts in which they are expressed. It has previously been proposed that subtyping individuals according to the contexts in which symptoms are expressed may be clinically useful. We examined context-based patterns of ADHD symptoms in a longitudinal cohort study of $n = 1388$ children, as well as context-specific and context-general predictors of symptoms. Participants were community-ascertained and provided ADHD symptom data at ages 7, 9, and 11. Using growth mixture modelling we identified five inattention and five hyperactivity/impulsivity categories that differed in the developmental patterns of symptoms reported by parent and teacher informants. We found some evidence that context-specific predictors were related to context-specific expressions. Specifically, after controlling for other risk factors for ADHD symptoms, relationships with teachers predicted school-specific (teacher-reported) but not home-specific (parent-reported) symptom levels. However, no subtypes defined by exclusively home-based symptoms emerged, suggesting that while symptoms may sometimes be specific to the school context, they are only rarely confined to the home context. Subtyping by context could be informative; however, further work will be required to uncover the nature of any etiological, functional, or outcome differences between those who show symptom expression in different contexts.

Published in: **Child Psychiatry & Human Development**

Validation of a Brief Self-Report Measure of Adolescent Bullying Perpetration and Victimization

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Although a wide range of measures of bullying have been developed, there remains a need for brief psychometrically supported measures for use in contexts in which there are constraints on the number of items that can be administered. We thus evaluated the reliability and validity of scores from a 10-item self-report measure of bullying victimization and perpetration in adolescents: the Zurich Brief Bullying Scales. The measure covers social exclusion, property destruction, verbal and physical aggression, and sexual bullying in both traditional and cyber forms. We evaluated factorial validity, internal consistency, developmental invariance, gender invariance, and convergent and divergent validity of the measure. Our sample was the normative longitudinal Zurich Project on Social Development from Childhood to Adulthood (z-proso) sample ($N = 1,304$). The study involved the administration of Zurich Brief Bullying Scales to participants aged 11, 13, 15, and 17 years. Strengths and weaknesses of the measure and recommendations for utilizing and improving the measure were identified. Overall, results suggest that the items provide a reasonable general but brief measure of bullying victimization and perpetration that can be used across early to late adolescence and in both males and females.

Published in: **Assessment**

Development and Validation of a Brief Measure of Violent Thoughts: The Violent Ideations Scale

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Violent ideations (VIs) have potential significance across clinical, forensic, and research contexts. They feature in dominant theories of violence, are a candidate risk factor in violence prediction, and are a potential target for therapeutic intervention. Given this, there is a need for multi-item psychometrically supported measures of VIs. We report on the development and validation of the “Violent Ideations Scale” (VIS): a brief measure of VIs. In a normative sample of $N = 1,276$ older adolescents, we evaluated the dimensionality, sex invariance, concurrent validity, and discriminative power of the VIS. The VIS showed unidimensionality, minor measurement differences across males and females, correlated well with a pre-existing measure of VIs and showed a strong relation to criminal violence. These features support the use of the VIS as a research tool and as a possible source of information regarding violence risk in clinical and forensic settings.

Published in: **Assessment**

Evaluating the shared and unique predictors of legal cynicism and police legitimacy from adolescence into early adulthood

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In different theoretical traditions, negative social conditions, attachments, and interactions shape the way individuals view the law and its agents. Although most researchers acknowledge the conceptual distinction between different legal attitudes such as legal cynicism and police legitimacy, it remains unclear to what extent these attitudes stem from the same social sources. In the current study, therefore, we evaluate the social and individual factors that influence trajectories of legal cynicism and police legitimacy using a diverse community sample of youths in Zurich, Switzerland. Latent growth curve models were employed to examine patterns of change in legal cynicism and police legitimacy between 13 and 20 years of age. The findings show that legal cynicism and police legitimacy both decline into early adulthood and exhibit high rank-stability over time. Furthermore, we find that legal cynicism is closely related to individual characteristics that reflect one’s inability to recognize or abide by their internal rules. By contrast, police legitimacy is shaped by socialization influences, particularly teacher bonds and police contacts. These results indicate a need to assess the measurement and interpretation of legal cynicism critically in relation to broader legitimacy beliefs and to investigate the shared and distinct sources of these different constructs.

Published in: **Criminology**

Patterns of Homotypic and Heterotypic Continuity Between ADHD Symptoms, Externalising and Internalising Problems from Age 7 to 15

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ADHD presents a serious community-health problem through its links to a wide range of negative outcomes. These outcomes are exacerbated when ADHD symptoms co-occur with other mental health problems. Research evidence suggests high rates of comorbidity with a range of problems. However, there is a paucity of longitudinal research that examines the predictive links between ADHD symptoms and symptoms of other mental health problems. We examined a cross-lagged autoregressive model in order to assess homotypic and heterotypic continuity between ADHD symptoms, aggressive behavior, non-aggressive behavior problems and anxiety/depression in a community-based sample of 1571 youth (761 female, 810 male) assessed annually from age 7 to 13 and again at age 15. Consistently significant correlations between each pair of problem behaviors provided support for concurrent comorbidity. Furthermore, significant autoregressive pathways provided support for homotypic continuity. Support for heterotypic continuity was limited to ADHD symptoms predicting both aggressive behavior and non-aggressive behavior problems, but not vice versa. Our study highlights the importance of focusing on ADHD symptoms to identify children at risk not only for continued ADHD symptomatology but also a range of externalizing behavior problems including different types of aggression and non-aggressive behavior problems, such as rule-breaking. Identifying these patterns in a community-based sample provides support for the possibility of early identification of risk for a range of problem behaviors.

Published in: **Journal of Abnormal Child Psychology**

Violent Poly-Victimization: The Longitudinal Patterns of Physical and Emotional Victimization Throughout Adolescence (11–17 Years)

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In this study, we aimed to characterize developmental patterns of poly-victimization in a normative sample of adolescents by applying longitudinal latent class analysis. Using the four most recent waves of data from the Zurich Project on the Social Development of Children and Youths (z-proso), we identified three classes, or separate groups, of youths with distinct patterns of victimization from age 11 to 17. The largest class represented young people who were least likely to be victimized in any way and at any time. The two smaller groups represented different types of poly-victimization- a non-parental and a long-term parental victimization group. Adolescents in the two groups differed both in the number as well as type of victimization that they experienced at different times. Moreover, class membership also had implications for different mental health outcomes.

Published in: **Journal of Research on Adolescence**

Punitive Parenting and Delinquency: The Mediating Role of Short-Term Mindsets

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Drawing from life history theory and developmental perspectives, we test the hypothesis that the relation between parental discipline practices and delinquency is explained in part by short-term mindsets. We argue that such practices induce an orientation towards the here-and-now rather than the future, which, in turn, promotes delinquency. We used longitudinal data ($N = 1,197$) from the Zurich Project on the Social Development from Childhood into Adulthood (z-proso). We distinguished between two types of disciplining practices, corporal and inconsistent punishment, which map onto two main environmental parameters, harshness and unpredictability. Results show that short-term mindsets, operationalized by impulsivity and low future orientation, mediate the relation between corporal and erratic punishment and delinquency, with impulsivity being the most important mediator.

Published in: **British Journal of Criminology**

A Longitudinal Study on Stability and Transitions Among Bullying Roles

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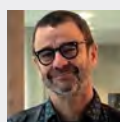
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Trajectories of stability and change in bullying roles were examined through a longitudinal prospective study of 916 school students followed up biannually from age 11 to 17. Perpetrators and victims had relatively stable trajectories with most of the children remaining in the same role over time or becoming uninvolved. Bully/victim was the most unstable role with frequent transitions to perpetrators or victims. Developmental change in bullying roles was found with a decrease in physical forms over time in bullies and victims but with persistently high perpetration and victimization in bully/victims. These findings open new horizons in research and practice related to bullying and can be useful for its early detection or design of targeted interventions.

Published in: **Child Development**

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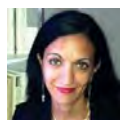
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