



**Tuesday, July 10 to Saturday, July 14, 2018**

**Abstracts**

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## Plenary Lecture Abstracts

### **How Radicalization Happens and How it Can Be Undone : Look to the N-Trilogy (Needs, Narratives and Networks)**

Arie W. Kruglanski

Distinguished University Professor at the University of Maryland,  
College Park



The phenomena of radicalization and deradicalization are examined in terms of their three fundamental ingredients: (1) Individual need for mattering and significance, (2) cultural narrative, justifying violence as means to significance, and (3) the social networking process that solders the means-ends relation between violence and significance. Based on these elements a model of radicalization will be described, and empirical evidence for the model will be cited gleaned through various methods and including investigations in various world locations and with at risk populations, including Muslims in Europe, and South East Asia White Supermatists in the United States, and The Tamil Tigers in Sri Lanka among others.

## A Good Childhood is a Smart Investment



Terrie E. Moffitt

Knut Schmidt Nielsen Professor of Psychology & Neuroscience at Duke University (USA) and a Professor of Social Behavior and Development at the Institute of Psychiatry, King's College London (UK)

Policy-makers are keen on early-years interventions to ameliorate childhood risks. They hope for improved adult outcomes in the long run, bringing return on investment. However, how much return can be expected depends, in part, on how strongly childhood risks forecast adult outcomes. Scientists disagree about whether childhood determines adulthood. We brought together multiple administrative government data registers with the four-decade NIA-funded Dunedin, New Zealand, birth-cohort study in order to test child-to-adult prediction in a different way, by using a population-segmentation approach. A segment comprising one-fifth of the cohort accounted for 36% of the cohort's injury insurance claims; 40% of overweight kilograms; 54% of cigarettes smoked; 57% of hospital nights; 66% of social welfare benefit payments; 77% of fatherless childrearing years; 78% of prescription drug fills; and 81% of criminal convictions. This shows that, in New Zealand, the vast bulk of a nation's social services, crime control, and health-care are expended on a relatively small population segment. Childhood risks, especially poor age-three brain health, predicted the members of this segment, with large effect sizes. This segment of the population starts the race of life behind their age peers by carrying a brain-health handicap in the first years of life. Early-years interventions that improve childhood brain health and reduce social risk factors may bring nations a surprisingly good return on investment.

## Dealing with Conflict Through Fission-Fusion Dynamics

Filippo Aureli

Universidad Veracruzana, Mexico and  
Liverpool John Moores University, UK



Fission-fusion dynamics are a characteristic of any social system, which integrates the degree of temporal variation in spatial cohesion between group members and in subgroup size and composition. Fission-fusion dynamics capture the variation in opportunities for group members to interact with one another. A high degree of fission-fusion dynamics is typical of species, such as *Homo sapiens*, in which group members are rarely all together because they frequently fission and fuse in subgroups of variable membership. The main reason behind a high degree of fission-fusion dynamics is the reduction of competition when resources are scarce, so that individuals can better exploit them being with fewer group members in small subgroups. I use our findings on spider monkeys (*Ateles geoffroyi*), a species with a high degree of fission-fusion dynamics, to illustrate how these dynamics can be effective in dealing with conflict and escalation of aggression. According to socioecological models, spider monkeys would be expected to experience strong contest competition and have clear-cut dominance relationships and female dispersal from the natal group. However, they do not. This is because they reduce conflict about decisions and aggressive escalation for resources through fissioning into subgroups. Thus, aggression is rare, but well targeted as when it is directed to immigrant females or young natal males to deter them joining the group or the adult male cohort, respectively. Aggression may occur when subgroups fuse, but the exchange of embraces reduces this risk. Thus, our research shows that a high degree of fission-fusion dynamics can change the expected social patterns and be an effective mechanism to deal with conflict and risk of aggression while maintaining the benefits of living in large groups.

## Aggression and Justice

Mario Gollwitzer

Ludwig-Maximilians-University, Munich, Germany



In this plenary lecture, I will elaborate on the psychological relations between aggression and justice, focusing on a specific aggressive reaction to (perceived) injustice: revenge. Outside psychology, revenge has been defined as an affect-driven, hostile, and impulsive reaction, an “instinct for retribution” (Justice P. Stewart) or a “psychological malfunction” (K. Horney). Within psychology, revenge is defined as “what individuals do with the desire to get even for a perceived harm” (Tripp & Bies, 1997). But the question is: what does “getting even” mean exactly? Under what circumstances do victims experience a sense of justice by taking revenge against the perpetrator? We explored these questions in a series of studies, which I will describe in this lecture. In a nutshell, our findings show that revenge aims at sending a message to the perpetrator: “Don’t mess with me”, and that avengers experience a sense of justice only when this message is received and understood by the perpetrator. In more recent studies, we explored the communicative function of revenge (1) in more complex social settings (i.e., displaced revenge), (2) in the context of revenge fantasies, and (3) in relation to more benign reactions to perceived injustice (i.e., forgiveness). Together, our findings do not only contribute to a better conceptual understanding of aggressive responses to injustice; our research program has also practical implications for promoting peaceful (i.e., non-aggressive) solutions to injustice conflicts.

## The Development of Violence from Age 8 to age 61: New Findings from the Cambridge Study in Delinquent Development

David P. Farrington

Emeritus Professor of Psychological Criminology  
Cambridge University, UK



The Cambridge Study in Delinquent Development is a prospective longitudinal study of 411 London males first assessed at age 8 in 1961. They have been interviewed 9 times from ages 8 to 48, and 93% of those who were still alive were interviewed at age 48. Also, their criminal records have been searched repeatedly from 1964 to 2017. This presentation reports results from the latest criminal record search, which extends information about official criminal careers to the 62nd birthday. Between ages 10 and 61, 178 males were convicted for 947 crimes, including 181 violent crimes (robbery, assault, threatening behavior, and carrying an offensive weapon). The percentage of offenses that were violent increased from ages 10-20 (11.7% of 486) to 21-39 (21.6% of 306) and to 40-61 (37.4% of 155). This presentation reports on: (1) the continuity of official violence from ages 10-20 to 40-61; (2) relations with self-reported violence at ages 15-18, 27-32, and 42-47; (3) risk factors at ages 8-10 for official violence at ages 10-20; (4) risk factors at ages 8-18 for official violence at ages 21-39; and (5) risk factors at ages 8-32 for official violence at ages 40-61. Implications are drawn for the prevention of violence.

## Aggression in People and Other Animals: Epiphanies, Digressions and Opportunities



Michael Potegal

University of Minnesota, USA

Evolutionary pressures on human behavior have generated deep seated motivations for self preservation, for the acquisition and control of resources and competition for reproductive opportunities as well as motivations for bonding and alliance with kin and in-group. As in other animals, these motivations are variously expressed in self-defense, territoriality, social dominance, and sexual possessiveness, all of which are contexts for, and can be triggers of, aggression. There are many striking and insight-yielding continuities between our aggression and that of other animals. These include, but are not limited to:

- stereotyped, species-typical body language and other displays of dominance and, reciprocally, displays of subordination and submission
- aggression typologies that include predation (*see* hunting), reactive responses to immediate threat (*see* anger) and the enthusiastic initiation of proactive aggression that serves to secure resources and/or establish and maintain social status (*see* bullying)
- occasional escalation from threats that size up and intimidate opponents to overt attack
- sexual coercion and sexual violence (*see* jealousy, rape)
- coalitional aggression (in primates, *see* war)
- bystander effects and the seeming ubiquity of postconflict reconciliation among members of a group.

The same brain structures that control aggression in other animals also do so in us, making new insights from neuroscience all the more relevant and helping us to interpret the emerging processes in the brains of ordinary people when angry and differences in the brains of chronically hostile and violent individuals.

This talk will present my epiphanal realization of these many parallels between ourselves and other animals, with a few digressions into my own work. At the same time, the differences between us and other animals underscore uniquely human capacity to use language for insult, threat and propaganda; to imagine and create weapons, and to organize complex social structures of hundreds, thousands or millions of people to wage war and commit genocide. In light of this multifaceted complexity, we should encourage participation in ISRA by members of all scientific disciplines interested in aggression and violence, from anthropology and animal behavior, behavior genetics and child development through criminology, endocrinology and neuroscience to psychiatry, pharmacology, social psychology, and sociology. ISRA can be an exciting and invigorating venue for practitioners of different disciplines to share insights derived from new technologies and theoretical developments. What we are about is sharing our keen interest in the phenomena of aggression, and solutions to, with colleagues who bring different perspectives to the discussion. I will continue to work toward these goals.



## Symposia Abstracts

### ***Symposium 01: The Role of Psychological Processes Accounting for Aggressive and Violent Behavior among Palestinian and Israeli Youth Exposed to Political Violence***

Eric F. Dubow | Bowling Green State University and the University of Michigan

In this symposium, we present findings based on a social-cognitive-ecological model for understanding the impact of exposure to political violence on the development of aggression and violent behavior of Palestinian and Israeli youth. We examine how contextual (e.g., violence exposure, social support) and individual-personal variables (e.g., social cognitions supporting aggression, emotional desensitization to aggression) mediate and moderate effects of exposure on aggressive behavior. Our analyses are based on a 4-wave prospective study of Palestinian and Israeli Jewish youth starting in 2007. The Palestinian youth (N=900; a nationally representative sample from the West Bank and Gaza) and the Israeli Jewish youth (N=450; oversampling of high-conflict regions) began the study in 2007, equally split across 3 age cohorts of 8, 11, and 14 year-olds). They and their parents were interviewed annually for the first three years of the study and then a random sample of 400 Palestinians and 162 Israelis were interviewed again 4 years later (ages 14, 17, and 20). In three symposium papers, we examine data relevant to three questions: 1) Does exposure to high levels of political violence cumulatively predict emotional desensitization to violence, and in turn, more aggressive and violent behavior? 2) Does a critical contextual factor, early social support from family and friends, reduce the potential negative effects of political violence exposure on the youth subsequently developing aggressive and violent behavior? and 3) Is early political violence exposure related to the development of aggression-supporting social cognitions (e.g., normative beliefs supporting aggression, aggressive fantasy), and in turn to serious aggressive and violent behavior? We discuss our findings in terms of informing our theoretical social-cognitive-ecological model and in terms of informing the development of intervention programs for war-affected youth.

### **Consequences of Exposure to War Violence: Discriminating Those with Heightened Risk for Aggression from Those with Heightened Risk for PTS Symptoms**

L. Rowell Huesmann | University of Michigan

Eric F. Dubow | University of Michigan

Paul Boxer | Rutgers University

Khalil Shikaki | Palestinian Center for Policy and Survey Research

Cathy Smith | University of Michigan

Simha Landau | Hebrew University

Shira Dvir Gvirsman | Tel Aviv University

Persistent exposure to war violence has detrimental effects on youth. Some of those exposed to war violence are more likely to act aggressively afterwards and some are more likely to display PTS symptoms. However, the concordance of these two outcomes is not strong, and it is unclear what discriminates between those who are at more risk for one or the other. Drawing on prior research on desensitization and arousal and on recent social-cognitive theorizing about how high anxious arousal can inhibit aggression (Huesmann & Kirwil, 2007), we hypothesized that those who characteristically experience higher anxious arousal when exposed to violence should display a greater increase in PTS

symptoms and a lower increase in aggression after exposure to war violence. To test this hypothesis, we used the 4 waves of longitudinal interview data we collected on aggression, PTS symptoms, and exposure to war violence along with additional data collected during wave 4 on the anxious arousal participants experienced while watching a very violent film. Longitudinal analyses revealed that exposure to war violence significantly increased the risk of subsequent aggression and PTS symptoms. However anxious arousal in response to seeing the violent film (measured from skin conductance and self-reports of anxiety) moderated the relation between exposure to war violence and subsequent psychological outcomes. Those who experienced greater anxious arousal showed a weaker positive relation between amount of exposure to war violence and aggression toward their peers and a stronger positive relation between amount of exposure to war violence and PTS symptoms.

### **Political Violence Exposure, Social Support, and Aggressive Fantasies: Long-Term Relations to Aggressive and Violent Behavior among Israeli and Palestinian Youth**

Simha Landau | Hebrew University

Cathy Smith | University of Michigan

Eric F. Dubow | University of Michigan

L. Rowell Huesmann | University of Michigan

Paul Boxer | Rutgers University

Shira Dvir Gvirsman | Tel Aviv University

Khalil Shikaki | Palestinian Center for Policy and Survey Research

Landau and colleagues have proposed a stress-support model (Landau, 1997, 1998; Landau & Beit-Hallahmi, 1983) in which violence exposure is expected to be positively related to stress factors and negatively related to social support systems. Thus, social support is conceived as either affecting directly or moderating the relation between the stressors such as exposure to violence and the negative consequences to which the stressors lead (e.g., subsequent aggressive behavior). We integrate the stress-support model with a social cognitive model that proposes that children who are exposed to persistent violence develop internalized aggressive guides for behaving in social situations--aggressive cognitive scripts--that guide behavior (Huesmann, 1998). Fantasizing about aggression is a form of mental rehearsal of scripts (Eron, 2001). We apply this integrated model to a 4-wave, prospective study of three age cohorts of (ages 8, 11, and 14 at time 1) representing two populations of children growing up in the Middle East: Palestinians (time 1 N = 600) and Israeli Jews (time 1 N = 451). Interviews were conducted with the children and their parents once a year for 3 consecutive years and a fourth time four years later when the youth were ages 14, 17, and 21, respectively. We examine the joint roles of social support and aggressive script development during the earlier years on aggressive behavior in the fourth wave of the study. Theoretical as well as practical and prevention aspects of the results are discussed.

### **Effects of Youths' Exposure to Political Violence in the Middle East: The Role of Social Cognitions about Aggression in the Long-Term Prediction of Serious Aggressive and Violent Behavior**

Eric F. Dubow | Bowling Green State University and the University of Michigan

L. Rowell Huesmann | University of Michigan

Cathy Smith | University of Michigan

Paul Boxer | Rutgers University

Simha Landau | Hebrew University

Shira Dvir Gvirsman | Tel Aviv University

Khalil Shikaki | Palestinian Center for Policy and Survey Research

Consistent with our social-cognitive-ecological model, we have recently shown that Palestinian and Israeli youth who are exposed to higher levels of political violence subsequently develop aggressive-supportive social cognitions (i.e., aggressive scripts, normative beliefs supporting aggression) and emotional distress that in turn predict subsequent aggression toward in-group peers (Huesmann et al., 2017). Those mediation results were obtained using data from the first 3 waves of our prospective study of Israeli and Palestinian youth in three starting age cohorts (ages 8, 11, and 14) who were assessed annually for three years. We have now collected a fourth wave of data from Palestinian and Israeli Jewish youth, 4 years after the last wave (the cohorts are now ages 14, 17, and 21). In this paper, we will examine whether exposure to political violence during the early waves of the study predict more serious aggressive and violent behavior by wave 4—severe physical aggression, support for and participation in violent political demonstrations against the outgroup, and arrests, now as the youth are middle to late adolescents and young adults. We also will examine the role of developing aggression-supporting social cognitions as key psychological processes in the link between political violence exposure and serious aggressive and violent behavior.

## **Symposium 02: The Taylor Aggression Paradigm in Neuroscience: Current Knowledge and Challenges of Studying Neurobiological Correlates of Aggression in Humans**

Katja Bertsch | University of Heidelberg

Thomas F. Denson | University of New South Wales

Understanding the biopsychosocial causes of aggression has engaged many generations of researchers. The development of standardized experimental paradigms that can be used to reliably induce and quantify aggressive behavior in humans has been an important step. One of these paradigms is Taylor (1967) Aggression Paradigm which elicits aggressive responses through interpersonal provocation. Since its development over 50 years ago, it has been used in a wide range of experiments investigating different person and situation factors that influence aggression. In the last decade, neuroscientists, such as Ulrike Krämer and Dave Chester, have adapted the Taylor Aggression Paradigm for the use in brain imaging and electrophysiological studies. In the current symposium, we will give an overview of the major results of these investigations. We will describe the most important brain circuits that seem to be involved in aggressive tendencies and their control (Macià Buades-Rotger and Nathan DeWall), explain how alcohol intoxication affects these brain circuits and changes the likelihood for acting out aggressively (Tom Denson), and show alterations in these brain circuits in a clinical population with an increased sensitivity to interpersonal provocation (Katja Bertsch). Throughout the symposium, the feasibility of the Taylor Aggression Paradigm for the investigation of neurobiological correlates of “normal” and “abnormal” aggression will be discussed and new modifications of the “original” paradigm will be presented.

### **Approach- and Avoidance-Driven Responses to Interpersonal Provocation**

Macià Buades-Rotger | University of Lübeck

Ulrike M. Krämer | University of Lübeck

In this talk, we summarize fMRI studies using variants of the Taylor Aggression Paradigm that allow to disentangle how core nodes of the brain’s reward-processing network, namely the ventral striatum (VS), the ventromedial prefrontal cortex (vmPFC), and the amygdala, modulate aggressive and avoidant responses to provocation. In the first study, we observed that the VS showed increased activity and connectivity with the vmPFC when subjects won to punish a provoking rival, relative to simply avoiding punishment. In a second study, aggression was predicted by amygdala reactivity to angry facial expressions in the course of an aggressive interaction. Furthermore, angry faces reduced amygdala-vmPFC coupling, and post-task increases in amygdala-vmPFC connectivity at rest were associated with reduced aggression. In a third study, we observed enhanced vmPFC activity when subjects decided to engage in an aggressive encounter, whereas amygdala activity was specifically upregulated when participants avoided a highly provoking opponent. Our data indicate that VS-vmPFC interactions underlie appetitive aggression, which is partly consistent with the proposed role of the latter region in subjective value computation and moral decision making. In contrast, the amygdala seems to favor avoidance or impulsive aggression depending on threat escapability. In this case, the vmPFC would act as a top-down regulatory input. This account reconciles the aggression literature with the well documented role of the amygdala in fear conditioning. Our studies allow to clarify the putative motivational and cognitive mechanisms underlying aggression-related brain function.

### **From Behavior to Brain: Why Does Self-Control Reduce Aggression?**

C. Nathan DeWall | University of Kentucky

David S. Chester | Virginia Commonwealth University

Why don't people behave aggressively? Each day, we experience factors known to increase aggression. Yet few people give in to their aggressive urges. Self-control helps make that possible. The talk attempts to explain why aggression persists despite powerful cultural and psychological forces aimed at reducing it. First, I discuss how psychological, biological, and neurological factors that weaken our self-control increase the risk of aggression. Specifically, I present neuroimaging evidence that experiencing the pain of rejection increases aggression primarily among people low in self-control. Though promising, these results fail to explain why poor self-control increases aggression. A second program of research seeks to fill this gap. Across six studies (N=1,516), we showed how people use aggression as a mood-regulation strategy. A final neuroimaging study extends this evidence by showing that aggression is highest when people fail to recruit regulatory regions that link aggressive retaliation to reward.

### **The Neural Correlates of Alcohol-Related Aggression**

Thomas F. Denson | University of New South Wales

Kate A. Blundell | University of New South Wales

Timothy P. Schofield | University of New South Wales

Mark M. Schira | University of Wollongong

Ulrike M. Krämer | University of Lübeck

Alcohol intoxication is implicated in approximately half of all violent crimes. Over the past several decades, numerous theories have been proposed to account for the influence of alcohol on aggression. Nearly all of these theories imply that altered functioning in the prefrontal cortex is a proximal cause. In the present functional magnetic resonance imaging (fMRI) experiment, 50 healthy young men consumed either a low dose of alcohol or a placebo and completed an aggression paradigm against provocative and non-provocative opponents. Provocation did not affect neural responses. However, relative to sober participants, during acts of aggression, intoxicated participants showed decreased activity in the prefrontal cortex, caudate, and ventral striatum, but heightened activation in the hippocampus. Among intoxicated participants, but not among sober participants, aggressive behavior was positively correlated with activation in the medial and dorsolateral prefrontal cortex. These results support theories that posit a role for prefrontal cortical dysfunction as an important factor in intoxicated aggression.

### **Neural Correlates of Reactive Aggression in Borderline Personality Disorder**

Katja Bertsch | University of Heidelberg

Marlene Krauch | University of Heidelberg

Falk Mancke | University of Heidelberg

Ulrike M. Krämer | University of Lübeck

Sabine C. Herpertz | University of Heidelberg

Reactive aggression against significant others is highly prevalent amongst patients with borderline personality disorder (BPD). Similar to self-injurious behavior, recent results suggest that reactive aggression may be regarded as a maladaptive strategy to regulate intense negative emotions, such as anger in BPD. In the current study, we used a modified version of the Taylor Aggression Paradigm to induce and measure reactive aggression in a sample of 60 female BPD patients with varying levels of self-reported aggressiveness as well as a healthy control group. In each round of this competitive reaction time task, participants observed their opponent while she selected a punishment level for her, bearing either a friendly or angry facial expression. Afterwards, participants in turn selected a punishment level for their opponent. Angry expressions led to higher punishment selections in healthy volunteers only, while aggressive responses of BPD patients did not depend on their opponent's facial expression but on who aggressive they were in the past two weeks. Highly aggressive patients reacted significantly more aggressive to friendly and angry expressions, while neither angry nor friendly expressions provoked aggressive responses in the low aggressive patients. Neurobiological correlates of interindividual differences in aggression will be presented and discussed at the conference, according to preliminary analysis and a pilot study, BPD patients show increased amygdala response to angry faces compared to healthy volunteers. Together with previous studies, the current findings suggest inflexibility in reactions to interpersonal signals in BPD patients. Strong interindividual differences in aggressive behavior amongst BPD patients call for large investigations that allow a characterization of subgroups for whom aggression may apply as a maladaptive emotion regulation strategy. From a clinical perspective, learning to differentiate between threat and safety signals in a social context may help to reduce problematic interpersonal behavior, such as reactive aggression in BPD.

### **Symposium 03: Parent-Child Physical Aggression: Predictors, Effects, and Interventions**

Christina M. Rodriguez | University of Alabama at Birmingham

Parental physical discipline remains a pervasive issue worldwide and in the U.S., such parent-child aggression persists as one of the most frequent discipline strategies. This symposium will entail four presentations considering different elements of physical punishment in the U.S. The first presentation will present findings of a Bayesian analysis of group differences in the adverse effects of physical discipline on child aggression, demonstrating similar effects across racial and ethnic groups. The second presentation will consider whether neighborhood crime and violence moderate the effects of physical punishment of children and children's problem behavior. The third presentation then consider, in light of such pervasive negative effects, what factors may predict parent's use of physical discipline, using a cross-lagged design to control for child predictors of parents' physical punishment use. The final presentation will consider the effectiveness of parenting intervention in reducing parental support and use of physical punishment. Together, this symposium pulls together evidence of the consistency of negative effects, the reasons why parents may use physical punishment, and the strategies that may be implemented to reduce parents' use. The symposium will culminate in a discussion with the audience of future directions in how we can utilize research findings to advance efforts to reduce parents' use of physical punishment.

#### **Bayesian Analysis of Effect of Corporal Punishment on Aggression across Groups**

Andrew Grogan-Kaylor | University of Michigan

Julia Ma | University Michigan-Flint

Shawna Lee | University of Michigan

Berenice Castillo | University of Michigan

A considerable amount of research has found that corporal punishment is associated with increased aggression among children. However, there remains considerable debate about the extent to which there are differences in the effects of corporal punishment on children's aggression in different ethnic or racial groups. Some have argued that in cultural contexts where CP is more normative, CP is not as detrimental to children. Traditional frequentist methods (e.g., traditional regression models) prioritize the detection of differences; in the case of CP -- differences between children who are spanked and those who are not spanked, and whether these differences vary by child's race or ethnicity. Bayesian statistical analysis provides a unique lens through which to discover either differences or similarities across groups since Bayesian analysis not only has the ability to reject a null hypothesis of no difference, but also has the ability to accept such a null hypothesis. We present a Bayesian regression analysis of the Fragile Families and Child Wellbeing Study, a large broadly representative sample of 4,898 families and children from 20 large U.S. cities with populations over 200,000. Mother's CP was measured when children were 3 and 5 years old. Results indicate that corporal punishment has a demonstrable negative effect on child aggression and that evidence points to similar effects across racial and ethnic groups. To our knowledge, this is the first study that has used a Bayesian analysis approach to examine the effects of CP on child aggression.

#### **Does Neighborhood Crime and Violence Moderate the Associations between Spanking and Early Behavior Problems?**

Julia Ma | University Michigan-Flint  
Andrew Grogan-Kaylor | University of Michigan  
Shawna Lee | University of Michigan

Parental physical punishment remains a widely endorsed disciplinary practice in the United States despite the increasing number of countries that have legally protected children against any form of family violence. A robust literature links spanking—the disciplinary practice of hitting a child’s bottom with an open hand—with negative outcomes. However, the question concerning whether the adverse effect of spanking on children differs by neighborhood contexts has not reached consensus. Using fixed effects regression that yield stronger statistical control for selection bias and omitted variables bias, this study tested whether neighborhood crime and violence moderates the association between spanking and child behavior. The sample for this study consisted of 2,472 families who participated in Wave 3 (child age 3) and Wave 4 (child age 5) of the Fragile Families and Child Wellbeing Study. The outcomes were externalizing and internalizing problems measured by the Child Behavior Checklist. The main predictors were mother’s use of spanking in the past year and the level of perceived neighborhood crime and violence. We employed fixed effects regression with interactions terms to examine whether the relationship of maternal spanking on children’s behavior problems varied across the level of neighborhood crime and violence. The main effects of spanking on externalizing and internalizing behavior problems were not moderated by the level of neighborhood crime and violence even after controlling for selection bias and time-invariant covariates. These findings underscore the need to advise parents to use non-violent disciplinary practices regardless of their neighborhood conditions.

### **Predicting Maternal and Paternal Parent-Child Aggression: Identifying Potential Early Targets**

Christina M. Rodriguez | University of Alabama at Birmingham  
Shannon M. O. Wittig | University of Alabama at Birmingham

Given considerable evidence of the adverse effects of parental physical discipline, identifying factors that predict parent’s use is an important step, particularly those factors that could be modified and addressed in interventions. Much of the literature in this area has concentrated on maternal physical discipline, underscoring the need for inquiry into factors relevant to fathers’ physical punishment use. The current presentation evaluated factors consistent with social information processing theory as potential predictors of later physical parent-child aggression. Parent factors were considered in conjunction with child factors in a crosslagged design, allowing for an evaluation of bidirectional effects. Data are drawn from two waves of a longitudinal study. Parents reported on their knowledge of discipline options, negative child attributions, and attitudes approving of physical punishment as well as their children’s temperament at age 6 months. Parents then reported on their use of physical discipline tactics as well as child behavior problems one year later. For mothers, findings indicated that early prevention targets would include all three of the parenting factors identified, with no indication of child temperament characteristics predicting maternal use of physical punishment tactics. For fathers, only limited knowledge of non-physical discipline strategies predicted their later use of physical punishment; further, fathers who considered their infants to be more active engaged in greater physical punishment use one year later. Findings have implications for target areas for early prevention efforts for both mothers and fathers.



**A Randomized Controlled Trial of Two Brief Parenting Interventions Designed to Reduce Risk for Parent-Child Physical Aggression**

Catherine A. Taylor | Tulane University

Laura Whitaker | Tulane University

Michelle Struthers | Tulane University

Julia M. Fleckman | Tulane University

Leann Myers | Tulane University

Ron Prinz | Monroe Carell Jr. Children's Hospital & Vanderbilt University

Seth J. Scholer | University of South Carolina

This study was designed to test the efficacy of two brief parenting interventions designed to reduce risk for parent-child physical aggression (PCPA). Study participants (N=759) are female primary caregivers of children between 2 and 7 years of age recruited from family service settings (Special Supplemental Nutrition Program for Women, Infants and Children (WIC) clinics). After completing a baseline interview, participants were randomized into one of 3 groups to receive: 1) Vanderbilt's Play Nicely, 2) Triple P-Level 2, or 3) a local service resource guide (control group). Post-test interviews were conducted 3-months following. Compared to the control group, the Play Nicely group had a reduction in both use and approval of PCPA (mean difference, CI = -0.30 [-0.58; -0.02]; p

### **Symposium 04: New Findings from the Cambridge Study in Delinquent Development**

David P. Farrington | University of Cambridge

Tara Renae McGee | Griffith University

Darrick Jolliffe | University of Greenwich

Henriette Bergstrom | University of Derby

This symposium brings together a collection of studies that utilise data from the Cambridge Study in Delinquent Development (CSDD). The CSDD is a prospective longitudinal study of 411 inner-city London boys who were followed up from childhood to age 48 (Generation 2/G2). Since then their criminal records have also been searched up to age 56. The most recent data collection followed up the children of these men (Generation 3/G3). The papers in this symposium will examine antisocial potential and the development of violent offending (self-report; G2); socio-environmental risk factors for borderline personality disorder in females (G3); and the relationship between empathy and self-reported violence (G3).

#### **Explaining the Development of Self-Reported Violent Offending Over the Life Course**

Tara Renae McGee | Griffith University

David P. Farrington | University of Cambridge

Within the Integrated Cognitive Antisocial Potential (ICAP) theory, the key construct underlying offending is antisocial potential (AP), which refers to the potential to commit antisocial acts. Previous research testing this theory has shown that AP (operationally defined and measured by antisocial attitude at age 18, 32 and 48): is relatively stable but decreases over time; predicts convictions; is predicted by socio-economic, school, child-rearing, and impulsivity factors. The relationship between AP scores and self-reported delinquency remains under-examined. Convictions reflect official biases in the arrest, charging, and court processes. These official biases will tend to mask and reduce the relationship between AP scores and convictions. Self-reported delinquency may provide a less biased measure of offending. This paper will utilize measures of self-reported violent offending in the Cambridge Study in Delinquent Development (CSDD) to examine the relationship of antisocial potential to self-reported offending. The extent to which antisocial potential is related to self-reported violent offending over time and the risk factors for antisocial potential and offending, will be explored using measures of self-reported offending when the males in the Cambridge study were 18, 32, and 48.

#### **Risk Factors for Borderline Personality Disorder: Findings from the Cambridge Study in Delinquent Development**

Henriette Bergstrom | University of Derby

David P. Farrington | University of Cambridge

Borderline Personality Disorder (BPD) is a Cluster B personality disorder that is characterized by aggression both as a criterion (e.g. “inappropriate, intense anger or difficulty controlling anger”; American Psychiatric Association, 2013, p. 663) (American Psychiatric Association, 1994, 2000, 2013; Field & Cartwright-Hatton, 2015) and as an outcome (e.g Dutton & Starzomski, 1993; Goodman & New, 2000; Ross & Babcock, 2009). It has also been suggested that BPD is how psychopathic traits present in women (Sprague, Javdani, Sadeh, Newman, & Verona, 2017), and is common amongst women in

prison (Black et al., 2007). The life-course development of BPD is less understood, but research indicates that socio-environmental factors play an important role in the development of the disorder (American Psychiatric Association, 2013; Weaver & Clum, 1993). The aim of the current paper is to establish which, if any, socio-environmental factors increase the risk for development of BPD in women. The current study analyses the Generation 3 (G3) females of the Cambridge Study in Delinquent Development (CSDD). The CSDD is a prospective longitudinal study of 411 boys (Generation 2; G2) from the age of 8 to the age of 56. Their biological children (G3) were interviewed at the approximate age of 25, and 260 of these were female. Risk factors at different levels (individual, parental, family, and socio-economic) were assessed and will be tested as potential risk factors for BPD. Implications for the life-course development of the disorder and early intervention will be discussed.

### **Low Empathy and Self-Reported and Official Violence**

Darrick Jolliffe | University of Greenwich

David P. Farrington | University of Cambridge

Maria M. Ttofi | University of Cambridge

There is a strong theoretical relationship between certain personality features (particularly low empathy) and offending, but the empirical relationship is much less strongly supported. Most empirical research on this relationship has been based on official measures of offending, commonly using imprisoned offenders. This means that even studies which identify a correlation cannot disentangle the extent to which there is a true relationship between low empathy and offending from the relationship between low empathy and criminal justice involvement in offending. This paper used data from the most recent wave of the Cambridge Study in Delinquent Development (CSDD), the generation 3 children of the original CSDD males (n=551), to examine the relationship between low empathy and both self-reported and official violence. In addition, the potential impact of background factors (e.g. low SES, criminal parents) on this relationship will be explored. The limitations of the current study and directions for future research will be discussed.

**Symposium 05: Testosterone Flexibly Modulates Aggressive and Prosocial Behaviours: New Insights Into Causality, Moderators, and Mechanisms**

Pranjal H. Mehta | University College London

Non-human animal studies indicate that elevated testosterone stimulates aggression and dominance, presumably as a means to gain status within social hierarchies. But humans attain status not only through behaviours such as aggression, but through prosocial behaviours as well. This symposium presents new data suggesting that testosterone flexibly influences aggressive and prosocial behaviours, along with insights about moderators and mechanisms. Geniole and colleagues demonstrate that testosterone interacts with facial cues of threat to guide selfish versus prosocial financial offers in a bargaining game. Mehta and colleagues find that testosterone's role in decisions to financially harm another player depends on acute cortisol stress responses. Higher testosterone was related to aggressive financial decisions among individuals who showed relatively buffered cortisol stress responses, but higher testosterone was related to prosocial financial decisions among individuals who showed relatively heightened cortisol stress responses. Kutlikova and colleagues reveal that testosterone (i) stimulates prosocial learning when prosociality is visible to others, and (ii) impacts the rates at which individuals learn to obtain rewards for themselves versus a charity. Roelofs and colleagues provide insights into the neural mechanisms through which testosterone guides social approach-avoidance behaviour in studies of healthy subjects, police officers, and clinically aggressive populations. Together, these four research programs move the field of social neuroendocrinology beyond a simple one-to-one mapping between testosterone and human aggression. Instead, the results point to novel context-dependent mechanisms through which testosterone flexibly guides people's social actions. These actions can help or harm others.

**Does Testosterone Reduce the Threat Premium in Economic Bargaining Interactions?**

Shawn N. Geniole | Nipissing University and University of Vienna

Cheryl M. McCormick | Brock University

Justin M. Carré | Nipissing University

The Ultimatum Game is an economic task in which participants decide how to split a sum of money between themselves and a responder. If the responder accepts the proposed split, both participants receive their corresponding payout; conversely, if the responder rejects the offer, both players receive nothing. Whereas most studies have focused on the responder's behaviour in this task, with rejections being used as an index of costly retaliatory aggression or punishment, less is known about the proposer and the cues they may use when regulating their decisions to be fair or selfish. Based on the hypothesis that facial cues of aggressiveness and threat in the responder signal a willingness and ability to retaliate in response to poor treatment, proposers should be sensitive to this information and offer higher amounts to individuals who appear more (vs. less) aggressive/threatening. In an initial set of studies, I found support for this threat premium: proposers, especially those who were physically weaker, offered more to high threat than to low threat responders. In a more recent pharmacological challenge experiment, preliminary analyses indicate that the administration of testosterone - which is posited to boost self-perceptions of formidability - reduces this threat premium. Specifically, proposers offered more money to high (vs low) threat individuals after receiving placebo, but this difference was weaker and non-significant after receiving testosterone. Overall, this work provides some initial evidence that

people consider both their own, and other's aggressiveness and threat potential when deciding to be fair or selfish in economic interactions.

### **Acute Cortisol Stress Responses Moderate Testosterone's Association with Aggressive Versus Prosocial Economic Decision-Making**

Pranjal H. Mehta | University College London

Smrithi Prasad | University of Southern California

Erik L. Knight | Pennsylvania State University

Jayanth Narayanan | International Institute of Management Development

Testosterone is theorized to promote behaviours such as aggression and dominance, but findings are inconsistent. Building on the dual-hormone hypothesis, the present research tested the extent to which testosterone's behavioural effects depend on acute cortisol stress responses. In Study 1, participants ( $n = 39$ , 52% men) were randomly assigned to a social-evaluative stressor or a relaxation task. Afterwards, participants played the ultimatum game in the role of responder, in which they made decisions to retaliate (or not) following unfair economic treatment. There was a positive association between basal testosterone and retaliation in the low-stress condition, but not in the high-stress condition. Further, cortisol concentrations increased in the high- compared to the low-stress condition, and these cortisol changes also moderated the association between basal testosterone and retaliation. In Study 2, participants ( $n = 112$ ; 44% men) provided saliva samples before and after a social-evaluative stressor and then decided how to divide a sum of money between themselves and another participant. High basal testosterone predicted aggressive financial decisions (keeping more money for oneself, which harms the other player) among individuals who experienced relatively buffered cortisol stress responses. By contrast, high basal testosterone predicted prosociality (splitting the money equally) among individuals who experienced relatively increased cortisol stress responses. These associations between basal testosterone and behaviour were seen in both men and women. Collectively, this research suggests that testosterone stimulates aggressive economic decision-making when cortisol stress responses are low, but testosterone stimulates prosocial economic decisionmaking when cortisol stress responses are high.

### **Can Anyone See Me? The Effect of Testosterone on Public and Private Prosociality**

Hana H. Kutlikova | University of Vienna

Nace Mikus | University of Vienna

Michael Naef | University of London

Christoph Eisenegger | University of Vienna

Claus Lamm | University of Vienna

Testosterone has repeatedly been reported to enhance status-seeking behaviors such as dominance and aggression in a variety of species. It has been suggested, however, that testosterone may also promote nonaggressive behaviour, in situations where displaying prosociality would lead to status enhancement. We tested this hypothesis using a single-dose placebo-controlled testosterone administration and a reinforcement learning task, in which male participants learned to obtain rewards for themselves or charitable organizations. Participants performed the task either in the presence of observers or in private. Using computation modelling, we show that testosterone increases prosocial

learning in situations where the behaviour is visible to others. In addition, we found that participants, whether observed or not, learn to obtain rewards for charitable organizations more slowly than for themselves. Interestingly, this difference in learning rate is smaller in participants treated with testosterone. These findings contradict a simple testosterone-aggression link and demonstrate instead that testosterone's effects on male behaviour are highly dependent on the social context, further supporting the hypothesis that testosterone flexibly promotes behaviours that enhance social status. Our study is the first to reveal the computational bases of human strategic prosociality and its underlying endocrinological mechanisms.

### **Testosterone and the Neural Control Over Social-Motivational Action**

Karin Roelofs | Radboud University

Reinoud Kaldewaij | Radboud University

Inge Volman | University College London

Saskia Koch | Radboud University

Anna Tyborowska | Radboud University

Ivan Toni | Radboud University

The role of testosterone in the neural regulation of impulsive aggressive behavior has been linked largely to decoupling of frontolimbic structures during social threat exposure in animals. However, few studies have tested these mechanisms in aggressive human populations, such as forensic psychiatric populations diagnosed with psychopathy or in relation to aggression in wellfunctioning populations, such as police officers. In a series of fMRI studies, we investigated the role of endogenous and exogenous testosterone on the neural control of social approach-avoidance actions in healthy and clinically aggressive populations, as well as in developmental samples. In an initial study, we observed that testosterone administration biased the amygdala towards threat approach in healthy subjects. In two subsequent studies, we found that high levels of endogenous testosterone were associated with reduced activity in the anterior prefrontal cortex (aPFC) as well as reduced aPFC-amygdala coupling, when people had to exert control over their automatic approach-avoidance tendencies. This effect was found both in individuals with psychopathy (N=17) and in police officers who scored high on aggressive traits (N=275). Together these findings may provide a mechanistic explanation for inadequate behavioral control in highly aggressive individuals during socially challenging situations known to elicit high testosterone levels. Findings will be discussed in light of recent work on the role of endogenous testosterone in the development of control over social approach-avoidance behavior from mid to late adolescence.

### **Symposium 06: Media Violence 1 (Violent Video Games)**

Sarah M. Coyne | Brigham Young University

The proposed submission will consist of two different symposia examining the short-term and long-term effects of media violence on a variety of behaviors and attitudes. This proposal (Media Violence 1 – Video games) will examine the impact of exposure to violent video games in a variety of contexts. Paper 1 examines the impact of exposure to violent video games by the wider social network on an individual's level of aggression. Paper 2 consists of four experiments that considers the impact of playing violent video games on an individual's perceived self-related level of pain. Paper 3 examines the moderating effect of social exclusion on aggressive responses after playing violent video games. Paper 4 examines video game violence as a predictor of the stability of video game addiction over the course of six years across adolescence and into emerging adulthood. Finally, Paper 5 will use EEG to discuss the neural mechanisms involved when playing violent video games. These papers use a variety of methodologies to examine the impact of violent video games, including experimental, longitudinal, and social network analysis and papers come from a variety of countries, including Germany, Italy, Luxembourg, and the United States. Collectively, they provide a nuanced look at the impact of violent video games on a variety of different outcomes.

#### **Effects of Violent Video Games on The Player's Social Network**

Tobias Greitemeyer | University of Innsbruck

Two recent meta-analyses (Anderson et al., 2010; Greitemeyer & Mügge, 2014) showed that playing violent video games significantly increases aggressive behavior. It thus appears that playing violent video games affects the player's social behavior outside the virtual world. However, it may even be that not only the players respond with increased aggression but also individuals who do not play violent video games but are connected to the player. In all previous investigations into the effects of violent video game play, researchers have focused on how playing violent video games affects the player's behavior. The present research addresses the effects of violent video game exposure on the player's social network. It is hypothesized that playing violent video games does not only lead to increased player's aggression, but also promotes aggression in people with whom the player is connected. In fact, results showed that there was a positive association between participant's level of aggression and the extent to which their social network plays violent video games. In particular, participants that do not play violent video games themselves become more aggressive when their social network plays violent video games. Mediation analyses showed that the social networks' level of aggression accounted for the impact of the social networks' violent video game exposure on the participant's level of aggression. These data suggest that violent video game exposure makes the player more aggressive, which then spreads through their social networks.

#### **Testing the Desensitizing Effects of Video Game Violence on Pain-related Responses**

André Melzer | University of Luxembourg

In four lab experiments (N=269), we tested whether the desensitizing effect of video game violence (VGV) on empathy and physiological reactivity may also be found for the perception of experimentally induced physical pain. After playing a violent or a nonviolent video game, pain-related responses to

thermal stimulation (i.e., self-reports, tolerance, heart rate variability-HRV) were measured using either the cold pressor task (Study 1, 4) or noxious heat applied via a thermode (Study 2, 3). As expected, gender, pain sensitivity and trait aggression predicted pain responses and antisocial behavior (i.e., cold pressor time set for the next participant: Study 1, duration and intensity in the Competitive Reaction Time Task: Study 3). In addition, preference for violent games was associated with lower reports of perceived self-related pain, ratings of pain expressed by others, and greater antisocial behavior. Contrary to expectations, however, there was no clear evidence for a pain-related desensitizing effect of VGV on pain tolerance, reported levels of pain, or physiological responses (i.e., HRV).

Our results corroborate previous findings that pain is complex and multidimensional (Melzack, 2005). Although individual, physiological and contextual factors are known to modulate pain, the violent gaming episode was only a weak factor in our studies, whereas personality traits and physiological factors have dominated pain responses.

### **The Lone Gamer: Social Exclusion Predicts Aggressive Inclinations Following Violent Video Game Playing.**

Alessandro Gabbiadini | University of Milano-Bicocca

Paolo Riva | University of Milano-Bicocca

Violent video game playing has been linked to a wide range of negative outcomes, especially in adolescents. In the present research, we first predicted that social exclusion could increase adolescents' willingness to play violent video games. We also predicted that violent games could increase the detrimental effects of social exclusion on aggressive inclinations. In Study 1, 121 adolescents were randomly assigned to a manipulation of social exclusion. Then, they evaluated the violent content of nine different video games (violent, nonviolent, or prosocial) and reported their willingness to play each presented video game. The results showed that excluded participants expressed a greater willingness to play violent games than nonviolent or prosocial games. No such effect was found for included participants. In Study 2, both inclusionary status and video game contents were manipulated. After a manipulation of inclusionary status, 113 adolescents were randomly assigned to play either a violent or a nonviolent video game. Then, we adopted the Voodoo Doll Task to give participants an opportunity to express their aggressive inclinations towards the excluders. Results showed that excluded participants who played a violent game displayed the highest level of aggressive inclinations. Overall, these findings suggest that exclusion increases preferences for violent games and that the combination of exclusion and violent game playing fuels aggressive inclinations

### **Pathological Video Game Use, Violent Video Games, and Aggressive Behavior**

Sarah M. Coyne | Brigham Young University

Wayne Warburton | Macquarie University

Douglas A. Gentile | Iowa State University

Laura A Stockdale | Brigham Young University

Pathological video game use (PVGU) has been associated with a host of negative psychological, physical, and social outcomes during adolescence, however little research has examined how PVGU



changes over the course of adolescence, with none following participants into adulthood. The current study examines how PVGU changes over a six year period from adolescence to emerging adulthood (from ages approximately 15-20 years old). Additionally, video game violence and aggressive behavior will be examined as predictors and outcomes. Participants were 668 adolescents and their parents from a large metropolitan area in the Northwest USA. PVGU, exposure to video game violence, and physical and relational aggression were all assessed via questionnaire, as were a number of control variables. A growth mixture model resulted in four different classes of participants. The vast majority of participants fell into a moderately stable (30%) or low stable (56%) group, suggesting few problems with PVGU. However, 11% of participants fell into a high and decreasing group, while 3% remained high and stable over the six years. Exposure to violent video games and both physical and relational aggression predicted some groups, but not others.

### **The Effect of Short-Term Violent Video Game Play on Implicit Emotional Face Processing: Evidence from Two Populations**

Laura A. Stockdale | Brigham Young University and Loyola University Chicago

Robert G. Morrison | Loyola University Chicago

Robert Palumbo | Loyola University Chicago

James Garbarino | Loyola University Chicago

Rebecca L. Siltan | Loyola University Chicago

Recent research suggests that short-term and prolonged exposure to media violence may modulate the way the brain prioritizes and processes the emotional information contained in human faces (Stockdale et al., 2016; 2017). However, less research has examined how exposure to media violence influences the relationships between cognitive processes associated with emotional processing and response inhibition. 30 frequent players of graphically violent video games and 30 infrequent players of graphically violent video games were brought into a lab and played a violent or a nonviolent video game for ten minutes. After video game play participants completed a stop-signal task using emotional human faces while their EEG was recorded on a 64-channel BioSemi Activeview 2 system. One-week later participants came back into the lab and completed the same procedures, but played the opposite video game. Frequent and infrequent gamers had differing neurological responses to emotional faces after playing a violent and a nonviolent video game, as reflected by their P100 and N170 amplitudes and latencies. Response inhibition after exposure to a violent or a nonviolent video game also differed across conditions and participants as reflected in their N200/P300 complex amplitudes and latencies. Importantly, frequent and infrequent players showed differing relationships between early ERP components associated with emotional face processing, task performance, and response inhibition after playing a violent video game. Results suggest that short-term exposure to media violence may modulate how the brain processes the emotional information contained in human faces and response inhibition in the presence of valenced stimuli.

### **Symposium 07: International Perspectives on Sexual Violence**

Kevin M. Swartout | Georgia State University

William F. Flack, Jr. | Bucknell University

Sexual violence against women is a public health epidemic. Although trustworthy prevalence rates are not available for many parts of the world, known international estimates of lifetime victimization prevalence range from 25 to 33% of all women (e.g., Hakimi et al., 2001; Ellsberg, 1997; Jewkes et al., 2001). Experiencing sexual violence negatively impacts women's sexual and reproductive health, it is one of the strongest risk factors for PTSD among women, and it elevates their risk for attempting suicide (Klump, 2008; Ullman, 2004; WHO, 2014). It is imperative to continue assessing sexual violence prevalence internationally and to better understand risk and protective factors for sexual violence. We have compiled five presentations that address these objectives. The symposium will begin with a brief overview of the international literature on sexual violence—including prevalence rates and constellations of risk and protective factors. Each subsequent presentation will detail empirical research on sexual violence and related factors. Findings will be reported from samples in the United States, Northern Ireland, Germany, Poland, Turkey, Brazil, Chile, and from asylum-seekers across 8 European countries. Time will be provided to consider commonalities and differences across these studies, as well as other issues of interest to audience members. The symposium chairs have corresponded with each paper presenter (indicated in boldface) and all have agreed to participate in the symposium. Data for each paper presentation have already been collected and analyzed.

### **Sexual Victimization Experience and its Association with Psychological Distress and Intimate Relationships**

William F. Flack, Jr. | Bucknell University

Susan Lagdon | Queen's University

Cherie Armour | Ulster University

Substantial prevalence rates of sexual victimization (SV) among university students have been demonstrated in the US, and more recently in the EU. Little systematic information is available about this problem among UK university students, and none has been reported in the peer-reviewed literature about students in Northern Ireland. The aim of this study was to examine data from a larger study exploring the effects of intimate partner violence on mental health among university students, in order to make available initial information about the experience of SV and subsequent outcomes. An online survey was used to obtain information from a sample of 856 women and 285 men attending university. The survey included measures of SV (from age 16), posttraumatic stress, generalized anxiety, depression, dissociation, distress tolerance, and intimate adult relationships. More women than men reported victimization during the previous year of sexual contact (29% vs. 14%), coercion (19% vs. 7%), attempted rape (12% vs. 6%), rape (9% vs. 3%), attempted rape or rape (15% vs. 6%), and overall sexual assault (34% vs. 18%). Correlations between types of sexual victimization and posttraumatic stress, dissociation, generalized anxiety, and depression were mostly small to moderate in magnitude. Results of regression analyses indicated that SV, alcohol consumption, and generalized anxiety were significant negative statistical predictors of lifetime adult intimate relationships for women, but not for men. Further research is needed on high-risk groups in Northern Ireland and

similar, nearby countries using consistent sampling methods and reference periods, as well as updated survey measures.

### **Sexual Scripts as Prospective Predictors of Sexual Victimization: A Cross-Cultural Analysis**

Isabell Schuster | University of Potsdam

Paulina Tomaszewska | University of Potsdam

Lylla Winzer | University of Potsdam

Anja Berger | University of Potsdam

Barbara Krahe | University of Potsdam

Cognitive scripts for consensual sexual interactions may be seen as holding a clue understanding of nonconsensual sexual interactions. To the extent that individuals' scripts of consensual sex contain elements associated with a higher risk of sexual aggression victimization (e.g., alcohol use, noncommittal sex, ambiguous negotiation of sexual intentions), they are assumed to increase the vulnerability for sexual victimization. Pornography use is studied as a source of influence for risky sexual scripts. Longitudinal data with male and female college students were collected in five countries (Germany, Poland, Turkey, Brazil, and Chile), including measures of risky sexual scripts, risky sexual behavior, and reports of sexual victimization obtained from men and women. In addition, pornography use was assessed in three countries. Across countries, risky scripts prospectively predicted sexual aggression victimization among college students. The pathways from risky scripts to sexual victimization were mediated by the translation of cognitive scripts into risky behavior in sexual interactions. In addition, evidence was found that pornography use informed risky sexual scripts and was indirectly related to sexual victimization via risky sexual scripts and behavior. The findings show that the extent to which cognitive scripts for consensual sexual encounters include features linked to a higher risk of sexual victimization predicts nonconsensual sexual experiences among both male and female young adults. They also show that pornography use is conducive to the development of risky sexual scripts. In terms of applied significance, the findings suggest that addressing scripts for consensual sexual interactions may be a promising avenue for intervention efforts.

### **Preventing Sexual Aggression among University Students in Germany: First Results of an Intervention Study**

Paulina Tomaszewska | University of Potsdam

Isabell Schuster | University of Potsdam

Barbara Krahe | University of Potsdam

Although previous research has shown that sexual aggression is widespread among young people, there is little data on effective, evidence-based prevention programs, especially outside the U.S. Therefore, we developed an online-based intervention to prevent sexual aggression perpetration and victimization and conducted a first test of its effects among 288 university students in Potsdam, Germany. Since risky sexual scripts and risky sexual behavior are key variables in the prediction of sexual aggression, these were addressed in our intervention, along with sexuality-related cognitions (sexual self-esteem, acceptance of sexual aggression) and behaviors (sexual assertiveness) as well as pornography use. Participants were randomly assigned to the intervention groups (IG1 or IG2), which received three modules designed to change participants' sexual scripts (IG1) or promote sexual self-

esteem and refusal assertiveness, to reduce pornography use, initiation assertiveness, as well as the acceptance of sexual aggression (IG2), or to the control group (CG). Baseline (T1), post-intervention (T4), and follow-up (T5) assessments were taken in all three groups across a seven-week period. At T5, the score of risky scripts was lower in IG1 than in IG2 or CG. Compared to the CG, sexual self-esteem was enhanced in both IGs at T4 and at T5, in those who reported low sexual self-esteem at T1. Acceptance of sexual aggression was lower in IG2 at both T4 and T5. However, several effects, especially regarding changing risky or assertive behavior, did not reach significance. The results are discussed in terms of the potential and challenges of a script-based intervention to reduce sexual aggression.

### **Sexual and Gender-Based Violence in the European Asylum and Reception Sector: A Perpetuum Mobile?**

Ines Keygnaert | Ghent University

Sonia F. Dias | Universidade Nova de Lisboa

Olivier Degomme | Ghent University

Walter Devillé | Netherlands Institute for Health Services Research

Patricia Kennedy | University College Dublin

Andras Kovats | Menedék

Sara de Meyer | Ghent University

Nicole Vettenburg | Ghent University

Refugees, asylum seekers and undocumented migrants are at risk of sexual and gender-based violence (SGBV) and subsequent ill-health in Europe, yet European minimum reception standards do not address SGBV. Hence, this paper explores the nature of SGBV occurring in this sector and discusses determinants for 'Desirable Prevention'. Applying Community Based Participatory Research, we conducted a SGBV Knowledge, Attitude and Practice survey with residents and professionals in 8 European countries. We conducted logistic regression using mixed models to analyse the data in R. Of the 562 respondents, 58.3% reported cases of direct (23.3%) or peer (76.6%) victimisation. Our results indicate that when men were involved, it most likely concerned sexual perpetration (aOR: 4.09, CI: 1.2; 13.89) and physical victimisation (aOR: 2.57, CI: 1.65; 4) compared to females who then rather perpetrated emotional violence (aOR: 1.85, CI: 1.08; 3.13) and underwent sexual victimisation (aOR: 7.14, CI: 3.33; 16.67). Compared to others, asylum seekers appeared more likely to perpetrate physical (aOR 7.14, CI: 4; 12.5) and endure socioeconomic violence (aOR: 10, CI: 1.37; 100), while professionals rather bore emotional (aOR: 2.01, CI: 0.98; 4.12) and perpetrated socio-economic violence (aOR: 25.91, CI: 13.41; 50.07). When group perpetration (aOR: 2.13, CI: 1.27; 3.58) or victimisation (aOR: 1.84, CI: 1.1; 3.06) occurred, it most likely concerned socio-economic violence. Within the European asylum reception sector, residents and professionals of both sexes experience SGBV victimisation and perpetration. Given the lack of prevention policies, our findings call for urgent Desirable Prevention programmes addressing risk factors socio-ecologically.

### **Further Evidence against the Campus Serial Rapist Assumption**

Kevin M. Swartout | Georgia State University

Leila Wood | University of Texas

Rose Marie Ward | Miami University

Neil Best | Geneva College

Gretchen Klum | Tulane University

The assumption that campus sexual assault is largely attributable to serial rapists—also known as repeat rapists—was challenged recently (Swartout et al., 2015). This study of longitudinal survey data collected from men across their four years of college suggested that men who perpetrate rape do not do so consistently across their high school and college years. Limitations of that study were that those data did not include attempted rapes or allow for a more direct test of the campus serial rapist assumption by identifying the specific number of discrete sexual assaults men in the study perpetrated, and thus the number of repeat perpetrators. These limitations are addressed in the current study. Sexual violence perpetration data were collected from male students enrolled across 47 different U.S. universities as part of a larger campus climate survey implementations. Students who reported perpetrating multiple acts of attempted or completed rape were asked two follow-up questions on (1) the number of victims and (2) the number of days the acts took place. Of the 161 men who reported perpetrating at least one act of attempted or completed rape, 71 (44.1%) reported perpetrating multiple acts, 32 (19.9%) reported perpetrating on multiple days, 14 (8.7%) perpetrated against multiple victims, and 12 (7.5%) perpetrated on multiple days and against multiple victims. Taken together, these findings indicate a large majority of college men who commit rape do so on only one occasion or perpetrate against only one person.

### **Symposium 08: Advancing Knowledge about Bullying and Cyberbullying**

David P. Farrington | Cambridge University

School bullying and cyberbullying are major social problems causing distress to many people. This symposium presents the main conclusions from two recent books and two forthcoming special issues of journals on these topics. In the first paper, Anna Costanza Baldry reviews knowledge about prevalence, risk factors, and interventions for school bullying and cyberbullying in 10 countries, based on the conclusions in a forthcoming edited book on these topics. In the second paper, Vicente Llorent reviews the main conclusions of a recent co-authored book on protecting children against school bullying and its consequences. Both protective factors and effective interventions are reviewed. In the third paper, Izabela Zych continues the theme of protective factors and effective interventions, and expands the reviews to cover cyberbullying as well as school bullying. She presents some of the main conclusions from a forthcoming special issue of *AGGRESSION AND VIOLENT BEHAVIOR* on these topics. The final paper, by Maria Ttofi, addresses the neglected topic of aggression targeted on school teachers. She summarizes some of the main conclusions from a forthcoming special issue of *AGGRESSIVE BEHAVIOR* on this topic.

#### **International Perspectives on Cyberbullying: Prevalence, Risk Factors and Interventions**

Anna Costanza Baldry | Università degli Studi della Campania

Catherine Blaya | HEP du Canton de Vaud

David P. Farrington | Cambridge University

Cyberbullying is a widespread phenomenon involving an increasing number of children and adolescents. To date, few studies have adopted a cross-cultural or a cross-national perspective, and comparing cyberbullying and cybervictimization prevalence rates across countries is not always possible because of the differences in measurement and methodology strategies used. The purpose of this presentation is to discuss data on the prevalence of cyberbullying and cybervictimization across different EU countries, and to analyze risk and protective factors for youngsters' involvement in both cyberbullying and cybervictimization. Also, the TABBY intervention programme to prevent and reduce cyberbullying will be presented. The project developed as crossnational program, was designed to increase youth awareness about internet risks and prevent cyberbullying and cybervictimization diffusion, and was implemented in 9 European countries. In each country, the same methodology and questionnaire was used, in order to make comparisons possible and to generalize cyberbullying prevention and intervention policies across Europe. This presentation will publicize our forthcoming book which presents all this information in more detail.

#### **Protecting Children against Bullying and its Consequences**

Vicente J. Llorent | University of Cordoba

David P. Farrington | Cambridge University

Maria M. Ttofi | Cambridge University

Izabela Zych | University of Cordoba

Bullying is a very damaging type of violence present in schools. This presentation will focus on a book titled *Protecting Children Against Bullying and its Consequences* recently published by Zych,

Farrington, Llorent and Ttofi. This specific analysis of strengths, rather than weaknesses, builds on the current literature with a new positive focus. Throughout its chapters, the book synthesizes the newest research on the topic in a brief and reader-friendly format. Meta-analyses and research syntheses are reviewed, together with empirical findings, to provide a global vision on what is being done and what can be done to protect children from bullying. Findings from the more common cross-sectional studies are included together with the results from newer prospective longitudinal studies that are uncovering causal relationships. We hope that this book will provide a comprehensive and global vision of research related to the protection of children from bullying and its consequences. It is also hoped that having these studies reviewed and gathered in a single book will encourage further development of anti-bullying policies and practices. This book shows that decreasing bullying is possible and should be attempted. If these findings are applied, many children can be protected, saved, and hopefully brought up in healthier communities and societies.

### **Protective Factors and Effective Interventions for Bullying and Cyberbullying**

Izabela Zych | University of Cordoba

David P. Farrington | Cambridge University

Maria M. Ttofi | Cambridge University

Bullying and cyberbullying are damaging aggressive behaviors in which some children and adolescents intentionally inflict frequent and long term harm on their peers who become victimized. After more than 40 years of study, a lot of knowledge on bullying has been gathered. Nevertheless, there are still many gaps in knowledge that need to be addressed. Research on protective factors and effective interventions is still in its relatively early stages. The number of studies on bullying and cyberbullying has increased rapidly in the past decades and some findings are contradictory and based on relatively small samples. In this presentation we discuss a special journal issue guest-edited by Zych, Farrington and Ttofi, focused on protective factors and effective interventions against bullying and cyberbullying. This special issue of *AGGRESSION AND VIOLENT BEHAVIOR* includes narrative reviews, systematic reviews and meta-analyses that synthesize research and provide a global vision of the field. The articles describe what is already known, draw conclusions about past and current advances, identify frontier research, and set trends regarding future development of the field. We hope that this special issue will prove to be a milestone towards protecting children and adolescents against bullying and cyberbullying.

### **Predictors of Teacher-Targeted Aggression: Results from a Systematic Review and Meta-Analysis**

Maria M. Ttofi | Cambridge University

Sara Valdebenito | Cambridge University

Hannah Gaffney | Cambridge University

Alex R. Piquero | University of Texas at Dallas

Dorothy L. Espelage | University of Florida

Teacher-targeted aggression is a highly neglected area of research within the school violence literature, despite the fact that teachers are, by and large, expected to implement anti-bullying and other school violence intervention policies. The time is ripe to investigate the exact prevalence of teacher victimization and also to examine the best predictors of this phenomenon. This oral

presentation discusses findings from a thorough systematic review and meta-analysis of factors that predict teacher-targeted aggression. Correlates of teacher victimization from different levels such as the individual (e.g. teacher authoritarian style; student's aggressive behavior), school (e.g. size of school, number of units/classes at school) and community (e.g. urbanity; community poverty level) were carefully coded. Teacher-targeted aggression could be teacher-rated or peer-rated. Meta-analytic findings are presented, drawing implications for future policy and practice. The last part of the presentation publicizes a forthcoming special issue of AGGRESSIVE BEHAVIOR on this topic based on co-ordinated study findings from many countries across the world.



### **Symposium 09: Socialization of Aggression in Children and Youth**

Anouk van Dijk | Utrecht University

Some children are more likely to develop aggressive behavior problems than others. By zooming in on socialization influences of parents and peers, the present symposium aims to enhance our understanding of the mechanisms fostering aggressive behavior and cognition in children and youth. The first presentation (Van Dijk et al.) focuses on socialization by parents in early childhood (age 4-7). Both observational and experimental findings showed that parent-child discussion of socially challenging interactions with peers reduced children's hostile interpretations of similar peer interactions. The second presentation (Nelson et al.) focuses on socialization by parents in middle childhood (grade 4). Building on the first presentation, this research examines children's hostile interpretations, and tests links with fathers' and mothers' perceptions of their children's hostile interpretations, and their authoritarian and authoritative parenting styles. The third presentation (Verhulp et al.) focuses on socialization by parents in an at-risk sample of referred children (mean age 10). This research examines prospective relations between maladaptive parenting and children's aggressive behavior problems, and tests whether these relations are mediated by increases in children's narcissistic personality traits. The fourth presentation (Vollet et al.) extends the scope of the symposium to peer socialization in adolescence (grade 9-10). Findings showed that exposure to aggressive text-messaging by peers predicted increases in adolescents' own social aggression (both text-based and in-person) one year later. The last presentation (Anderson) integrates these findings in the General Aggression Model to provide an encompassing view of how parental and peer socialization influences may increase youths' propensity for aggression.

#### **Does Parent-Child Discussion of Peer Provocations Reduce Children's Hostile Interpretations and Aggressive Behavior?**

Anouk van Dijk | Utrecht University

Sander Thomaes | Utrecht University

Astrid M. G. Poorthuis | Utrecht University

Bram O. de Castro | Utrecht University

Parents comment on their children's social endeavors on a daily basis, providing rich input for children's interpretations of their social world. Two studies investigated whether parent-child discussion of peer provocations reduces young children's hostile attributional bias. Study 1 (N = 109, age 4-7)—an observational study—showed that parent-child discussion of nonhostile attributions (when reading a picture book) predicted reductions in children's hostile attributional bias from pre- to post-discussion  $F(1, 102) = 10.01, p = .002, \eta^2 = .09$ . Study 2 (N = 160, age 4-6)—an experimental study—showed that stimulating parents to discuss nonhostile attributions (vs. a control condition) reduced children's hostile attributional bias in response to hypothetical vignettes,  $F(2, 157) = 5.63, p = .004, \eta^2 = .07$ , but not in response to a staged peer provocation. No effects were found on a sticker task assessing aggressive behavior. Discussion will focus on the brief duration of the manipulation and its implications for the generalizability of the findings. Despite these limitations, the finding of the present research expand existing evidence by showing that parent and child attributional styles are not merely linked, but may be transmitted through parent-child discussion.

### **Parenting Dimensions and Parent's Hostile Intent Attributions: Connections with Parental Perceptions of their Child's Hostile Intent Attributions**

David A. Nelson | Brigham Young University  
Sarah M. Coyne | Brigham Young University  
Mikaila L. Schoenfeld | Brigham Young University  
Christine M. Cramer | Brigham Young University

Nelson, Cramer, Coyne and Olsen (2018) have recently demonstrated that parent perceptions of their children's hostile intent attributions predict their children's peer-reported aggressive behavior better than the children's self-reports of their own hostile intent attributions. In this paper, we look at how (a) different parenting styles and (b) a parent's own hostile intent attributions correspond with these same parents' perceptions of their children's hostile intent attributions. We expected that, the more authoritarian the parent, the more likely they are to see hostile intent attributions in their children. This is consistent with prior research suggesting that parents may model hostile intent attributions or perceive their children to be hostile toward them, and these parents are likely to be authoritarian. Children of authoritarian parents also tend to be more aggressive, so these parents may also infer hostile intent attributions from the child's peer difficulties. In contrast, authoritative parents may be more likely to give the child the benefit of the doubt, in regard to espousing hostile intent attributions, and their parenting also models this in parent-child interactions. Children of authoritative parents also tend to be socially competent, which may also correspond with more benign intent attributions. We also expected that parents' peer-oriented hostile intent attributions would correspond with their children's. These analyses were conducted with both instrumental and relational provocation scenarios, and for both mothers and fathers. Analyses confirmed the hypotheses, and a multivariate model examines the relative predictive value of parenting dimensions and parent hostile intent attributions in prediction.

### **Exploring Texting Messaging as a Platform for Peer Socialization of Social Aggression**

Justin W. Vollet | The University of Texas at Dallas  
Madeleine J. George | The University of Texas at Dallas  
Kaitlyn Burnell | The University of Texas at Dallas  
Marion K. Underwood | The University of Texas at Dallas

Peers socialize adolescents' social aggression in face-to-face interactions (Ellis & Zabatany, 2007; Warner & Hill, 2010); however, such influence now likely transcends in-person interactions due to the increased popularity of text messaging. Thus, research on peer socialization of social aggression in these environments is needed. This study examines whether development of social aggression during adolescence is shaped through youths' exposure to peers' socially aggressive texting. Participants were a diverse sample of 221 adolescents (46.7% female) in the southern United States. Data were collected during 9th and 10th grade. Text messages sent to peers over four days at each time point were coded for socially aggressive talk about another peer. Participants' exposure to peers' socially aggressive texting was captured as the number of texts received by participants from peers that were socially aggressive about another peer. Teachers provided ratings of participants' in-person social aggression. Cross-lagged panel modeling was used to examine whether exposure to peers' socially aggressive texting socialized adolescents' in-person and text-based social aggression. Exposure to peers' socially

aggressive texting in 9th grade predicted changes in participants' in-person social aggression from 9th to 10th grade ( $\beta=.23$ ,  $p$

**Family and Peer Influences on the Development of Youth Propensity for Aggression: The General Aggression Mode**

Craig A. Anderson | Iowa State University

This presentation highlights how the main findings of the presentations can be integrated by the General Aggression Model (GAM). Repeated short-term effects of key parental and peer interactions influence the learned knowledge structures (attitudes, beliefs, emotions, scripts...), which become increasingly stable with practice and age. In this way, an aggression-prone personality develops, which in turn influences subsequent daily encounters in multiple ways.

### **Symposium 10: The Neurobiology of Appetitive Aggression: Examining Hedonically Motivated Aggression in Humans and Other Mammals.**

James K. Moran | Charité

Our symposium takes up the idea that Aggression can be driven by appetitive motivation across humans and other mammals. Clinical interviews with combatants exemplify this, showing that experiences of perpetration of violence are not necessarily traumatic, but can be variously experienced as exciting like a sport, arousing like sex, or addictive like a drug. We explore the possibility that Appetitive Aggression is a functional motivational element of healthy behavior across mammalian species, rather than a situational or psychopathological dysfunction. Our first speaker Sam Golden shows that conspecific aggression can actually be addictive in a strain of mice, and maps the functional connectome of addiction and relapse behavior using brain clearing (iDisco+) together with whole mount light sheet fluorescent microscopy (LSFM). Our second speaker, James Moran, presents magnetoencephalography (MEG) data in healthy human participants contrasting reactive and appetitively motivated aggression states, and shows the critical role of right temporal/parietal cortical regions relating to perspective taking in differentiating appetitive aggression from reactive aggression. Our third speaker Annegret Falkner shows that male mice take the opportunity for aggressive confrontation with conspecifics as a reward, and that this is driven by interactions within highly conserved regions of the hypothalamus. The causal role of this circuitry is further demonstrated by manipulating behavior with optogenetic stimulation of these regions. Our fourth speaker David Chester, looks at the pleasure of taking revenge on other people, using fMRI to show that pleasure in revenge is related to connectivity between reward-related brain areas and frontal areas that regulate social pain and rejection. This has both dispositional and situational elements.

#### **Compulsive Addiction-Like Aggressive Behavior in Mice**

Sam A. Golden | National Institute on Drug Abuse

Aggression is evolutionarily advantageous and well-conserved across species, but one form—appetitively driven aggression against conspecifics—has been posited as the nearly exclusive province of humans. We sought to identify intractable appetitive aggression in a strain of mice that naturally exhibit a spectrum of aggressive behavior. We trained mice to voluntarily self-administer access to other subordinate conspecifics for aggressive encounters. Using established metrics for drug addiction in rodents, we found that approximately 20% met criteria for addiction to aggression. This subpopulation showed intense attack behavior, low likelihood of choosing an alternative incentive over aggression, exceptionally high progressive-ratio responding for access to aggression, resistance to punishment-based suppression of aggression, and robust relapse to aggression seeking. Our findings support a shared evolutionary origin for neural mechanisms underlying compulsive appetitive aggression and suggest that this problem in humans may be viewed within the context of addiction and studied with similar methodologies. Here, we present preliminary data characterizing the functional whole-brain connectome of aggression seeking and relapse using brain clearing (iDisco+) in combination with whole mount light sheet fluorescent microscopy (LSFM) for the neuronal activity marker c-Fos. This method provides a pipeline for high-speed acquisition of brain activity at cellular resolution using immunostaining and LSFM imaging, followed by automated mapping and analysis of activity. In combination with operant procedures, these data will inform a neuroanatomical framework for identifying the whole-brain organization of appetitive aggression seeking and relapse behavior.

## **Differences in Brain Circuitry for Appetitive and Reactive Aggression as Revealed by Realistic Auditory Scripts**

James K. Moran | Charité

Aggressive behavior is thought to divide into two motivational elements: The first being a self-defensively motivated aggression against threat and a second, hedonically motivated “appetitive” aggression. Appetitive aggression is the less understood of the two, often only researched within abnormal psychology. Our approach is to understand it as a universal and adaptive response, and examine the functional neural activity of ordinary men (N = 50) presented with an imaginative listening task involving a murderer describing a kill. We asked participants to imagine they were criminal profilers, and to put themselves in the position of killers as they heard simulated testimony of a murder. We manipulated motivational context in a between-subjects design to evoke appetitive or reactive aggression, against a neutral control, measuring activity with Magnetoencephalography (MEG). Results show differences in left frontal regions in delta (2–5 Hz) and alpha band (8–12 Hz) for aggressive conditions and right temporal/parietal delta activity differentiating appetitive and reactive aggression. Trait-level Appetitive Aggression was similarly associated with right temporal/parietal delta activity. These results validate the distinction of reward-driven appetitive aggression from reactive aggression in ordinary populations at the level of functional neural brain circuitry. The right temporal/parietal region are developmentally sensitive to prenatal testosterone, and associated with various aspects of perspective taking on other people, potentially explaining the role of dehumanization as a prerequisite to appetitive violence carried out on another person.

## **Hypothalamic Control of Aggressive Motivation and Action**

Annegret Falkner | Princeton University

Acts of aggression may be preceded by a motivated appetitive state that promotes animals to seek out opportunities for violence. While significant progress has been made identifying specific neural circuits that are involved in generating aggressive action, it has been more difficult to assess the neural mechanisms of these underlying proactive seeking states. Within the hypothalamus, a highly conserved subregion the ventrolateral part of the Ventromedial Hypothalamus (VMHvl) within the “social decision-making network”, is critical for intermale aggression. Stimulation of this area promotes attack and individual neurons in this area are active during aggressive action. In addition, we have recently found that this area is also critical for appetitive aggression-seeking behavior. Using an aggression-operant task, where male mice can proactively choose to seek out brief and repeated attack opportunities, we find that single neurons in the VMHvl respond during this aggression-seeking phase in addition to the action phase, and changes in population activity recorded optically using fiber photometry track changes in task learning and extinction. Optogenetic stimulation increases appetitive aggression by accelerating trial-to-trial response initiation latency. In addition, we find a new role for an anatomically segregated population of hypothalamic inhibitory neurons on the lateral edge of the VMHvl (the VMHvl “shell”). These neurons send strong direct inhibitory drive to the VMHvl and behave as a permissive gate during aggression seeking. Together these data suggest that this fundamental neural circuit serves to link together the motivation and action phases of aggression.

## **The Appetitive Basis of Aggressive Responses to Social Rejection**

David S. Chester | Virginia Commonwealth University

Revenge can be sweet, but does this truism help us understand why rejected people act aggressively? We used functional neuroimaging to examine whether retaliatory responses to rejection were associated with activity in the brain's ventral striatum, a core node of the brain's reward circuit. We expanded upon these findings by testing whether specific patterns of brain activity during the rejection incident were associated with greater striatal activity during retaliatory aggression. More specifically, we tested whether activity in the ventrolateral prefrontal cortex (VLPFC) during rejection, a brain region implicated in the regulation and inhibition of social pain, would predict greater striatal activity during retaliatory aggression. Sixty undergraduates underwent functional MRI while they were socially accepted and then rejected, and were then given an opportunity to retaliate against their rejecters. We replicated previous links between social rejection and activity in the brain's mentalizing network, social pain network, and VLPFC. VLPFC recruitment during rejection was associated with greater activity in the brain's reward network (i.e., the ventral striatum) during retaliatory aggression. This retaliation-related striatal response was associated with greater levels of retaliatory aggression. Dispositionally-aggressive individuals exhibited less functional connectivity between the ventral striatum and the VLPFC during aggression. This connectivity exerted a suppressing effect on dispositionally aggressive individuals' greater aggressive responses to rejection. These results help explain how the pain of rejection and reward of revenge motivate rejected people to behave aggressively.

**Symposium 11: Evidence-Based Development and Implementation of Novel Psychotherapeutic and Psychoeducational Interventions for University Students Found Responsible of Sexual Misconduct**

Raina V. Lamade | Fairleigh Dickinson University

Elise C. Lopez | The University of Arizona

The unique social contexts and developmental trajectories of university students (i.e., emerging adults) requires a tailored intervention approach. This symposium will provide an overview of the evidence-informed Science-based Treatment and Risk Reduction for Sexual Assault (STARRSA) program, the first program of its kind to tailor treatment to university students found responsible of sexual misconduct. STARRSA includes two modularized interventions, CBT psychotherapy and psychoeducation, within a Risk-Needs-Responsivity (RNR) framework. Both interventions are tailored to the risks and needs of individual students using tools developed by the research team. The primary objective of this project, supported over four years by the U.S. Department of Justice, was to test the feasibility of developing and implementing treatment for students found responsible of sexual misconduct. In this session, we provide a rationale for tailoring treatment for college students and a description of the multifaceted, comprehensive approach to develop this program. Data to inform the program was obtained from three populations: male university students, who make up the majority of perpetrators; female university students, the majority of victims of sexual misconduct; and college administrators and decision-makers. The program was also informed by risk and treatment research on adult and juvenile sexual offender populations, and the literature on campus sexual assault. Data were obtained from administrators at 54 universities and students at 13 universities. We will present these data, and discuss challenges encountered and solutions proposed. The final STARRSA pilot program components, ultimately implemented at 13 U.S. universities in the 2017-18 academic year, will be presented.

**STARRSA: Developing and Implementing a Treatment Intervention for College Students Found Responsible for Sexual Misconduct**

Raina V. Lamade | Fairleigh Dickinson University

Mary P. Koss | The University of Arizona

Robert Prentky | Fairleigh Dickinson University

Alexandra Brereton | Fairleigh Dickinson University

This paper summarizes the development of a treatment program for students found responsible of sexual misconduct. The Science-based Treatment and Risk Reduction for Sexual Assault (STARRSA) project, supported by U.S. Department of Justice, was created to identify the confluence of factors related to sexual misconduct on college campuses, and to design a treatment program to address those factors. STARRSA is treatment option consisting of psychotherapy and psychoeducation for students found responsible of sexual misconduct. The program modules specifically target the associated risk factors as part of a comprehensive approach to help improve campus safety. This presentation will discuss the unique factors of this population that should be considered to successfully develop an effective program for university students, and the complexities of implementing treatment programs to this population, within a higher education system. This presentation includes a presentation of the core components of both interventions and modules, as well as a discussion of barriers to implementation and challenges of carrying out treatment. Additionally, steps for implementing STARRSA and the core components of this modularized, tailored program will be outlined.

### **Informing Student Sexual Offending Treatment Program Feasibility through University Staff/Administrator Perspectives: A Mixed-Methods Study**

Robert Prentky | Fairleigh Dickinson University

Raina V. Lamade | Fairleigh Dickinson University

Elise C. Lopez | The University of Arizona

Mary P. Koss | The University of Arizona

Support from administrators and student affairs workers is paramount for implementing new programs on a university campus. Likewise, information about campus practices and experiences working with students involved in sexual misconduct proceedings are highly valuable to developing novel campus-based programming that is both feasible and sustainable. Focus groups and surveys were conducted with university administrators and relevant stakeholders (e.g., campus-based behavioral health providers, student conduct workers). This mixed-methods study assessed (1) the breadth and types of treatment available to university students found responsible of sexual misconduct, (2) the typical structures in place for providing treatment to students, (3) barriers to and possible solutions for providing treatment on campus, and (4) special considerations for providing treatment on campus (e.g., voluntary vs mandated treatment; implications of misconduct cases and sanctions for international students). This paper discusses the results of the study, and how the results were integrated into the development of the STARRSA program.

### **Sexual Misconduct: Testing an Expansion of the Confluence Model of Perpetration**

Neil Malamuth | University of California- Los Angeles

Kevin M. Swartout | Georgia State University

Raina V. Lamade | Fairleigh Dickinson University

Elise C. Lopez | The University of Arizona

Mary P. Koss | The University of Arizona

Robert Prentky | Fairleigh Dickinson University

Extant empirical literature has provided robust support for Malamuth's Confluence Model for campus sexual assault. Along with hostile masculinity and impersonal sexual behavior, two additional factors, negative peer influence and alcohol consumption, have been examined. No study to date has examined the incremental influence of a number of hypothetically important, theoretically related personality factors. Using a sample of over 1000 male students from over 10 colleges and universities across the country, who completed a comprehensive survey that assessed factors associated with sexual aggression and questions about conduct and sexual behavior, we examined the relationships between the core components of the Confluence Model [hostile masculinity and impersonal /uncommitted sexual behavior] and 1) self-centered, narcissistic attitudes, 2) influence of peers and a negative peer environment, 3) alcohol consumption, 4) clinical traits associated with psychopathy, such as lack of empathy and deceptiveness, and 5) a prior history of antisocial behavior/conduct problems. Using a variety of structural equation modeling techniques (e.g., causal modeling / path analysis), we examined several proximal outcomes of self-reported sexual aggression, addressing the fundamental question: Does each model fit well enough to be a reasonable explanation of the trends in our data? Path diagrams for each model present simple isomorphic relationships. Our ultimate goal



was to examine the multiple paths, or equifinality, of sexually assaultive behavior by college students. This presentation will discuss the integration of the confluence model factors into the STARRSA modules, in addition to the results of the study.

### **University Women's Perceptions of Campus Climate, Campus Safety, and Experiences Reporting Campus Sexual Misconduct**

Elise C. Lopez | The University of Arizona

Raina V. Lamade | Fairleigh Dickinson University

Mary P. Koss | The University of Arizona

Robert Prentky | Fairleigh Dickinson University

Extant literature has examined the perceptions of campus safety and the ability of colleges to handle sexual misconduct complaints successfully, as well as experiences with sexual misconduct and possible reasons why females do not report incidents of misconduct. This study explored the consequences of the decisions to report and not report sexual misconduct as well as perceptions as to why other women do not report sexual misconduct, and the relationships among these factors. This study presents analyses of female college students' responses in the following domains: 1) campus climate factors, including peer attitudes and behaviors; 2) perceptions of campus safety and their university's ability to appropriately handle sexual misconduct claims; 3) reasons why women do not report sexual misconduct; and 4) consequences of their decisions to report and not report incidents of sexual misconduct. This paper also analyzes the relationships between each of these sets of factors: 1) campus climate and campus sexual assault; 2) perceptions of campus safety, the ability of the administration to handle sexual misconduct claims, and personal experiences with reporting sexual misconduct; 3) campus safety and universities' ability to handle sexual misconduct claims and opinions on why women do not report sexual misconduct; 4) for female students with a history of sexual victimization prior to college, the relationship between a history of sexual victimization and perceptions of campus safety and likelihood to report campus sexual assault. Additionally, implications of these results and their importance in the STARRSA pilot site recruitment process will be discussed.

### **Psychoeducation Meets Justice: The Spectrum of Application of STARRSA Products in Student Sexual Misconduct Response**

Mary P. Koss | The University of Arizona

Elise C. Lopez | The University of Arizona

Jay Wilgus | no affiliation

Raina V. Lamade | Fairleigh Dickinson University

Robert Prentky | Fairleigh Dickinson University

The STAARSA project intended to create a therapeutic response to those adjudicated responsible for sexual misconduct. Over time goals have shifted in response to the needs of institutions of higher education. Some did not want a one-on-one psychotherapeutic process or their regulations prohibited a therapeutic sanction. The STAARSA psychoeducation version was an alternative modality to achieve the original goals of augmenting the available sanctions for sexual misconduct. The intended population was the same: responsible persons allowed to remain on campus or readmitted after a period of exclusion. During implementation we observed that the curriculum was being incorporated

at other points on the misconduct response timeline and with cases that did not process through a judicial hearing. Evolving usage mapped remarkably onto restorative justice initiatives on campuses and revealed new opportunities to use STAARSA psychoeducation. Restorative justice practices are becoming popularized as institutions of higher education around the globe strive to address student sexual offending. This presentation defines restorative justice as a non-adversarial approach to rehabilitation, punishment, and victim support. From a restorative justice perspective, wrong has been done, and the person who committed it is responsible for repairing harm done to victims, family and friends, and the community. The presentation focuses on three that occur at different points in misconduct response: prevention circles, restorative conferences, and reintegration circles. Each will be briefly described, including examples from international settings, and the potential enhancements of them by STAARSA psychoeducation will be identified.

## **Symposium 12: Violent Attitudes and Beliefs: Conceptualization, Measurement, and Relationship with Violent Behaviour**

Kevin Nunes | Carleton University

Cognitions regarding violence play a central role in many theories of violent behaviour (e.g., Anderson & Bushman, 2002; Andrews & Bonta, 2010; Bandura, 1973). They are considered to be especially important in forensic and correctional theory, research, and practice because of their putative causal relationship with violence; changing them may provide a means by which to reduce violent behaviour (Andrews & Bonta, 2010; Douglas & Skeem, 2005; Kraemer et al., 1997). In this symposium three papers will examine the measurement of violent cognitions. The first paper will present the development of a new self-report measure of evaluative attitudes towards violence, and an experimental test of its construct validity. The second paper will present a literature review and original findings on the assessment of a broader set of violent cognitions and their relationship to violent behaviour. The final paper will present an experimental validation of a self-report measure of evaluative attitudes towards sexual violence. Together these papers will provide an overview of the theoretical and empirical literature regarding the conceptualization and measurement of a variety of violent cognitions, and their potential role in violent behaviour. We will also raise and address important questions about construct validity (i.e., the extent to which a measure assesses the intended construct), and provide measures that can be used in practice and in research to further examine the relationship between these cognitions and violent behavior.

### **The Development and Validation of a Measure of Evaluative Attitudes Towards Violence**

Kevin Nunes | Carleton University

Chloe Pedneault | Carleton University

We will present the development and validation of a self-report measure of evaluative attitudes towards violence (i.e., the extent to which violence is viewed negatively or positively). We first created a large pool of potential items, which we administered to two separate samples of men from the community (N = 318; N = 226). Based primarily on item variance (to avoid floor effects), interitem correlations (to eliminate redundancy), and factor structure (to ensure unidimensionality), we retained 17 items to create the Evaluation of Violence Questionnaire (EVQ). We then conducted a randomized experiment to test the construct validity of the EVQ with 510 men from the community. If the EVQ really does assess evaluative attitudes towards violence, then its scores should change in response to established attitude-change procedures. Participants were randomly assigned to an attitude-change condition to make evaluation of violence more negative or to a control condition. EVQ scores decreased from pre- to post-test for participants in the experimental condition (Cohen's  $d = -0.52$ , 95% CI [-0.79, -0.25]), but did not change for participants in the control condition. Similarly, post-test EVQ scores were lower for participants in the experimental condition than for participants in the control condition (Cohen's  $d = -0.36$ , 95% CI [-0.54, -0.18]). These results suggest that the EVQ does assess evaluative attitudes towards violence. Future research should use the EVQ to further test construct validity, distinctiveness from other violent cognition measures, and the extent to which evaluative attitudes play a causal role in violence.

### **Measures of Violent Thinking and Violent Behaviour: Implications for Treatment**

Nicola Bowes | Cardiff Metropolitan University

Many theories and models suggest violent thinking causes or triggers aggressive and violent behaviour. However, relatively little attention has been paid to how we measure, or assess, violent thinking and what specific cognitive deficits may be important treatment targets for those seeking treatment. In this paper, we will first present the findings from our systematic review of the literature on this topic in which we found only five published studies measuring the impact of violent thinking on violent behaviour. The most robust of these measures were the EXPAGG (Campbell, Muncer, & Coyle, 1992) and the Maudsley Violence Questionnaire (MVQ; Walker, 2005). These measures have been used with a variety of populations internationally (e.g., UK, Spain, Germany, Italy, Russia, Nigeria) and drawn from various samples including prison populations, secure hospital settings, and general/non offending populations. We will next present the results of a study, in which we used these two measures along with a self-reported violence assessment in order to explore and compare their utility in predicting self-reported violence, using regression models. This study included participants from a prison sample and adults in the general population. The findings demonstrate the importance of one factor on the MVQ, 'Machismo', being responsible for around 30% of the variance in self-reported violence. 'Machismo' relates to embarrassment over backing down from violence or confrontations, justifying violence as a means of responding to threats or attacks and violence as part of being a man (macho). Implications for designing psychological treatment programmes for violence will be considered.

### **Evaluation of Sexual Aggression Against Women (ESAW) Scale: Assessing Construct Validity**

Chloe Pedneault | Carleton University

Kevin Nunes | Carleton University

Preliminary research suggests that individuals who hold less negative evaluative attitudes towards sexual aggression are more likely to engage in sexually aggressive behaviour (e.g., Hermann & Nunes, 2016). To facilitate more rigorous research in this area, the next important step is to examine the extent to which measures designed to assess evaluative attitudes towards sexual aggression truly assess what they intend to measure (i.e., construct validity). In the current paper presentation, we will discuss a study in which we examine the construct validity of the Evaluation of Sexual Aggression Against Women (ESAW) scale (Hermann & Nunes, 2015); a new measure specifically designed to assess evaluative attitudes towards sexual aggression. We are conducting a randomized experiment in which we manipulate evaluations to be more negative using well-established evaluation change procedures (i.e., persuasive messaging and evaluative conditioning). If the ESAW truly assesses evaluations of sexual aggression, its scores should decrease in response to the manipulation. We will present data from 500 male undergraduate students and 500 men from the community, who we are currently in the process of recruiting. Preliminary analyses (N = 30 male students) show that ESAW scores decreased from pre- to post-test for participants in the experimental condition but did not change for participants in the control condition. This provides some preliminary evidence supporting the construct validity of this scale. If further evidence supports the construct validity of the ESAW, this scale should be used in future research to test whether evaluative attitudes play a role in sexually aggressive behaviour.

## **Sexual Coercion: Attitudes that Make it Possible**

Avigail Moor | Tel Hai College

Acquaintance rape occurs at epidemic rates all over the globe. As damaging as this form of sexual aggression is to its victims, the blame for its occurrence and the responsibility for its prevention have routinely been placed on them. In particular, it is claimed that women don't object clearly enough to sexual coercion such that the perpetrator could not have known that he was coercing them. The present study seeks to examine the accuracy of this and similar claims, so as to establish what, in fact, makes it possible for a person to disregard a woman's lack of consent and turn an innocuous rendezvous into aggressive sexual coercion. In this mixed-method study, 250 men, ranging in age from 20-65, completed a self-report questionnaire, and 40 additional men, of similar ages, were interviewed in depth. Contrary to societal myths, the quantitative findings indicate that men have the capacity to recognize diverse expressions of objection to sex - verbal and non-verbal alike. Subsequently, the qualitative in-depth interviews sought to ascertain what, if so, enables them to ignore these perfectly well-understood cues. The findings indicate that men allow themselves to disregard common forms of verbal resistance, such as saying 'no' and the like, by opting to view them as an invitation to persist, while discounting their sincerity. Pleasant non-verbal refusal is regarded in a similar vein. The only form of objection that men seem to take notice of is aggressive unpleasant reactions on women's part. Preventive implications of these multifaceted findings are discussed.

### **Symposium 13: Exposure to Violence, Social Cognitions, and Aggressive and Violent Behavior among Urban Adolescents and Young Adults**

L. Rowell Huesmann | University of Michigan

In this symposium, we present findings based on a social-cognitive-ecological model for understanding the impact of exposure to violence in various contexts (family, school, neighborhood, media) on urban adolescents' and young adults' aggressive and violent behavior. The study includes three high-risk samples in three U.S. cities: Flint, MI, Jersey City, NJ, and Toledo, OH. Our focus is on how participants' exposure to general and weapon violence in multiple contexts predicts their later violent behavior and use of weapons, and on what cognitions and emotional processes mediate these relations. In the first paper, we examine social cognitions about general and weapon violence (normative beliefs, aggressive fantasy, hostile biases) in the Flint sample, in which youth participated in a 4-year longitudinal study from childhood through early adulthood. We analyze relations between social cognitions and concurrent violent behavior during the last wave of data collection when participants ranged in age from 18-25. In the second paper, also from the Flint sample, we first examine how participants' exposure to general and weapon violence in multiple contexts when they were in the 2nd through 11th grades predicts their subsequent serious aggression, violent behavior, and weapon use 10 to 12 years later. Then we examine what cognitions and emotional processes mediate these relations. In the third paper, we examine social-cognitive correlates of weapon use among high school students in the Jersey City sample. In the fourth paper, in a sample of 251 adjudicated youth from Toledo, we examine youths' commission of simple and aggravated assault as a function of their exposure to violence (witnessing and victimization), as well as three social cognitions (legitimacy for government to prohibit criminal behaviors, self-serving cognitive distortion, and a perspective taking index).

#### **Social Cognitions about General Violence and Weapons Violence: Relations with Aggressive and Violent Behaviors**

Cathy Smith | University of Michigan

Eric F. Dubow | University of Michigan and Bowling Green State University

L. Rowell Huesmann | University of Michigan

Paul Boxer | Rutgers University and University of Michigan

Todd D. Little | Texas Tech University

Our research is grounded in social-cognitive-developmental theories that explain how youth acquire and display different social behaviors (in our case, aggression and violence) as they grow up in hierarchically embedded contexts--family, peers, neighborhood, community, and culture. Social-cognitive models focus on the role of cognitive scripts, world and self-schemas, and normative beliefs, social goals, and attributions (e.g., Bandura, 1986; Berkowitz, 1990; Crick & Dodge, 1994; Huesmann, 1998). These cognitions provide a basis for the stability of behavior across situations and over time. Fagan and Wilkinson (1998) applied such a model to youth living in dangerous neighborhoods "in which beliefs about guns and the dangers of everyday life may be internalized in early childhood and shape cognitive frameworks for interpreting events and actions during adolescence" (p. 107). We use data from the 4th wave of a longitudinal study of three age cohorts of youth in Flint, MI, who were interviewed for three successive annual waves beginning in 2007 (starting grades 2, 4, and 9), and again in 2017 (ages 8, 20, and 25). We present descriptive statistics for our measures of social cognitions about general and weapon-specific violence: 1) attribution of hostile intent in general and

with weapons; 2) cognitive rehearsal of scripts involving aggression and with weapons specifically; 3) normative beliefs supporting general and weapon-specific violence; and 4) self-image about weapons as related to masculinity and power. We examine the associations of these social cognitions with participants' reports of mild aggression, severe physical aggression, aggressive personality, weapon carrying/use, and arrests.

**Social Cognitive Mediators of the Longitudinal Relations between Childhood Exposure to Violence in Multiple Contexts (Neighborhood Violence, TV Violence, and Video Game Violence) and Subsequent Violent Behavior and Weapon Use**

L. Rowell Huesmann | University of Michigan

Eric F. Dubow | University of Michigan and Bowling Green State University

Paul Boxer | Rutgers University and University of Michigan

Cathy Smith | University of Michigan

Maureen O'Brien | University of Michigan

Brad Bushman | Ohio State University

Numerous experiments have demonstrated that exposure to TV or video game violence stimulates aggressive behavior in the short run. Field studies have also shown that such exposures and exposure to family and community violence are correlated with concurrent aggressive behavior. Additionally, a few recent longitudinal studies have shown that habitual exposure to violence in any context (e.g., community, media, video games) predicts increases in aggressive behavior in the long run. These studies also have shown that the effects are mediated by certain cognitive and emotional processes. However, few studies have shown, as predicted by observational learning theory, that habitual observations of violence lead to a long-term increase in risk for very violent behavior including weapon use.

We report results from a 3-cohort 4-wave 10-year longitudinal study of 426 high-risk 2nd, 4th, and 9th graders from Flint, Michigan. Each year for the first three years (starting in 2006), we evaluated their exposure to violent TV and movies, the extent of their violent video-game playing, and their exposure to neighborhood violence. We also assessed their aggressive behavior and relevant social cognitions about aggression. Then in 2016-17, we tracked down and assessed over 50% of them again. We found that early exposure to violence in each context (media or real-life) predicted subsequent aggression in childhood and adolescence and subsequent violent behavior and weapon use in young adulthood. Furthermore, we found that these effects were significantly mediated by changes in social cognitions – most notably in normative beliefs about violent behavior and weapon use.

**Social-Cognitive Information-Processing Predictors of Weapon Use among Juveniles**

Paul Boxer | Rutgers University and University of Michigan

Eric F. Dubow | University of Michigan and Bowling Green State University

L. Rowell Huesmann | University of Michigan

Jennifer Irving | Rutgers University

Todd D. Little | Texas Tech University

Violent behavior is maintained over time and across situations in part by a social-cognitive information processing (SCIP) style that includes hostile attributions of intent, approving beliefs about violent

retaliation, and fantasies about engaging in violence (Huesmann, 1988, 1998). This SCIP orientation develops through observational and direct learning of aggressive responses and is supported by social-ecological contexts that fail to punish and sometimes reward violence. Yet strikingly little research has considered SCIP in relation to weapon use. We examined SCIP correlates of weapon use in a sample of 200 youth (44% male, 90% nonwhite) enrolled in 10th grade in the public school district of a medium-sized northeastern US city. Youth completed measures of weapon use (guns, knives) along with hostile biases, beliefs approving of aggressive responding, and violent fantasy. Correlations suggest that youth who use weapons are more likely to attribute hostile intent to ambiguous provocations ( $p < .10$ ), more supportive of aggressive retaliation ( $p < .001$ ), and more frequently fantasize about engaging in violence ( $p < .01$ ). One-year follow-up data collection is in process. Analyses will incorporate over-time prediction of weapons outcomes, and results will be discussed with respect to implications for research and theory on the development of aggression.

### **The Influence of Exposure to Violence and Social Cognition in Predicting Criminal Behaviors among Adjudicated Youth**

Marie S. Tisak | Bowling Green State University

John Tisak | Bowling Green State University

Sara E. Goldstein | Montclair State University

Previous studies have demonstrated that it is important to distinguish between different types or seriousness of aggression when considering youth criminal behavior and associated cognitions (Caprara et al., 2014; Tisak et al., 2011). In this study we focused on two types of criminal acts, simple and aggravated assault. One goal investigated the relationship between exposure to violence

and committing the corresponding criminal behavior. Participants were 251 (157 males; 93 females) adjudicated youth from the United States. Participants completed three questionnaires where they rated how often they witnessed, were a victim, and committed simple and aggravated assault. Being a victim of simple assault predicted committing simple assault,  $F(3,156) = 4.84$ ,  $p < .01$ ,  $R^2 = .09$ , across gender. Being a victim of aggravated assault predicted committing aggravated assault,  $F(3, 155) = 29.83$ ,  $p < .001$ ,  $R^2 = .37$ , for both genders. However, the intercepts and slopes differed based on gender. Participants also completed three cognitive measures, ratings on the legitimacy for government to prohibit criminal behaviors (Tisak, 2004), a self-serving cognitive distortion questionnaire (Gibbs et al., 1996), and a perspective taking index (Davis, 1980). Lower perspective taking ability predicted the use of self-serving cognitive distortion,  $F(2, 224) = 12.06$ ,  $p < .0001$ ,  $R^2 = .10$ , and predicted aggravated assault,  $F(2,221) = 7.12$ ,  $p = .001$ ,  $R^2 = .06$ . Additionally, both higher rates of cognitive distortion and views that it is not legitimate for government to prohibit criminal behaviors predicted committing aggravated assault,  $F(3,209) = 18.26$ ,  $p < .0001$ ,  $R^2 = .21$ .



### **Symposium 14: Does Sex Matter? Sex Differences in Aggression**

Inga D. Neumann | University of Regensburg

Out-of-context and exacerbated aggression causes severe socio-economic, as well as medical consequences, which has stimulated extensive research on the neurobiological mechanisms underlying offensive behaviors especially in males. However, our knowledge regarding aggressive behavior in females is extremely limited mainly due to the assumption that females are less aggressive than males in several species including humans. Current studies have shown that rates of violence are rising among girls and young women in the Western societies. The purpose of this session is to explore and compare recent findings on the neurobiology of female versus male aggression, going from basic research to a broader and clinical approach.

#### **Why Is She Mad? The Role of Neuropeptides in Female Aggression**

Vinícius Elias de Moura Oliveira | University of Regensburg

Inga D. Neumann | University of Regensburg

Trynke de Jong | Project Manager at Lifelines Biobank

Oxytocin (OXT) and vasopressin (AVP) are known to modulate social behaviors, including aggression, in a sex-specific manner. Therefore, our aim was to investigate the role of these neuropeptides on female aggression. We established the female intruder test (FIT) and found that a combination of social isolation and repeated exposure to a female intruder efficiently increased aggression in virgin female rats. Highly aggressive females showed increased OXT levels in the cerebrospinal fluid after FIT exposure, as well as a positive correlation between aggression and OXT levels. OXT receptor binding was also changed in the central amygdala and ventral lateral septum. Regarding the AVP system, lower levels of AVP were found in the cerebrospinal fluid of females. Vasopressin 1a receptor (V1aR) binding was decreased in the dorsal part of the lateral septum, and negatively correlated with their aggressive behavior. Intracerebroventricular treatment with either OXT (50ng) or AVP (0.1 and 1ng) was able to decrease female aggression. Importantly, this anti-aggressive effect of both nonapeptides was mediated via the V1aR specifically within the dorsal part of the lateral septum as revealed by local infusion of either the V1a receptor agonist or antagonist. In conclusion, a balance between OXT and AVP seems to be crucial for regulating aggressiveness in virgin female rats. In addition, the anti-aggressive effects of AVP seem to be mediated via the V1aR positive neurons located in the dorsal lateral septum. Supported by EU (FemNAT).

#### **The Role of the Ventromedial Hypothalamus ESR1 Sensitive Neurons on Male And Female Aggression**

Dayu Lin | New York University School of Medicine

As an essential means to resolve conflicts, aggression is expressed by both sexes but often at a higher level in males than in females. Recent studies suggest that cells in the ventrolateral part of the ventromedial hypothalamus (VMHvl) that express estrogen receptor alpha and progesterone receptor (Esr1/PR) play an essential role in male but not female mouse aggression. In contrast to these findings, here we show an indispensable role of VMHvl Esr1+ cells in female aggression. This population is active when females attack naturally. Inactivation of these cells reduces female

aggression whereas their activation elicits an attack. Additionally, we found that female VMHvl contains two anatomically distinguishable subdivisions that show differential gene expression and projection patterns. The medial part of the VMHvl is activated during aggression whereas the lateral part becomes active during female sexual behavior. These results support an essential role of the VMHvl in both male and female aggression and reveal the existence of two previously unappreciated subdivisions in the female VMHvl that are involved in distinct social behaviors.

### **Hormonal Patterns in Females and Males with Conduct Disorder: Results of the European Multicenter Study Femnat-CD**

Anka Bernhard | University of Frankfurt

Despite findings of neurobiological alterations in conduct disorder (CD), only few studies assessed hormonal patterns in males and especially females with CD though they play a significant role for stress reactivity and social functioning. Further, endocrinological alterations seem to be influenced by the experience of environmental risk factors. Therefore, within an European multicenter study (FemNAT-CD), basal (N=360; cortisol, alpha-amylase, testosterone, DHEA-S, estradiol, progesterone, oxytocin, arginine-vasopressin) and reactive (in response to stress; N=310; cortisol, testosterone, oxytocin) hormonal patterns were assessed in sex, age and puberty matched females and males with CD compared to healthy individuals (9-18 years) considering sex differences and the relation to psychosocial risk factors (using logistic regression, principle component, mediation and rmANCOVA's analyses). In females, lower basal estradiol levels and an interaction of low cortisol and alpha-amylase with high oxytocin were related with higher risk for CD status. In males, lower basal alpha-amylase and higher DHEA-S levels plus a combination of high cortisol, testosterone and DHEA-S were predictive for CD status. Regarding endocrinological stress reactivity, both males and females with CD showed attenuated stress responses for cortisol, testosterone and oxytocin compared to healthy adolescents. Associations with psychosocial risk factors (e.g. trauma exposure) emerged but were more significant for hormonal stress reactivity. Results indicate distinct basal hormonal characteristics and diminished reactive endocrinological stress responses in CD compared to healthy adolescents along with clear sex differences. Thus, endocrinological alterations might play a significant role in the development of CD and may be used to characterize individuals with CD.

### **Investigating Sex Differences in the Relationship between Conduct Disorder and Brain Structure and Function**

Graeme Fairchild | University of Bath  
 Areti Smaragdi | University of Southampton  
 Karen Gonzalez-Madruga | University of Southampton  
 Roberta Riccelli | University of Southampton  
 Justina Sidlauskaite | University of Southampton  
 Harriet Cornwell | University of Southampton  
 Jack Rogers | University of Birmingham  
 Edmund Sonuga-Barke | King's College London  
 Stephane de Brito | University of Birmingham

Although there is convincing evidence that males and females with Conduct Disorder (CD) differ in terms of risk factors, clinical presentation, and adult outcomes, little research has investigated the neurobiological basis of these sex differences, and most neuroimaging research on CD has focused on males. We investigated whether there are similarities or differences in brain structure or function between males and females with CD as part of the multi-site FemNAT-CD study (N=200). We used voxel-based and surface-based morphometry to assess brain structure and a facial emotion processing task to study brain activity. We found that males and females with CD showed common reductions in cortical thickness and grey matter volume, and increased gyrification in prefrontal cortex relative to controls, whereas sex-by-diagnosis interactions were observed in anterior insula and amygdala volume. These interactions were driven by structural alterations in males, but not females, with CD. Furthermore, some CD-related associations with brain structure were in opposite directions in males and females (e.g., superior frontal gyrus surface area and gyrification). In the fMRI studies, we found common reductions in amygdala activity in males and females with CD for faces in general, but sex-by-diagnosis interactions for amygdala activity during angry face processing (males with CD showed higher, and females with CD lower, amygdala activity). These studies provide the first robust evidence for sex differences in the relationship between CD and brain structure and neural activity during emotion processing. Overall, our findings suggest that there may be important sex differences in the neurobiological basis of CD and aggressive behaviour.

### **Symposium 15: Flexibility and Validity of Behavioral Aggression Paradigms: A Problem or a Blessing?**

Jill Lobbestael | Maastricht University

Self-report of aggression can be considered suboptimal because of its socially undesirable nature and humans often lack insight into it. Yet, behavioral assessment of aggression is a challenging task. The current symposium will focus on the validity and flexibility of several behavioral aggression paradigms. The first two contributions focus on the Taylor Aggression Paradigm (TAP). David Chester (Virginia Commonwealth University, USA) presents two preregistered studies demonstrating that the TAP is a valid aggression measure irrespective of its methodological flexibility. TAP scores showed agreement with other laboratory aggression measures, were magnified by an experimental provocation manipulation, and were associated with aggression-related traits. Jill Lobbestael (Maastricht University, the Netherlands) addresses the problem of high heterogeneity in TAP outcome scores. Using a factor analytic approach, they reveal the presence of two TAP factors (i.e. provoked and unprovoked), and present an empirically derived scoring key with weighted sum scores to calculate both factor scores. The other two contributions present new behavioral measures to assess aggression. Ulrike Krämer (University of Lübeck, Germany) will present a variant of the TAP, the Fight-or-Escape paradigm (FOE), which allows participants with the opportunity to fight (i.e. retaliating aggressively against an aggressive opponent), act non-aggressively, or escape (i.e. avoiding the interaction altogether). Finally, Nathan DeWall (University of Kentucky, USA) presents two new behavioral tasks based upon magical thinking; the Voodoo Doll Task and the Voodoo Doll Self- Injury Task. Data will be presented on the correspondence between stabbing a doll that represents a close relationship partner and actual aggressive behavior directed toward that person. Modifying the aggression target to the self provides a valid measure of a person's propensity to engage in nonsuicidal self-injury. This symposium stimulates a critical take on aggression assessment, and contributes to increasing both innovative and empirically-based solutions to the aggression field.

### **Assessing the Validity of the Taylor Aggression Paradigm in the Absence of Methodological and Quantitative Flexibility**

David S. Chester | Virginia Commonwealth University

Emily N. Lasko | Virginia Commonwealth University

The Taylor Aggression Paradigm (TAP) is a frequently-used laboratory measure of aggressive behavior. However, the flexibility inherent in its implementation and analysis can undermine its validity. To test whether the TAP is a valid aggression measure irrespective of this flexibility, we conducted two preregistered studies (Study 1 N = 177; Study 2 N = 168) of a 25-trial version of the TAP using a single scoring approach that aggregated participants' behavior across the entire task. Internal meta-analyses revealed that across both studies, TAP scores showed agreement with other laboratory aggression measures (with and without counterbalancing), were magnified by an experimental provocation manipulation, and were associated with traits typically linked to aggressive behavior (aggression, agreeableness, antagonism). Mixed evidence was found for the external and discriminant validity of the task. Volume and duration settings from each trial were internally consistent and largely loaded onto a single component, suggesting that the aggregate scoring approach accurately represents the underlying data structure. These results provide preliminary support for the internal validity of this approach to the TAP as a measure of aggressive behavior, irrespective of flexible research practices.

### **An Empirically Derived Scoring Algorithm for Provoked and Unprovoked Aggression Using the Taylor Aggression Paradigm (TAP)**

Jill Lobbestael | Maastricht University  
 Suzanne Brugman | Maastricht University  
 Franziska Emmerling | Technical University Munich  
 Alexander T. Sack | Maastricht University  
 Teresa Schuhmann | Maastricht University  
 Arnoud Arntz | University of Amsterdam

The Taylor Aggression Paradigm (TAP) is one of the most often used behavioral aggression measures. Its large methodological flexibility in applications and trial specifications could be considered an advantage. There also appears to be strong heterogeneity in possible quantification strategies of the outcomes, and over 150 different operationalizations have been used across publications. This strongly threatens the validity of the TAP, and stimulates false negative research outcomes in the field of aggression. The current technical paper will empirically address this issue by using a factor analytic based method in a sample of N=593 participants. Results reveal a two factor fit together explaining 84% of the variance that was invariant across sample construction. The first factor includes all trial scores after the first time the participant received aversive feedback (i.e. provoked factor), and the second factor includes all trial scores before this feedback (i.e. unprovoked factor). A two-step scoring key is provided to calculate these two TAP outcomes. First, eight secondary variables have to be calculated based on distinct combinations of intensity, durations, and win/lose outcomes. Second, these eight scores have to be multiplied by set standardized regression weights and summed using a specific formula. By providing aggression researchers with a concrete and empirically derived scoring outcome of the TAP, the current study wants to stimulate standardization in behavioral aggression outcomes. This will contribute to increased validity of the aggression research field.

### **A Novel Approach to Study Aggression and Avoidance Reactions to Provocation**

Ulrike M. Krämer | University of Lübeck  
 Macià Buades-Rotger | University of Lübeck  
 Frederike Beyer | University College London

Aggression paradigms as the Taylor Aggression Paradigm (TAP) are limited in the behavioral options offered to the participant which limits their extrinsic validity. Here, we will present behavioral data from the Fight-or-Escape paradigm (FOE), a variant of the Taylor Aggression Paradigm. In this paradigm, the participant has the options of retaliating aggressively against an aggressive opponent, acting non-aggressively or avoiding the interaction altogether. In a first experiment, the fear potentiation (FP) of the startle response was found to be negatively correlated with a composite measure of aggression and avoidance against the provoking opponent. In a second experiment, participants completed the FOE as well as the Dot-Probe Task (DPT) and the Approach-Avoidance Task (AAT). Subjects with higher approach bias scores in the AAT avoided the provoking opponent less frequently. Hence, individuals with high threat reactivity and low approach motivation displayed more avoidant responses to provocation, whereas participants high in approach motivation were more likely

to engage in aggressive interactions when provoked. The FOE is thus a promising laboratory measure of avoidance and aggression

### **A New Way to Assess Aggression: Voodoo Dolls and the Power of Magical Thinking**

C. Nathan DeWall | University of Kentucky

David S. Chester | Virginia Commonwealth University

Zac Whitt | Indiana University-Purdue University

Tchiki S. Davis | Berkeley Well-Being Institute

Assessing aggression is no easy task. Each measure is imperfect in its balance of reliability and validity. Yet aggression researchers do their best to construct and validate measures that can help us understand why people act aggressively and how to prevent it. In this talk, I present three lines of research on the validation and use of two related aggression measures: the Voodoo Doll Task (VDT) and the Voodoo Doll Self-Injury Task (VDSIT). Both tasks draw on our natural tendency to grant objects magical properties, in which people mentalize, perspective-take, and bestow minds upon non-human entities. First, I show how stabbing a doll that represents a friend or close relationship partner corresponds with actual aggressive behavior directed toward that same friend or close relationship partner. Second, I offer evidence that modifying the target of aggression to the self provides valid evidence regarding a person's propensity to engage in nonsuicidal self-injury. Third, I demonstrate that responses on the voodoo doll self-injury task predict emotion-regulation responses in the wake of social rejection.

**Symposium 16: From Animal Brains to Criminal Minds – Bridging Perspectives on Neural Signatures of Anger and Aggression**

Gabriela Gan | Central Institute of Mental Health Mannheim

Anger is an approach-related basic emotion that often results in reactive aggression, manifesting not only in clinical and criminal populations, but to a certain degree in healthy individuals. Neurobiological models of human aggression suggest that anger and reactive aggression are mediated by an imbalance between hypoactive “top-down” prefrontal areas, and hyperactive “bottom-up” limbic reward, as well as threat-related circuits. While animal models of aggressive behavior mostly target maladaptation in subcortical circuits that are involved in motivated behavior such as the hypothalamus, the striatum, and the lateral habenula, the focus has shifted towards the involvement of the prefrontal cortex given its importance for human aggression. In our symposium, we will bring together researchers approaching the neural signatures of anger and aggression from different perspectives. The first talk will discuss neural circuits of aggressive behavior based on novel animal models of appetitive aggression. The second talk will report on the impact of genetic vulnerability for aggressive behavior on intermediate neural phenotypes in emotion and inhibitory control circuits in healthy human populations, specifically looking at variation in RFX1, a newly identified candidate gene for aggression. The third talk will focus on altered neural functioning of clinically significant reactive aggression in intermittent-explosive disorder based on findings from functional magnetic resonance imaging (fMRI). The final talk will discuss the neural underpinnings of aggressive behavior in criminal populations and prediction of future antisocial behavior using MRI data (i.e., neuroprediction). Our symposium adopts a translational view on the neural basis of anger and aggression to foster the dialogue between aggression researchers from different disciplines. Therefore, we aim to delineate maladaptive brain processes underlying pathological anger and aggression, and highlight opportunities and pitfalls in integrating findings from animal and human neurobiological models of aggressive behavior.

**Neural Circuits Underlying Appetitive Aggression in Mice**

Hossein Aleyasin | Icahn School of Medicine at Mount Sinai

Aggression is an innate social behavior in animals that helps individuals defend territory, secure resources, protect progeny, and increase the chance of successful mating in a competitive environment. However, inappropriate aggressive reactions to provocation, aggression out of context, or insensitivity to non-threatening social cues can bring devastating consequences for individuals and the society. Animal models of aggression provide face validity, by recapitulating essential components of the behavior and provide the opportunity to quantify behaviors such as aggression seeking and associated reward. We studied the behavior of mature and sexually experienced male mice, when encountering another mature male as an intruder in their home cage. We identified aggressor mice as ones, who chose to attack the intruders, and non-aggressors as those who refused to show physical aggression. Over the course of three days, aggressor mice showed increasingly shorter latency to initiate attacking that might indicate an “appetitive aggression” phenotype. To directly test their motivation for aggression we used a conditioned place preference (CPP) paradigm. Aggressors showed significantly higher preference toward the context that was associated with the opportunity to fight, similar to the way mice behave when they are exposed to other rewarding stimuli such as drugs and sex. We also found that  $\Delta$ FosB is increased in the nucleus accumbens, the

hub of the brain's reward system, after repeated rounds of aggression. Interestingly, human studies also show a link between the nucleus accumbens and aggressive behavior. These observations across species corroborate the construct validity of animal models of aggression.

### **Genetic Variation in RBFOX1 Modulates Prefrontal-Cingulate Functioning in Emotion and Inhibitory Control Circuits**

Gabriela Gan | Central Institute of Mental Health Mannheim  
 Anais Harneit | Central Institute of Mental Health Mannheim  
 Marjolein van Donkelaar | Radboud University Medical Center  
 Janina Schweiger | Central Institute of Mental Health Mannheim  
 Henrik Walter | Charité University Medicine  
 Susanne Erk | Charité University Medicine  
 Barbara Franke | Radboud University Medical Center  
 Andreas Meyer-Lindenberg | Central Institute of Mental Health Mannheim  
 Heike Tost | Central Institute of Mental Health Mannheim

Adoption and twin studies demonstrate that aggressive behavior runs in families with half the risk being attributable to genetic factors. Genome-wide association studies (GWAS) on anger and aggression have identified a new candidate gene for aggression, RBFOX1 (RNA binding protein fox-1 homolog 1), which is involved in neural development. Here, we assessed the impact of genetic variation in RBFOX1 on intermediate neural phenotypes of aggressive behavior in prefrontal-limbic emotion and inhibitory control circuits. 331 healthy adults (mean age = 33 +/-9.8; 48% male; ethnicity: Caucasian) were genotyped for the rs6500744 RBFOX1 variant, the top RBFOX1 hit in a GWAS on conduct disorder symptoms (Sonuga-Barke et al., 2008). Emotion-, and inhibition-related brain functioning was measured with a face-matching task and a Flanker/GoNogo task using functional magnetic resonance imaging (Meyer-Lindenberg et al., 2006). We analyzed the effect of rs6500744 on brain functioning with a 3 (genotype) x 2 (sex) full-factorial model controlled for age using SPM12. Risk allele carriers (CC, C/T) showed a significantly increased response of the dorsal anterior cingulate cortex during emotion processing (pFWE=.006), and a reduced response of the left inferior/middle frontal gyrus during inhibitory control compared to T/T carriers (pFWE=.033). Together with recent findings in animal models, we provide first evidence that genetic variation in RBFOX1 is associated with altered inhibition- and emotion-related prefrontal-cingulate functioning in humans. Notably, our findings for RBFOX1 converge with intermediate neural phenotypes in prefrontal-cingulate emotion and inhibition circuits previously linked to the MAOA-L genotype, the most widely studied risk genotype for aggression.

### **Neural Functioning in Emotion and Salience Networks in Intermittent Explosive Disorder**

Nelly Alia-Klein | Icahn School of Medicine at Mount Sinai

Intermittent-explosive disorder (IED) is characterized by disproportionate reactive aggression to provocation, and represents a quite prevalent psychiatric disorder in the aggression spectrum among the general population. The personal and societal consequences of aggressive behavior arising from IED are severe and long-lasting, especially since IED is often undiagnosed and therefore not treated adequately. We will present a series of functional magnetic resonance imaging (fMRI) studies tapping



into emotional (e.g., arousing threat pictures), and behavioral domains (e.g., retaliatory versus reward-seeking behavior) that have previously been shown to be impaired in individuals with IED. Specifically, we will discuss the role of the orbitofrontal cortex and the pulvinar in arousal modulation to threat images; and furthermore, the role of the mesocorticolimbic salience network assessed with an fMRI-adapted version of the point-subtraction aggression paradigm in IED. For the first time, we will present findings from resting-state fMRI analyses in IED implicating the habenula as an important node for human reactive aggression, pointing to direct translation from recent pre-clinical studies. Finally, it is of vital importance to understand the neural mechanisms underlying disproportionate reactive aggression in IED, in order to develop efficacious intervention approaches aimed at reducing severe outbursts of aggression.

### **Neurobiology of Psychopathy, Neuroimaging Methods, Neuroprediction of Future Antisocial Behavior in Youth and Adult Criminal Populations**

Nathaniel Anderson | The University of New Mexico

The criminal justice system makes predictions about future human behavior every day. Whether to grant bail, provide sentencing enhancements (i.e., life-sentence), or whether to grant probation or parole, the justice system is in the business of making predictions. To aid with these predictions researchers have developed numerous actuarial scales to improve predictive accuracy. This research has identified variables, such as age, age of first criminal offense, impulsivity, genetics, and psychopathy, as important predictors of future antisocial behavior. Here we review recent studies examining how neuroscience may add to the predictive utility of these and new brain based measures of risk. Indeed, studies have shown that brain based measures are often incrementally predictive of future antisocial behavior, above and beyond actuarial data, and may someday be useful in aiding the justice system in making better predictions.

### **Symposium 17: Media Violence 2 - Multiple Media**

Sarah M. Coyne | Brigham Young University

The proposed submission will consist of two different symposia examining the short-term and long-term effects of media violence on a variety of behaviors and attitudes. This proposal (Media Violence 2 - Multiple Media) will examine the impact of exposure violence in multiple media, and will end with a broad examination of the wider media violence field. Paper 1 examines the impact of violent pornography on sexual aggression. Paper 2 consists of a 10 year longitudinal study examining how exposure to early media violence use (in five different contexts) increases the risk of engaging in violent behavior, getting into a physical altercation, and using a weapon in the future. Paper 3 consists of six studies to examine why individuals ignore and dismiss media violence effects. Finally, Paper 4 will discuss extensions to the General Aggression Model and the future of media violence research. These papers represent multiple methodologies (cross-sectional, experimental, longitudinal, etc) from multiple countries (Australia, USA, and the United Kingdom) and provide a wide lens view to the impact of media violence on individuals.

### **Media Violence, Internet Pornography, and Societal Violence toward Women**

Wayne A. Warburton | Macquarie University

Shireen Bernstein | Macquarie University

This talk briefly examines the notion that portrayals of violence toward women in media such as video games and music may impact aggressive attitudes and behaviors toward women, before focusing on the effect of viewing aggression toward women in internet pornography (IP). IP often contains content where women are coerced, humiliated, hit or hurt. To examine whether exposure to such content impacts the behavior of IP viewers, 278 young adults were asked about their IP use and its impact on their thoughts, feelings and behaviors. Although most participants explicitly rejected violence, a substantial number reported that the pornography they accessed impacted their own sexual behavior, and a small but robust link between IP and sexual aggression in the form of sexual coercion and physical aggression was found. This talk concludes by suggesting further avenues for research on the links between portrayals of violence toward women in various media and violence toward women in the home and in wider society.

### **The Relation between Media Violence Exposure in Childhood and Externalizing Behaviors in Adulthood in the National Growing Up with Media Study**

Michelle Ybarra | Center for Innovative Public Health Research

Growing up with Media is a national, longitudinal survey. Youth were 10-15 years of age when they were first surveyed in 2006. In 2016, when they were 19-25 years of age, they were surveyed for the 7th time. The response rate was 50% (n=794/1586). Violent media was assessed across five different mediums (e.g., television, music, games, websites). Three types of past-12-month externalizing behaviors were analyzed: using a weapon, getting into physical altercations, and serious violence. Multivariate logistic regression models estimate that the relative odds of engaging in violent behavior in the past 12 months at Wave 7 were 2.3 times higher with each incremental increase in media violence exposure at baseline (p=0.05). When current media violence exposure was added to the

model (aOR = 1.6,  $p=.16$ ), the predictive value of baseline violent media exposure remained borderline significant (aOR = 2.0,  $p=0.10$ ). The relative odds of getting in a physical altercation in the past 12 months at Wave 7 rose 1.6 times with each incremental increase in exposure to media violence at wave 1 ( $p=0.006$ ). The relation became borderline significant (aOR = 1.4,  $p=0.09$ ) once current violent media exposure was added (aOR = 1.6,  $p=0.03$ ). The relative odds of using a weapon in the past 12 months at Wave 7 were 1.7 higher with each incremental increase of media violence exposure at Wave 1 ( $p=0.006$ ). This use was no longer significant ( $p=0.11$ ) once current exposure to media violence was added to the model (aOR = 1.7,  $p=0.3$ ). Findings suggest that exposure to media violence across a range of mediums, both when one is an adolescent as well as when one is a young adult, predicts one's likelihood of engaging in violent behavior and physical assault in young adulthood.

### **Media Violence “Debate” - Exploring Why People Deny Scientific Findings and Attack Scientists**

Sara Prot | Coventry University

Craig A. Anderson | Iowa State University

Douglas A. Gentile | Iowa State University

Muniba Saleem | University of Michigan

Ksenija Bosnar | University of Zagreb

Zlatan Krizan | Iowa State University

Denial of scientific evidence is a common phenomenon documented in various areas such as climate change, evolution, effects of vaccinations, tobacco and violent media effects. Science denial is often accompanied by anger and aggressive actions towards scientists including personal and professional attacks (Lewandowski, Mann et al., 2013). Despite the large and consistent research literature demonstrating media violence effects on aggression (e.g. Anderson et al., 2010), science denial is prevalent in this area and especially in the area of violent video game effects research. Six studies explored factors underlying denial of violent video game effects and aggressive actions towards scientists, focusing on both individual differences and intergroup dynamics between scientists and denialists. Two cross-sectional correlational studies revealed associations between social identification, intergroup threat and science denial of violent video game effects. Three experimental studies demonstrated significant short-term effects of social identification and intergroup threat on science denial, anger and aggression towards scientists. Finally, a short-term longitudinal study revealed considerable stability in anti-science attitudes. These findings suggest that science denial is a complex phenomenon influenced by a number of individual-level and group-level processes. When research findings threaten a valued social identity and when scientists are perceived as a highly threatening group, people are more likely to derogate the research, and to express anger and aggression towards researchers.

### **Media Violence and the General Aggression Model**

Craig A. Anderson | Iowa State University

Brad J. Bushman | Ohio State University

The General Aggression Model (GAM) is a meta-theory that considers the role of personal and situational variables on aggressive behavior, ranging from the biological to the cultural. Possible mediating variables include internal states (e.g., aggressive thoughts, angry feelings, increased

physiological arousal) and the results of appraisal and decision processes (automatic and controlled). In this presentation, we focus on one situational variable—exposure to violent media—and how it can influence a wide array of cognitive, developmental, emotional, and social processes that can increase likelihood of aggression. We use GAM as a theoretical framework to explain a wide variety of violent media effects. We add some clarifications and extensions to GAM that research in the past 15 years has shown to be needed in the model. We also suggest new research directions in the media violence domain that we believe will be especially useful in the future.

### **Symposium 18: Ethnic-Based Aggression and Victimization in Adolescence and Early Adulthood**

Anja Schultze-Krumbholz | Technische Universität Berlin

Jan Pfetsch | Technische Universität Berlin

According to the 2015 Ageing report of the European Commission, migration to Europe has been constantly increasing since around 2000 and will continue doing so for the next 20 years. Therefore, European adolescents and young adults are increasingly faced with ethnic heterogeneity in many countries. This may pose challenges, but also opportunities. Some of the challenges are additional forms of aggression and victimization, namely aggression based on ethnic characteristics of the target, e.g. ethnic bullying or victimization. Adolescence is a sensitive phase for identity formation, which is also influenced by identification with certain groups as well as ethnic background. Thus, ethnic-based victimization, directly threatens adolescents' identity development as well as their psychological well-being (cf. Schmitt, Branscombe, Postmes & Garcia, 2014). On the other hand, ethnic variables might also be predictors of aggression, such as different norms about aggression in different ethnical or cultural groups. For example, Fandrem and colleagues (2009) suggest that higher levels of bullying perpetration among immigrant youths might be associated with the wish for affiliation. This symposium presents empirical research examining ethnic-related aggression and ethnic influences on aggression and victimization. Patterns of ethnic victimization and aggression are empirically identified within a German adolescent sample and will be presented together with predictors for showing these patterns. Further potential predictors of ethnic victimization are migration status, acculturation orientation and bullying perpetration, as examined in an Italian adolescent sample. A third study reports on cyberbullying and in how far forms, impact and coping are related to ethnicity in a German adolescent sample. Finally, mechanisms of justice sensitivity fostering or inhibiting prejudice and discrimination against other ethnic groups are examined in an age-diverse German sample.

#### **Patterns of Racial/Ethnic-Related Victimization and Aggression in a German Adolescent Sample**

Anja Schultze-Krumbholz | Technische Universität Berlin

Angela Ittel | Technische Universität Berlin

In 2015, every third adolescent in Germany stemmed from a family with a migrant background (Statistisches Bundesamt, 2017). As this proportion will likely increase in the future (European Commission, 2015), reports of ethnic/racial aggression are a growing concern to educators and students. Ethnic/racial victimization and aggression refer to a subtype of aggression based on racial or ethnic characteristics of the target. Previous research showed this type of victimization to be associated with internalizing and externalizing problems (e.g. McKenney, Pepler, Craig & Conolly, 2006). In the present study, 282 seventh and eighth grade students (51.4% girls, 47.2% boys, MAge = 13.22 years, SDAge = 0.84 years, range: 11-16 years) provided data on self-report measures regarding different types of ethnic victimization and perpetration (native language, religion, appearance and ethnicity; Strohmeier, 2016) as well as internalizing and externalizing problems (SDQ; Goodman, 2001). 132 (46.8 %) of the students were from a migrant background. As we did not have hypotheses regarding patterns of ethnic victimization and aggression, we conducted exploratory latent class analyses (LCA). Preliminary results show a 3-class-solution to be the most fitting for victimization as well as for aggression. Patterns look very similar for victims and aggressors: no ethnic victimization/aggression (75.8% each), ethnic victimization/aggression mostly through mockery and name-calling and a focus on appearance (17.0% and 15.2%, respectively) and intense ethnic

victimization/aggression (7.2% and 9.0%, respectively). Classes will be examined regarding covariates (age, gender, migrant status) and internalizing and externalizing problems. Implications for students and school professionals will be discussed.

### **Ethnic Bullying: How Does Acculturation Orientation Interact with Social Withdrawal in Determining the Impact of Different Immigrant Status on Victimization?**

Benedetta E. Palladino | University of Florence

Valentina Zambuto | University of Florence

Ersilia Menesini | University of Florence

Literature has shown that the first generation of immigrant adolescents experiences a higher rate of bullying compared to the third generation and to native counterparts (Pottie et al. 2015). From a psychological perspective it seems important to understand how acculturation towards home and host countries could interplay with individual characteristics such as social withdrawal, in determining the impact of different immigrant status on ethnic victimization. Within a large school project, we collected data about 70 adolescents born abroad (foreign parents, no Italian citizenship); 96 born in Italy (foreign parents, no Italian citizenship, only at 18 years old they can request it); 96 born in Italy with an Italian parent and an immigrant one (they have Italian citizenship) (total N=252). At the univariate level we found that the least frequent group showed lower levels of ethnic victimization ( $F(2, 250) = 6.305$ ;  $p = .002$ ) and a higher level of acculturation orientation toward Italy ( $F(2, 250) = 14.078$ ;  $p = .002$ ).

### **Cyberbullying in a Multicultural Context – Forms, Strain, and Coping Related to Ethnicity**

Jan Pfetsch | Technische Universität Berlin

Ebru Balıkcı | Technische Universität Berlin

Ahmet Levent | Technische Universität Berlin

Cyberbullying is repeated aggression via digital media. There is numerous research analyzing forms of cyberbullying (e.g., relational or picture-based cyberbullying) and coping reactions towards cybervictimization (e.g., passive coping, seeking social support, retaliation). However, the dynamics of cyberbullying in a multicultural society are not well-understood yet. While Hispanic and black youth seem to experience less cybervictimization than white youth, they show comparable rates of negative mental health outcomes (Edwards, Kontostathis, & Fisher, 2016), but evidence is scarce outside of the U.S. From 6-15-year-old Germans, 4% were born in another country (first-generation immigration), 25% were born in Germany, but their parents in another country (second-generation immigration), and 71% had no migration background (Destatis, 2017). The current study focused on these groups: How does cyberbullying refer to ethnic-related characteristics (e.g., language, religion, appearance) versus non-ethnic-related characteristics (e.g., dispute, provocation, academic achievement)? Do persons with migration background show different levels of strain and coping mechanisms? In search of an ethnic diverse sample, N = 348 adolescents, aged M = 14 (SD = 1.2) years, 50% males, filled in a questionnaire about cyberbullying, perceived strain, motives for cybervictimization and coping behavior. 21% of the sample were non-migrants, 14% first-generation immigrants, and 66% second-generation immigrants. While first-generation immigrants reported higher ethnic-related cybervictimization and ethnic-related motives for cybervictimization, they did not differ concerning language-based or relational cybervictimization, strain or coping behavior. Second-generation

immigrants did not differ from non-migrants. In sum, ethnic-related cybervictimization seems prevalent especially among first generation immigrants, who are affected in likely manner as non-migrants.

### **Links of Justice Sensitivity, Prejudice, and Discrimination**

Rebecca Bondü | Psychologische Hochschule Berlin

Felicia Engelhardt | Universität Konstanz

Felicia Schwemmer | Universität Konstanz

The tendency to frequently perceive and intensely negatively respond to injustice to one's own disadvantage (victim justice sensitivity) was related to antisocial behavior and conservative values by previous research. Thus, we assumed that victim justice sensitivity should also be positively related to prejudices against different groups. In contrast, the tendency to frequently perceive and negatively respond to injustice to the disadvantage of others (altruistic perspectives of justice sensitivity), were positively related to prosocial and cooperative behavior by previous research. Hence, we expected those justice-sensitivity perspectives to show negative relations with prejudice. We asked N = 337 participants between 16 and 68 years of age (M = 26.5 Jahre, SD = 10.93; 79% women) to rate their justice sensitivity, islamophobia, homophobia, und ambivalent sexism against men, as well as self-perpetrated discrimination. Victim justice sensitivity predicted islamophobia in cross-sectional regression models above and beyond authoritarianism and social dominance orientation, but not homophobia or ambivalent sexism against men. According to our hypothesis, the altruistic perspectives of justice sensitivity, predicted lower levels of islamophobia, homophobia, and ambivalent sexism against men. Finally, victim sensitivity positively and perpetrator sensitivity negatively predicted self-perpetrated discrimination cross-sectional. Hence, the findings of the present study further support the notion that high levels of victim justice sensitivity are related to a broad range of maladaptive patterns of behavior and cognition. In contrast, the altruistic perspectives of justice sensitivity are potential protective factors against prejudice.

### **Symposium 19: In Or Out Of Control? Neural Correlates of Anger, Aggression and Self-Control**

Lisa Wagels | Research Center Jülich

Thomas F. Denson | University of New South Wales

A major interest in psychology and neuroscience has been the identification of brain networks and mental processes that contribute to anger and aggressive behaviour. Although much progress has been made regarding the normal spectrum of aggression and its pathological expressions, many questions remain answered. The integration of neurobiological mechanisms and psychological theories is currently a major point of interest in the pursuit of further understanding anger and aggressive behaviour. Neuroimaging approaches are important in anger and aggression research because they allow the identification of mechanistic neurotransmitter systems, hormones and genetics. They also shed light on the neural correlates of potential psychological mechanisms (e.g., self-control, personality traits). Provocation is one of the most prominent factors leading to reactive aggression. This type of aggression is an emotional, impulsive reaction performed with the intention to hurt another person. Within the scanner, provocation often involves receiving negative feedback, a punishment, or an unjustified insult and requires the need for controlling negative emotions. Prior imaging work isolating the brain regions in anger and reactive aggression implicates those involved in emotional reactivity and self-control. Yet, linking variations in provoked aggression to specific alterations in the neurobiological system remains a challenge for aggression research. Further, whether increasing self-control affects the neural networks involved in control processes and angry affect remains unclear. The current symposium will focus on neural circuits that underlie anger and aggressive reactions following provocation. During the first session, the effects of self-control training on neural responses to provoked anger will be presented. The following two sessions will focus on gender differences in brain circuits processing social provocation and on the influence of exogenous testosterone and genetics on reactive aggression in males. Finally imaging results from adolescents exhibiting reactive aggressive conduct problems will highlight atypical neural mechanisms of threat processing under varying regulatory demands.

#### **Neural Responses to Practicing Self-Control: The Case of Anger Provocation**

Joanne R. Beames | University of New South Wales

Timothy P. Schofield | The University of Melbourne

Mark M. Schira | Neuroscience Research Australia and University of Wollongong

Thomas F. Denson | University of New South Wales

Poor self-control causes many problems for individuals and communities. One means to improve self-control is through practice, otherwise known as self-control training (SCT). Studies examining the phenomenological mechanisms induced by SCT have failed to identify robust causal influences. One possibility is that SCT may enhance self-control via changes to neural activity. To test this hypothesis, the current fMRI study examined whether SCT changes neural networks related to self-control when provoked. Forty-five healthy young men and women completed two-weeks of SCT or an active behavioral monitoring task, and were then insulted during scanning. Relative to participants in the SCT condition, participants in the control condition demonstrated increased activation in the middle frontal gyrus, precentral gyrus, insula, and claustrum from pre- to post provocation. Trait aggression correlated with activation in prefrontal areas for both conditions, increased activation in the insula for the SCT condition, and increased activation in the hippocampus and thalamus for the control condition.



Amygdala-frontal functional connectivity emerged in both conditions post-provocation, however, connectivity was stronger in the SCT condition. Finally, SCT had no impact on a behavioral measure of response inhibition or self-reported anger. These results provide the first evidence for the neural mechanisms underlying SCT.

### **Sex Differences in Automatic Emotion Regulation Give Rise to Differential Brain Activation in Reactive Aggression**

Nils Kohn | Donders Institute for Brain, Cognition and Behaviour

Jonathan Repple | Münster University and Uniklinik RWTH Aachen

Christina M. Pawliczek | Uniklinik RWTH Aachen

Ute Habel | Uniklinik RWTH Aachen and Research Center Jülich

Lay psychology suggests strong sex differences in aggression, yet little is known about the underlying neurobiology of putative differential aggressive tendencies between the sexes. We investigated reactive aggression in 20 women and 22 men, employing a modified Taylor Aggression Paradigm (mTAP) in an fMRI setting. Subjects were provoked by money subtraction from a fake opponent and given the opportunity to retaliate likewise. In the absence of behavioral differences, male and female subjects showed differential brain activation patterns in response to provocation. Men had higher left amygdala activation during high provocation. This amygdala activation correlated with trait anger scores in men, but not in women. Also, men showed a positive association between medial prefrontal cortex (mPFC) and the anterior cingulate cortex (ACC) activity in the provocation contrast and their tendency to respond aggressively, whereas women displayed a negative association. Drawing on the automatic emotion literature, the brain activation patterns align with sex differences in automatic emotion regulation underlying reactive aggressive behavior. This interpretation is further supported by correlation of brain activity with task reactivity and trait measures. Brain activation differences during a reactive aggression paradigm and the absence of behavioural differences might be explained by sex differences in automatic emotion regulation.

### **Neural Mechanisms of Exogenous Testosterone and Genetic Susceptibility in Reactive Aggression**

Lisa Wagels | Research Center Jülich, Research Center Juelich and RWTH Aachen University, Uniklinik RWTH Aachen

Ute Habel | Research Center Jülich, Research Center Juelich and RWTH Aachen University, Uniklinik RWTH Aachen

Mikhail Votinov | Research Center Jülich, Research Center Juelich and RWTH Aachen University, Uniklinik RWTH Aachen

Intra individual differences in the reaction towards provocation might be partly explained by alterations in the genetic susceptibility for aggression as well as fluctuations of hormones. Among others, the sex hormone testosterone and a polymorphic region of the MAOA gene have been proposed to affect aggressive tendencies and underlying neural mechanisms. In a randomized double-blind placebo controlled design, 103 participants were applied with either a testosterone or a placebo gel before engaging in a social provocation paradigm during an fMRI experiment. Additionally, participants were genotyped for the MAOA VNTR polymorphism. In both groups, participants indicated increased negative affect after performing the task. They also reacted more aggressively towards high

provocations in the preceding trial. On a neural level comparing high to low provocation was associated with increased activity in the prefrontal cortex, bilateral insula and amygdala. The testosterone group was more sensitive towards social provocation compared to the placebo group subtracting reacting more aggressively on high provocations. Correspondingly, increased amygdala reactivity towards social provocation was found in the testosterone group. Male carriers of MAOA short alleles in the in the testosterone group demonstrated significantly enhanced connectivity between the prefrontal cortex and the amygdala. This was in line with lower anger and task aggression levels in this group. The results demonstrate that testosterone affects aggressive responding depending on context and genotype. Testosterone effects on aggression seem to be related to amygdala reactivity during provocation processing and connectivity of prefrontal-limbic networks during aggressive responding.

### **Modulation of Amygdala Response by Cognitive Conflict in Threat-Reactive Adolescents with Conduct Problems**

Catherine L. Sebastian | University of London

Jean Stafford | University College London

Eamon J. McCrory | University College London

Arjun Sethi | University College London

Stephane de Brito | University of Birmingham

Patricia L. Lockwood | University of Oxford

Essi Viding | University College London

Adolescents with threat-reactive conduct problems typically display high levels of reactive aggression, i.e. aggression in response to threat, frustration or provocation. However, little is known regarding the neural mechanisms which may contribute vulnerability for these behaviours. Our prior research has shown that these adolescents display hyperactive amygdala response to facial fear, which may have functional relevance for executive processing (Sebastian et al., 2014). However, it is unknown whether amygdala response to fear in this group shows the typical pattern of modulation by variation in cognitive task demands. Here, we present fMRI data from a cognitive conflict task in which the requirement to visually scan fearful faces was held constant across low and high levels of cognitive conflict (load) in 17 threat-reactive adolescent males with conduct problems (CP) and 18 typically developing (TD) controls. TD adolescents showed a typical pattern of attenuated right amygdala response to fear under high (relative to low) conflict, replicating previous findings from this task in a typical adult sample (Sebastian et al., 2017). However, threat-reactive adolescents with CP showed the reverse pattern, with attenuated right amygdala response to fear under low conflict only. Findings suggest atypical modulation of amygdala response as a function of task demands, and raise the possibility that this group are unable to implement sufficient regulation of amygdala response when cognitive task demands are high.

## **Symposium 20: Alcohol as a Distal and Proximal Risk Factor for Sexual Aggression: Evidence from Longitudinal, Experimental and Qualitative Data**

Massil Benbouriche | Wayne State University

Antonia Abbey | Wayne State University

Sexual aggression is a substantial public health issue on university campuses and in society at large. Alcohol is present in approximately 50% of sexual assaults (Abbey et al., 2014). Results of experimental studies also show that alcohol is a situational risk factor for sexual aggression ( $d = .32$ ; Crane et al., 2016). Using data from longitudinal, experimental and qualitative designs, the overall aim of the present symposium is to discuss how and for whom alcohol is involved in sexual aggression. Testa and Cleveland present results from a prospective study with first year male college students highlighting the role of drinking venue attendance in the relationship between heavy episodic drinking and sexual aggression. Benbouriche et al. describe findings from an alcohol administration study which demonstrate that alcohol's effects on men's sexual aggression intentions vary based on their rape supportive attitudes. Through a sexual imposition paradigm, Leone et al. examine the independent and interactive effects of alcohol, perceived alcohol use of the female target, and masculine gender role stress on men's sexual aggression. Abbey et al. present findings from a dating simulation designed to study "in the moment" processes associated with sexual aggression. For intoxicated male participants, there was a strong link between engaging in consensual sexual activities and persisting after receiving a refusal. Swan et al. asked college students to describe situations in which alcohol or other drugs were used without someone's knowledge to obtain sex without consent. Although these situations were rare, they occurred in social situations which felt normal and safe. In combination, these studies provide insight into the types of circumstances in which alcohol is most likely to encourage sexual aggression among individuals predisposed to be sexually aggressive. The authors will discuss the implications of their findings for future research and prevention initiatives.

### **Heavy Episodic Drinking and Sociosexuality Predict College Men's Sexual Aggression Perpetration via Drinking Venue Attendance**

Maria Testa | University at Buffalo

Michael J. Cleveland | Washington State University

Background: College men's alcohol consumption has been positively associated with sexual aggression perpetration and alcohol is present in half of college sexual assaults. Yet, men's drinking is typically not a robust longitudinal predictor of later sexual assault (Testa & Cleveland, 2017; Thompson et al., 2015) after accounting for risk factors, such as impersonal sex. Men characterized by heavy episodic drinking and impersonal sex were expected to frequent drinking venues (parties, bars), which have been shown to predict sexual aggression perpetration over multiple college semesters (Testa & Cleveland, 2017). In the present study, we proposed and tested an indirect effects model whereby college men's tendency to engage in impersonal sex was hypothesized to contribute to heavy episodic drinking and participation in drinking venues (parties, bars), which in turn has a positive effect on sexual aggression perpetration. Method: Freshman males ( $N = 1043$ ) were recruited via email to participate in a 5 semester study. Key measures included the Sociosexuality Index (Simpson & Gangestad, 1991) as a measure of impersonal sex, frequency of heavy episodic drinking (HED, 5+ drinks per occasion), frequency of attending drinking venues (parties, bars), and the Sexual Strategies Survey (SSS, Struckman-Johnson et al., 2003), a measure of tactics used to convince a female partner to have sex

when she didn't want to. Using T1 data to predict T3 SSS and using T3 data to predict T5 SSS, we found support for hypothesized indirect effects of HED and Sociosexuality on self-reported sexual aggression via attendance at drinking venues.

### **From Sexual Misperception to Behavioral Intentions: The Distinct Effects of Alcohol and Sexual Arousal in Sexual Aggression**

Massil Benbouriche | Wayne State University

Jean-Pierre Guay | University of Montreal

Benoit Testé | University of Brittany

Marc Lavoie | University of Montreal

Background: Alcohol myopia (Steele & Josephs, 1990) is the dominant theory to explain the effects of alcohol in sexual aggression (George & Stoner, 2000). A similar framework has been proposed to explain the effects of sexual arousal in social information processing, in particular decision-making, namely a "motivational myopia" (Ditto et al., 2006). However, much less is known about the interactive effects of alcohol and sexual arousal in sexual aggression. Method: We used a 2 x 2 betweenparticipants factorial design (N = 135) to study the effects of acute alcohol intoxication and sexual arousal on (1) sexual misperception, (2) behavioral intentions to use non-violent coercive strategies, and (3) behavioral intentions to commit rape. Results: Using Cox regressions, multiple linear and multiple logistic regressions, we found that the effects of alcohol on sexual misperception as well as on behavioral intentions of sexual aggression were moderated by rape supportive attitudes. Together, those results indicate that even when men correctly perceive an absence of sexual consent, those with a higher level of rape supportive attitudes are more likely to use coercive strategies to have sex if no alcohol has been consumed, but are also more likely to commit rape when they have consumed alcohol. Discussion: Further investigations is required to fully understand why sexual arousal showed no significant effect. While sexual arousal was successfully manipulated, such results suggest that processes underlying alcohol myopia and motivational myopia may differ.

### **We Were Both Drunk: Examining Interactive Effects of Men's Acute Alcohol Intoxication, Masculine Gender Role Stress, and Women's Drinking on Sexual Aggression Perpetration**

Ruschelle M. Leone | Georgia State University

Michelle Haikalis | University of Nebraska-Lincoln

Dominic J. Parrott | Georgia State University

David DiLillo | University of Nebraska-Lincoln

Scant research has elucidated individual differences in sexual aggression (SA) perpetration when alcohol is consumed by either the perpetrator or victim (i.e., discordant) or both parties (i.e., concordant). The present study sought to examine the effect of men's acute alcohol intoxication and laboratory-based SA perpetration in the presence of a male peer as a function of their tendency to cognitively appraise gender relevant situations as stressful (i.e., masculine gender role stress; MGRS) and their perceptions of a woman's drinking. Participants were 156 men who completed a self-report measure of MGRS, were randomly assigned to consume an alcoholic or non-alcoholic beverage, and then engaged in a laboratory paradigm with a male friend wherein they had the option to show a female confederate, who reported a strong dislike of sexual content in the media, a sexually or non-

sexually explicit film. Prior to selecting a film for her to watch, men were informed that the female confederate was randomly assigned to either an alcohol or no-alcohol beverage condition. Results indicated that intoxicated, compared to sober, participants were (1) more likely to perpetrate SA towards an intoxicated woman when they were high, but not low, in MGRS, and (2) less likely to perpetrate SA against a sober woman when they were high, compared to low, in MGRS. Findings suggest that concordant, but not discordant, drinking is more likely to be associated with SA perpetration in high MGRS men. Discussion will be guided by alcohol myopia theory and consider prevention implications.

### **Men's Responses to Women's Sexual Refusals: Evaluation of a Dating Simulation of Sexual Aggression Developed for Alcohol Administration Research**

Antonia Abbey | Wayne State University

Sheri Pegram | Wayne State University

Jackie Woerner | Wayne State University

Rhiana Wegner | Wayne State University

Breanne Helmers | Wayne State University

Zunaira Jilan | Wayne State University

Self-report surveys provide a wealth of information about the etiology of sexual aggression; however, neither "in the moment" processes or causality are established with correlational designs. We developed a 2-dimensional virtual reality dating simulation in which male participants go on multiple dates with a female agent viewed from a first person perspective on a computer screen. Participants are given a list of choices about what they can do with their date; the list includes nonsexual activities (e.g., watch TV), sexual activities she accepts (e.g, kiss), and sexual activities she refuses (e.g., vaginal sex). Sexual aggression is operationalized as repeated attempts to engage in sexual activities the female agent refuses. Ecological validity is high because participants make decisions throughout the simulation. In a construct validity study, the number of refusals 87 men received was significantly positively correlated with their self-report (from a separate session) of committing sexual aggression. Aggression in response to rejection was predicted by an interaction between individual characteristics (e.g., sexual dominance) and forming hostile cognitions about the female agent. In another study, 62 male participants completed the simulation after being randomly assigned to drink alcohol (BAC = .08) or no alcohol. There was a stronger link between engaging in low level sexual activities and persisting in attempts at refused penetrative sex among intoxicated participants as compared to sober participants. In sum, this experimental analogue for sexual aggression allows researchers to examine individual and situational factors that are most likely to trigger men's aggressive responses to women's sexual refusals.

### **Alcohol and Sexual Assault in the Context of Drugging**

Suzanne C. Swan | University of South Carolina

Nicole V. Lasky | Northeastern State University

Bonnie S. Fisher | University of Cincinnati

Kayla Ford | University of South Carolina

Andrew T. Schramm | University of South Carolina

Findings from over 6,000 college students indicated 1 in 13 students knew or suspected that they had been drugged (i.e., administered a drug or alcohol without their knowledge or consent; Swan et al., 2016). Among students who had been drugged, 12.1% experienced unwanted sexual touching and 5.4% experienced forced sexual intercourse while they were drugged. In this paper, we report on qualitative data from in-depth semi-structured interviews that shed light on the role of alcohol in sexual assaults that occur in the context of drugging. Interviews were conducted with one individual who described using alcohol to commit sexual assault, and 12 people (10 female, 2 male) who were drugged and sexually assaulted. The perpetrator described the deliberate use of alcohol to get both himself and the victim drunk so “that way we both can’t consent...and it’s not really rape either”. In his mind, being drunk created a “moral grey zone” in which nobody could be held accountable for their actions, therefore rape could not occur. For victims, the sexual assaults occurred in what seemed like a perfectly normal social situation, typically a night of socializing and drinking with people they trusted, just as they had done many times before. Many victims had not been drinking heavily when they were drugged. The data indicate that rapists exploit socially normative situations in which friends drink together, and the trust of those around them, to commit crimes.

### **Symposium 21: Extending the Reach of Evidence-Based Parenting Interventions for Aggressive Behavior Using Innovative Implementation Strategies**

Miguel T. Villodas | San Diego State University

Harsh and hostile parent-child interactions and the use of ineffective or inconsistent behavior management strategies have consistently been found to contribute to the development and maintenance of child aggressive and externalizing behavior. It is not surprising that intervention programs that teach parents to consistently apply effective strategies for managing aggressive behavior and to improve the quality of parent-child interactions are supported by extensive evidence from meta-analytic studies (Kaminski, Valle, Filene, & Boyle, 2008). However, evidence-based parenting interventions are under-utilized by many of the families that may have the greatest need for these strategies (e.g., low-income families) and dropout continues to limit their effectiveness (Reyno & McGrath, 2006). This symposium brings together leading researchers to present recent findings from four randomized controlled trials that tested innovative implementations of evidence-based parenting interventions for children with aggressive and externalizing behavior problems to improve their accessibility, utilization, and effectiveness among at-risk families. First, Dr. Daniel Bagner will present findings from the Infant Behavior Program, a brief, home-based adaptation of Parent-Child Interaction Therapy (PCIT), for infant aggressive behavior in low-income families. Second, Dr. Miguel Villodas will discuss findings from an in-home adaptation of PCIT for reducing parent-child aggression, as well as child externalizing behavior problems among families who were investigated for child abuse. Third, Dr. Paulo Graziano will present findings from a trial comparing a brief, intensive adaptation of PCIT to the traditional format for reducing aggressive behavior among children from predominantly low-income, Latino families. Finally, Dr. Linda Pfiffner will discuss factors, that moderated the effects of the Collaborative Life Skills program, a school-based multi-component behavioral parent training program for children with externalizing behavior problems. The Discussant, Dr. Andrea Chronis-Tuscano, will consider these presentations in the context of the emerging literature on improving the efficacy and effectiveness of evidence-based interventions for at-risk families.

#### **Impact of a Brief and Home-Based Intervention on Aggressive Behaviors in High-Risk Infants**

Daniel M. Bagner | Florida International University

Brynna H. Heflin | Florida International University

Perrine Heymann | Florida International University

**Introduction:** Early child aggressive behaviors are prevalent, particularly for low-income families. Despite evidence for parenttraining interventions, including Parent-Child Interaction Therapy (PCIT), economically disadvantaged families have higher dropout rates and poorer outcomes. Identification of problems in infancy would likely require less intensive and shorter interventions. Therefore, we examined the effect of a brief and home-based adaptation of PCIT for infants, the Infant Behavior Program (IBP), on infant aggressive behaviors. **Method:** Families were recruited at a large primary care clinic. Of the 60 infants (Mean = 13.57 months) randomized to IBP or standard care (SC), most (60%) were from families with incomes below the poverty line. Aggressive behaviors were rated by mothers on the Infant-Toddler Social Emotional Assessment (ITSEA) and coded by masked observers for frequency and on a global scale during an observed parent-infant interaction. **Results:** In a mixed-effects regression model examining longitudinal change on the ITSEA from baseline to a 6-month follow-up, the group by time interaction was significant (.045;  $p < .05$ ;  $d = .51$ ). Specifically, maternal

report of aggression significantly increased over time for the SC group (slope = .057,  $p < .01$ ) but did not change in the IBP group. Coding of aggressive behaviors is in progress and will be completed and analyzed by the meeting. Conclusion. Results suggest the IBP can be effective in preventing aggression from increasing during the second year of life. These findings highlight the opportunity to intervene as early as possible to improve access and care for at-risk infants and their families.

### **The Effects of an In-Home Parent-Child Relational Intervention on Parent-Child Aggression and Child Externalizing Behavior Among Families At-Risk for Child Abuse**

Miguel T. Villodas | San Diego State University

Feion M. Villodas | San Diego State University

Kelly D. Cromer | Florida International University

Jacqueline O. Moses | Florida International University

Loreen Magaiño | Florida International University

Daniel M. Bagner | Florida International University

Early identification and intervention with families at-risk for parent-child aggression is essential to the prevention child physical abuse and externalizing behavior problems. Despite improvements in the identification of at-risk families and the availability of evidence-based parent training interventions, many at-risk families do not receive these services. The purpose of this study was to examine the feasibility and initial effectiveness of an in-home adaptation of Parent-Child Interaction Therapy (PCIT), with a motivational enhancement, for the prevention of parent-child aggression and child externalizing behavior problems among families at risk for child abuse. Twenty-seven families who were (1) investigated by the Department of Children and Families for suspicion of child abuse, (2) determined to be at moderate or high risk for abuse, and (3) remained intact, were referred to two community agencies and randomly assigned to receive either PCIT ( $n=14$ ) or services as usual (SAU;  $n=13$ ). Parents assigned to PCIT reported a significantly greater reduction in their use of physically assaultive discipline strategies (e.g., hitting child with an object, slapping child in the face) following treatment than parents assigned to SAU,  $2(1) = 4.2$ ,  $p < .05$ . Parents assigned to PCIT also

reported significant reductions in their children's externalizing behavior problems following treatment, Cohen's  $d = .8$ , while parents assigned to SAU did not, Cohen's  $d = .24$ . The findings of this study indicate that in-home PCIT can effectively reduce parent-child aggression and child externalizing behavior problems among families at-risk for child abuse. Barriers to intervention feasibility with this population will be discussed.

### **Condensing Parent Training: A Randomized Trial Comparing the Efficacy of a Briefer, More Intensive Version of Parent-Child Interaction Therapy (I-PCIT)**

Paulo A. Graziano | Florida International University

Rosmary Ros | Florida International University

Despite being an evidence-based intervention for early externalizing behavior problems (EBP), Parent-Child Interaction Therapy (PCIT) is often associated with significant attrition ranging from 33 to 60% (Eyberg et al., 2001). Hence, it is imperative to determine whether a shorter treatment period yields better treatment participation but with similar gains. Other potential advantages of an intensive



treatment include reducing functional impairment in a more rapid manner as well as enhancing family motivation by having a more focused treatment period. The purpose of the current study was to examine the comparative efficacy of a briefer more intensive version of PCIT (I-PCIT; Graziano et al., 2015). Fifty-six children (Mage= 4.27) with elevated EBP (67% boys, 83% Hispanic, median income = \$35,000-50,000) were randomly assigned to receive 10 sessions of either traditional PCIT (1 day/week for 10 weeks) or I-PCIT (5 days/week for 2 weeks). Reductions in aggression and overall EBP were comparable across traditional PCIT and I-PCIT, Cohen's  $d = 1.21-2.36$ . Similarly, improvements in positive parenting, negative parenting, and parenting stress were also comparable across treatment groups, Cohen's  $d = .32-1.14$ . Despite similar significant improvements across treatments, the dropout rate was significantly higher in the traditional PCIT group (8%) compared to I-PCIT (0%). Results demonstrate the initial efficacy of a briefer more cost effective treatment for young children with EBP. Of note, we are finishing our 6-month follow-up data along with coding of parenting skills, which will also be presented.

### **Moderators of Multicomponent School-Home Intervention Effects on Externalizing Behaviors**

Linda J. Pfiffner | University of California

Yuanyuan Jiang | University of Alberta

Behavioral parent training is the leading evidence-based psychosocial treatment for externalizing problems, yet accessibility and generalizability of treatment effects are limitations. To address these concerns, the Collaborative Life Skills (CLS) program, was developed for elementary school-age students with attention and behavior problems. CLS is a 12-week program of empirically supported parent training combined with school and student components and delivered in urban public schools by existing schoolbased clinicians. Using a cluster randomized design, we compared CLS (N=12 schools, N=72 students) to usual school/community services (N=11 schools, N=63 students) and found that CLS showed significantly greater improvement in externalizing problems and functional outcomes than usual services (Pfiffner et al., 2016). In this study we evaluate potential moderators of treatment response. Linear mixed-effect models tested the interaction between child and parenting baseline factors with treatment group on oppositional/conduct symptoms at post-treatment (models adjusted for baseline and clustering effects by school). Significant interactions were explored by comparing simple slopes of association between the baseline factors and symptoms for each group. Results show significant interactions for group with parent-child dysfunction, child age, and severity of child conduct problems and aggression. Interactions between group with sex, race, and IQ were not significant. Analyses of slopes show that families with greater parent-child dysfunction, younger children, and children with more severe conduct problems and aggression showed a stronger immediate treatment response. These findings show that a school-based treatment model which includes parent training delivered at school sites may be especially effective for families and youth at greatest risk.

### **Discussant**

Andrea Chronis-Tuscano | University of Maryland

Dr. Andrea Chronis-Tuscano is an Associate Editor for the Journal of Consulting & Clinical Psychology and the President-Elect of the International Society for Research in Child & Adolescent Psychopathology (ISRCAP). She has conducted extensive research on developing novel treatments for

child psychopathology, which target early risk and protective factors, such as maternal parenting and psychopathology. She will consider the presentations included in this symposium in the context of using adaptive intervention and implementation strategies to improve the availability, efficacy, and effectiveness of evidence-based parenting interventions for at-risk families. Her discussion will focus on the common theme of the presentations, which focus on extending the reach of evidence-based intervention strategies by implementing them in settings and formats that increase availability, utilization, and engagement of families who may have the greatest need for services.

**Symposium 22: Preventing Aggression and Violence: What Can Our Research Offer**

Barbara Krahe | University of Potsdam

Compared to the rapid increase in knowledge about the individual development and situational triggers of aggression and violence, current evidence on effective strategies for prevention and intervention remains limited. Prevention efforts can be classified into two main categories. The first comprises efforts at reducing the dispositional tendency to engage in aggressive behavior by targeting individual risk factors, with intervention efficacy reflected in lower odds of acting aggressively over time. The second approach is directed at situational interventions designed to reduce the probability of aggressive reactions in a specific context. The proposed symposium will exemplify the potential of sound, theory-based and methodologically rigorous interventions from each of the two categories to demonstrate how our knowledge about risk factors of dispositional and situational aggression can be used to design intervention efforts. The first two papers will present evidence of successful situational inhibition of aggression, buffering the effects of two well-established triggers of aggression, namely alcohol and frustration. The first presentation is grounded in alcohol myopia theory and demonstrates that alcohol-related impairment of information processing capacities can be counteracted by a self-awareness manipulation. The second presentation is based on the theory of incompatible states and shows that the elicitation of affective states such as positive affect, feeling relaxed, but also feeling sad, can mitigate anger following a frustration and thereby mitigate the frustration-aggression link. The next two presentations focus on interventions designed to reduce aggression on a more long-term basis. The third presentation reviews existing evidence on preventing antisocial and delinquent behavior and reports results of a successful project starting at preschool age. The fourth and final presentation addresses the prevention of intergroup aggression and introduces a project combining strategies at the local community level to promote integration. Avenues for strengthening the focus on prevention in future aggression research will be discussed.

**Enhanced Self-Awareness Reduces Aggression in Intoxicated Individuals: Moderators of Intervention Responsivity**

Dominic J. Parrott | Georgia State University

Christopher I. Eckhardt | Purdue University

Miklos B. Halmos | Georgia State University

Andrea Massa | Purdue University

It is well-established that alcohol is a contributing cause of aggression (Leonard & Quigley, 2016). Unfortunately, existing interventions for alcohol-related aggression, which focus almost exclusively on treatment for an alcohol use disorder, demonstrate only minimal effectiveness (Murphy & Ting, 2010). To address this gap, this presentation will describe the effects of a laboratory based intervention manipulation designed to reduce aggression post-alcohol consumption by inducing self-awareness and examine individual-level factors which moderate intervention responsivity. This program of research is grounded in Alcohol Myopia Theory (AMT; Steele & Josephs, 1990), which advances the counterintuitive prediction that alcohol will decrease aggression when inhibitory cues (i.e., heightened self-awareness) are most salient. Indeed, self-awareness is a particularly strong inhibitory cue, as the encoding of self-relevant information is associated with better self-regulation in accordance with nonaggressive social norms. Three independent laboratory-based studies will be presented which demonstrate that (1) intoxicated, aggression-prone individuals (Mean BrAC = .094-.098%) who are in

an environment saturated with self-awareness cues (relative to an environment devoid of such cues) will show reduced levels of aggression, and (2) different individual-level factors moderate individuals' responsivity to this intervention manipulation. Findings support the development of interventions that aim to redirect intoxicated individuals' attention toward stimuli that are non-aggressive, non-provocative, and/or prohibitive of aggressive behavior and highlight the importance of individual differences in receptivity to such interventions. Discussion will address methods by which this work can inform the development of "field ready" interventions for alcohol-related aggression.

### **Reducing Anger and Aggression through Eliciting Incompatible States: Interventions, Processes, and a Generalized Model of Incompatibility-Based Aggression Control**

Johannes Lutz | University of Potsdam

Barbara Krahé | University of Potsdam

According to the incompatible response hypothesis, the experience of certain affective states is inherently incompatible with aggressive behavior. Eliciting such incompatible states is proposed to buffer the effects of aggression-impelling factors, thereby reducing overt aggression. In this talk, we summarize the current state of research on incompatibility-based interventions and introduce a comprehensive formulation of the incompatible response hypothesis. While the majority of previous studies on the incompatible response hypothesis has focused on inducing incompatible positive affect through the visual domain (e.g. by exposing participants to funny cartoons), incompatibility effects may also arise from other modalities, like the haptic senses. Accordingly, we tested tactile sensations as a new modality for the induction of incompatibility. Further, past research has most often conceptualized incompatibility as the contradictoriness of positive and negative emotions. However, some negative emotions may also be incompatible with aggressive behavior. Specifically, we examined the aggression-reducing potential of the experience of sadness, an emotion linked to a reduction of approach behavior and passivity. Extending the basic idea of incompatibility to body posture-induced states, it was found that feeling relaxed, induced by sitting in a reclined position, reduced the link between frustration and aggression. Finally, a generalized model of incompatible states is introduced to account for the multiple processes underlying incompatibility effects, and to integrate them with contemporary theories of human aggression. The concluding discussion focuses on directions for future investigations of the processes underlying incompatibility effects and critically examines its possible applications in real-world aggression control settings.

### **Developmental Prevention of Aggression and Delinquency: Current State and an Example of a Long-Term Evaluation of a Universal Program**

Friedrich Lösel | University of Cambridge and University of Erlangen-Nuremberg

Doris Bender | University of Erlangen-Nuremberg

Mark Stemmler | University of Erlangen-Nuremberg

In the last decades there has been a strong expansion of programs of developmental prevention of aggressive, delinquent and antisocial behavior. Numerous programs have been implemented in families, schools and other contexts to reduce risk factors and promote protective factors. Most meta-analyses showed desirable average effects (Farrington et al., 2017), but they also revealed a lack of well-controlled evaluations with long follow-up periods that are necessary from a developmental

perspective. This presentation will at first briefly address the current state of developmental prevention. Then we present an own evaluation of a universal prevention program. This is part of the Erlangen-Nuremberg Development and Prevention Study (ENDPS), a combined longitudinal and experimental project that started at preschool age. In the prevention part a group-wise randomized design was used to evaluate a training of children's social problem solving skills, a parent training, and a combination of both programs. Outcomes were assessed in a multi-measure multi-informant approach from preschool to youth. There were various desirable effects not only in the short- and medium-term, but also after five and about ten years. The effects were mostly small and varied across times, outcome measures and informants. Our findings will be discussed with regard to the current state of developmental prevention and the issue of replication and differentiation (Lösel, 2017).

### **Integration as a Means to Prevent Intergroup Violence**

Ulrich Wagner | University of Marburg

Johannes Maaser | Philipps-University and Marburg City Administration

Intergroup theories and research have convincingly demonstrated: Intergroup faultiness leads to negative escalating intergroup conflicts, including prejudice, discrimination and violence. Important moderators of intergroup conflicts are (perceived) negative interdependence about material resources as well as values and norms and the missing of intergroup contact. The described process holds true for right wing intergroup violence as well as extremist violence based on religious backgrounds. Evidence based prevention of intergroup violence should focus on this scientific knowledge. Since negative escalating intergroup conflicts depend both of the objective situation of the groups involved as well as on the perceived negative interdependence, plans about prevention of intergroup violence also have to incorporate societal and political determinants of these perceptions as well as processes of propaganda reception. The presentation reports about interventions to prevent intergroup violence with a special focus on a local co-operation project of the Working Unit Social Psychology at the Philipps-University and the city of Marburg. Interventions incorporate measures to avoid right-wing violence against immigrants as well as to improve integration of immigrants and thereby to avoid religious extremist violence. One measure in this context was to study interactions between immigrants and the autochthonous population and reporting the results to the public as a means to counteract stereotyped political debates about the threats associated with immigration.

### **Symposium 23: The Risky Business of Predicting Intimate Partner Violence**

Kevin L. Nunes | Carleton University

Over the past decades researchers have demonstrated that risk for intimate partner violence (IPV) can be identified, measured, and managed. Several instruments have been developed to guide the assessment of the risk (likelihood of re-offence) posed by IPV offenders, such as the Ontario Domestic Assault Risk Assessment (ODARA; Hilton et al., 2004; Hilton, Harris, & Rice, 2010) and the Spousal Assault Risk Assessment (SARA; Kropp, Hart, Webster, & Eaves, 1994, 1995, 1998). Our first presenter, Zoe Hilton, has led those advances, developing and validating two widely used actuarial IPV risk assessment instruments. Dr. Hilton will provide an introduction to and overview of IPV risk assessment approaches, measures, and evidence regarding predictive accuracy. She will then present her more recent research on the extent to which the predictive accuracy of an IPV risk assessment instrument (ODARA) generalizes to female offenders and other types of violence. In the second paper, Sacha Maimone will present a longitudinal study on the predictive accuracy of IPV risk assessment instruments (ODARA and SARA) scored by police threat assessors. In the third paper, Anna Pham will explore the number and nature of constructs underlying an actuarial IPV risk assessment instrument (ODARA). In the final paper, Sandy Jung will test the extent to which two IPV risk assessment instruments (ODARA and SARA) provide complementary relevant information, such that they independently predict re-offending and together more strongly predict re-offending than either one alone. Together these papers will present an introduction to the area of IPV risk assessment, an overview of the knowledge base, and new research exploring more novel questions and contexts that advance scientific knowledge and inform practice.

#### **What Do We Know about Assessing Intimate Partner Violence Risk?**

N. Zoe Hilton | University of Toronto and Waypoint Centre for Mental Health Care

Risk assessment is a first step to managing risk of criminal violence. Research on risk assessment for intimate partner violence (IPV) has taken a number of approaches, developing tools and methods for victim interview, case formulation, or quantifying criminal justice data to produce actuarial instruments. This presentation will begin with an overview of the development and empirical research with the most widely used measures. Then I will describe recent research with an actuarial instrument called the Ontario Domestic Assault Risk Assessment (ODARA; Hilton, Harris, & Rice, 2010), including its applications to male and female IPV offenders, men who assault their children, and the relation of IPV risk to non-IPV offending.

#### **Predictive Accuracy of Risk Assessment by Police Officers Using the Spousal Assault Risk Assessment and the Ontario Domestic Assault Risk Assessment Guide**

Sacha Maimone | Carleton University

The last two decades have seen an emergence of numerous empirically developed schemes for assessing intimate partner violence (IPV) risk (see Hilton & Eke, 2017, for a review). Currently, there is limited research on the accuracy and validity of these IPV risk schemes as they are used by police; however, this is of utmost importance given that they are being increasingly adopted by police to inform decisions regarding custody and/or protection of victims (e.g., Ennis, Hargreaves, & Gulayets,

2015). As such, the current presentation will examine the predictive accuracy of two police-scored IPV risk schemes in predicting violent reoffense: Ontario Domestic Assault Risk Assessment (ODARA) and a modified version of the Spousal Assault Risk Assessment (SARA). A violent re-offense was defined as any new violent charge and/or conviction and was coded from official files for 51 IPV perpetrators (20 violently re-offended and 31 did not). The average follow-up was 2.71 years. Moderate to large effect sizes were found for the police-scored ODARA and modified SARA when predicting violent re-offense. Further, the police-scored ODARA was predictive of violent re-offense after controlling for the police-scored modified SARA, but not vice versa. These results suggest that the police-scored ODARA and, albeit to a lesser extent, the police-scored modified SARA risk schemes may be accurate in predicting violent re-offense. This is a first step in assessing the predictive validity of police-scored IPV risk schemes and extends the few previous studies assessing whether violence risk can be accurately identified by police officers using these instruments.

### **Risk Constructs Behind Intimate Partner Violence**

Anna Pham | Carleton University

Risk assessment is considered the cornerstone of offender management in various legal and clinical contexts, and is one effective strategy to prevent future reoffending. Actuarial risk assessment measures typically combine primarily static (i.e., historical and measured at one time point), empirically-derived unique predictors of recidivism. Although they outperform other types of measures, actuarial measures have often been criticized for their inability to inform the selection of treatment targets because static factors do not capture potential change. Accordingly, latent variable models have been suggested as a framework to link historical risk factors to risk domains that may be the target of treatment or focus of supervision. Therefore, the first step is to identify potential risk domains in actuarial measures. This presentation will examine the factor structure of a commonly used actuarial measure of risk for IPV: the Ontario Domestic Assault Risk Assessment (ODARA). The sample consisted of 234 perpetrators who were charged for at least one offence against their past or current intimate partners, and had complete scores on the ODARA. An exploratory factor analysis of the ODARA suggested that there are three latent constructs that comprise the measure: Factor 1 contained items pertaining to criminal/violent history, Factor 2 mainly contained items related to circumstances of the index offence, and Factor 3 contained items related to victim vulnerabilities. These results indicate that actuarial risk tools for IPV are multidimensional, and suggest that these dimensions may be linked to psychological characteristics that could potentially be changed through intervention.

### **Incremental Predictive Validity of Intimate Partner Violence Risk Tools**

Sandy Jung | MacEwan University

Improvements in the risk prediction of domestic violence against intimate partners have the potential to inform policing practices in the prevention of further victimization. This presentation will examine the incremental predictive validity of two measures of risk for intimate partner violence (IPV)—Spousal Assault Risk Assessment (SARA) and Ontario Domestic Assault Risk Assessment (ODARA)—for IPV re-offending, general violent re-offending, and general re-offending. A sample of 289 perpetrators who were charged for offenses against their intimate partners was followed up for an average of 3.3 years. Archival ratings of the two measures demonstrated that SARA scores showed incremental validity for

IPV re-offending, ODARA scores incrementally predicted general violent re-offending, and both tools incrementally predicted general re-offending. Additional analyses demonstrated that the Psychosocial Adjustment domain of the SARA contributed most uniquely to the prediction of IPV reoffending. Implications for the use of multiple tools in clinical practice and the management of IPV offenders will be discussed.



### **Symposium 24: Aggression: Across Cultures and Context**

John Tisak | Bowling Green State University

The four papers in this symposium on aggression in various contexts include data from the United States, Italy, Luxembourg, Estonia, Germany, and Turkey. In the first paper, Tisak, Alessandri, and Jensen discuss the influence of personality characteristics, social skills, peer relationships in predicting perceptions of interactions with the police and substance abuse and mental health issues of adjudicated youth from the United States. For example, they found that previous adjudications, low prosocial skills, low emotional stability predicted substance use and mental health issues. Menesini, et al., utilized the context of cyberbullying and victimizations to (1) examine the psychometric properties of their scale (Florence Cyberbullying and Cybervictimization) and (2) to test the differences in involvement among adolescents from Estonia, Italy, Germany, and Turkey. They report that both scales showed good fit indexes and acceptable reliability. They found that adolescents from Estonia and Italy exhibited lower levels of involvement in cyberbullying than adolescents from Germany and Turkey. The third and fourth papers utilize the work place as the context for aggression. Alessandri and De Longis, examined the tendency of negative emotions to persevere over time. They hypothesized that workers who experience these negative emotions to be more sensitive to stressors, which would lead to emotional reactions to stimuli in the environment leading to counterproductive work behaviors. In using a multilevel modeling, their hypothesis was supported. Steffgen and Sischka investigated via a longitudinal study (two waves) the role of different psychosocial working conditions as an indicator of work-related anger. Using hierarchical regression analyses, they found that feedback, and mental demands at work were incrementally linked to work-related anger at T2.

### **Youth Offenders: The Association among Police Interactions, Personality, and Mental Health**

Marie S. Tisak | Bowling Green State University

John Tisak | Bowling Green State University

Guido Alessandri | Sapienza University of Rome

Cjersti J. Jensen | Bowling Green State University

This study focused on adjudicated youth ( $N = 112$ ) from the United States. We examined the influence of personality characteristics, social skills, peer relationships on police interactions and mental health. Assessments included perceptions of their interactions with the police (e.g., I cannot trust the police), self-reports of positive orientation (e.g., I have great faith in the future), agreeableness (e.g., I understand when people need my help), and emotional stability (e.g., I don't believe I am an anxious person). Other measures were based on the Ohio Assessment of Youth System, and consisted of history of past criminal behaviors, evaluations of prosocial skills, friends' engagement in criminal activity, and history of substance abuse and mental health. Four separate multiple regression analyses were performed. Increasing emotional stability of youth offenders ( $\beta = .240, p < .05$ ) predicted positive orientation. Increasing age, ( $\beta = .117, p < .05$ ) and lower agreeableness ( $\beta = -.616, p < .01$ ) predicted more negative perceptions of interactions with police. Less educational skills ( $\beta = .196, p < .05$ ), and interaction with peers involved in criminal activity ( $\beta = .149, p < .01$ ) also predicted negative perceptions of interactions with the police. Furthermore, previous adjudications, ( $\beta = .338, p < .01$ ), low prosocial skills ( $\beta = .421, p < .01$ ), low emotional stability ( $\beta = -.498, p < .05$ ) predicted the scale combining substance abuse and mental health issues. Discussion will center on the importance in using various assessments to investigate behaviors and perceptions of adolescent offenders.

### **Cyberbullying and Cybervictimization among Adolescents of Four Countries: Cultural Differences and Prevalence**

Ersilia Menesini | University of Florence

Benedetta E. Palladino | University of Florence

Annalaura Nocentini | University of Florence

Piret Luik | University of Tartu

Karin Naruskov | University of Tartu

Zehra Ucanok | Hacettepe University

Aysun Dogan | Ege University Izmir

Anja Schultze-Krumbholz | Freie Universität Berlin

Markus Hess | Freie Universität Berlin

Herbert Scheithauer | Freie Universität Berlin

Aggression in the virtual context and cyberbullying are becoming more and more relevant to understand adolescents aggression and violence. The aims of the present study are to examine the psychometric properties of the short version of the Florence Cyberbullying Cybervictimization Scales (FCBVSs; Palladino, Nocentini, & Menesini, 2015) and to test for differences in the involvement between adolescents belonging to four countries: Estonia, Italy, Germany, and Turkey. The sample consisted of 1,964 adolescents (48.2% girls) from middle and high schools. The participants' age ranged from 12 to 20 years old ( $M = 14.49$ ,  $SD = 1.66$ ) years. To assess cybervictimization and cyberbullying we used the short version of the FCBVSs. Both scales included 4 items asking how often the participant experienced behaviours (i.e. exclusion, visual, written, verbal, impersonation) during the past couple of months (Menesini et al., 2012; Palladino et al., 2017). CFAs has shown good fit indexes (cybervictimization:  $\chi^2 = 1.953$ ,  $DF = 2$ ,  $P = .38$ ;  $CFI = 1.000$ ;  $RMSEA = .00$ ; cyberbullying:  $\chi^2 = 8.412$ ,  $DF = 2$ ,  $P = .015$ ;  $CFI = .980$ ;  $RMSEA = .04$ ). Both scales also showed acceptable reliability (cybervictimization:  $\alpha = .68$ ; cyberbullying:  $\alpha = .79$ ). Looking at the country differences, we found that Italian and Estonian adolescents show lower level of involvement as cyberbullies compared to the other countries ( $F(3; 12,277) = 12,277$ ;  $p < .001$ ;  $\eta^2 = .02$ ). Cross-country invariance and prevalence comparisons will be presented taking into consideration possible gender and age differences. Results will be discussed within a cross-cultural approach highlighting possible implications for interventions.

### **Counterproductive Work Behaviors: The Role of Negative Emotions Intensity, Inertia, and of Negative Events at Work**

Guido Alessandri | Sapienza University of Rome

Evelina de Longis | Sapienza University of Rome

Counterproductive work behaviors (CWB) are harmful to the organization by directly affecting its functioning or property, or by hurting employees in a way that will reduce their effectiveness (Fox, Spector, & Miles, 2001). According to the Stressor Emotion model (Spector et al., 2006) there is a close link between experienced negative emotions at work, and the probability, for a worker, to engage in CWB. It is assumed that stressors act as the trigger of CWB, by inducing negative emotions, including anger, anxiety, and depression. Such emotions contribute to CWB that can occur immediately and impulsively or at a later time. In this contribution, we expand the above framework, by examining the

tendency of negative emotions to persist over time and to be resistant to change at work, or simply their inertia (Kuppens et al., 2010). We predict that for workers higher in emotional inertia, the impact of work demands on CWB via experienced negative emotions will be stronger. This hypothesis is based on the idea that "that individuals who have a tendency to experience negative emotions will be more sensitive to stressors and will be more likely to exhibit emotional reactions to the environment, as well as CWB" (Spector et al., 2006, p. 32). This hypothesis was tested in an ESM conducted on 130 young workers, assessed during working hours. Participants were prompted six times per day for 5 working days. Using multilevel modeling, we found support for a moderated mediational model which nicely agreed with our research hypothesis.

### **How Working Conditions Influence Work-Related Anger**

Georges Steffgen | University of Luxembourg

Philipp E. Sischka | University of Luxembourg

The main purpose of the present study was to investigate the role of different psychosocial working conditions as indicators of work-related anger experience in a longitudinal perspective. Specifically, we focus on the role of workplace mobbing as a crucial factor under debate (Steffgen, Sischka & Schmidt, 2016). To this end, two waves of the Quality-of-Work-Survey Luxembourg were considered (Sischka & Steffgen, 2015). Each wave is a representative sample of 1526 respectively 1506 employees working in Luxembourg (data collection via computer-assisted telephone interviewing). 702 employees participated in both surveys (aged from 18 to 64 years; 53.8 % male). All working conditions at T1 showed zero-order correlations with anger experience at T2. More specifically, hierarchical regression analyses revealed that feedback, and mental demands at work but not mobbing were incrementally linked to work-related anger at T2 controlling for collinearity (T1). The longitudinal findings underline the importance of differential working conditions as diagnostic indicators of work-related anger.

**Symposium 25: Innovative Interventions, Methodologies, and Variables of Interest in Interpersonal Violence and Aggression Research**

Travis N. Ray | Oakland University

Michele R. Parkhill | Oakland University

Rates of interpersonal violence and aggression toward women and vulnerable populations (e.g., LGBTQ) remain alarmingly high despite increased attention during recent years. Novel approaches and theoretical applications are needed to advance research and preventative efforts. The proposed symposium will discuss an array of interventions, methodologies, and variables of interest that show promise in expanding both creativity and knowledge among interpersonal violence and aggression researchers and interventionists. Five contributors are proposed for the symposium. Three contributors will focus presentations on methodologies, theoretical models, and variables of interest. Parkhill et al. presents findings from four studies that have examined the role of emotion regulation in the perpetration of violence against women—two of which apply experimental methodology to examine the interaction of emotion regulation, previous sexual assault perpetration, and stress to predict aggression toward a female confederate. Ray and Parkhill compare LGBTQ adolescents' sexual victimization experiences to those of non-LGBTQ adolescents and propose a model of aggression toward gay men that incorporates the emotion of disgust. Wegner et al. presents two novel experimental approaches that assess men's incapacitated rape intentions: (1) a simulated drinking game paradigm measuring perpetrators' predatory beverage allocation behavior and (2) a written scenario designed to assess the decision-making process that occurs across a night of drinking that culminates in incapacitated rape. Two further contributors present technology-based interventions aimed at preventing sexual violence. Gilmore et al., proposes a new mHealth application that will target the role of alcohol in sexual assault and provide personalized information relevant to risk and protective factors for sexual assault. Finally, Lopez and Koss target physical and sexual violence through GIS mapped, police report 'hot spots' and introduces a bystander training program developed to teach barroom staff to recognize aggression perpetrated by bar patrons.

**The Role of Emotion Regulation in Violence against Women**

Michele R. Parkhill | Oakland University

Scott M. Pickett | Oakland University

Mitchell Kirwan | Oakland University

Travis N. Ray | Oakland University

Violence against women continue to be a pervasive problem in both community and college populations. Researchers have identified several consistent predictors of violence perpetration, including childhood trauma, impersonal sexual attitudes, and hostile attitudes about women. More recent research has begun to focus on situational variables, such as substance use, that increase in-the-moment risk of perpetrating violence. Even more recently, emotion regulation has been used to explain the link between risk variables and actual instances of perpetration. This talk will highlight four studies that have examined the precise role emotion regulation plays in perpetrating violence against women. The first study examined emotion regulation as a mediator of the relationship between childhood trauma experience and later sexual assault perpetration. The second study examined whether the addition of emotion regulation would create a more comprehensive Confluence Model of sexual assault and relationship violence perpetration. The final two experimental studies examined

how emotion regulation interacted with previous sexual assault perpetration and experimental condition (stress v. no stress) to predict aggression against a female confederate using the Taylor Aggression Paradigm. All of the studies to be highlighted demonstrate that emotion regulation plays a significant role in the perpetration of violence against women. Further, this finding is consistent across methods and populations as significant results are seen in both college and community samples of men using both survey and experimental methodologies. How these results can be used to further research on violence against women and the clinical implications for male perpetrators will be discussed.

### **Examining Disgust and Emotion Regulation Difficulties as Components of Aggression toward LGBTQ**

Travis N. Ray | Oakland University

Michele R. Parkhill | Oakland University

Previous research suggests that LGBTQ experience higher rates of aggressive victimization than their heterosexual peers. The relative dearth of research on LGBTQ victimization has created two particular deficits in the current literature 1) research examining sexual victimization and perpetration in LGBTQ adolescents and 2) theoretical explanations as to why LGBTQ are at increased risk of victimization. To address the first deficit, data from a campus climate survey were utilized. Results suggest that LGBTQ adolescents experience higher rates of every type of sexual victimization (i.e., sexual contact, attempted sex, vaginal sex, oral sex, anal sex) than do their non-LGBTQ counterparts, with the vast majority perpetrated by male acquaintances. A subsequent study was then conducted to examine a theoretical model of aggression (i.e., physical, verbal, sexual) toward gay men. Previously established models of aggression suggest that men who adhere to traditional gender norms of masculinity exhibit increased sexual prejudice, which then leads to aggressive behaviors toward gay men. However, emotional components—such as disgust—have been shown to influence prejudice and are strongly related to anger. Additionally, the inability to adequately regulate such emotions may increase the likelihood of engaging in aggressive behavior. Results from a structural equation model suggest disgust may affect sexual prejudice and that those with high levels of emotion regulation difficulties may be at increased risk to display physical and verbal aggression toward gay men. Implications and future directions will be discussed.

### **Novel Experimental Approaches Toward the Assessment of Men's Incapacitated Rape Intentions**

Rhiana Wegner | University of Massachusetts Boston

Kelly Cue Davis | Arizona State University

Ashlin R.K. Roy | University of Massachusetts Boston

Incapacitated rape (IR) perpetration involves giving someone drinks to increase their intoxication and/or engaging in sexual activities with someone who is too intoxicated to consent or passed out. Up to one-third of college men report having perpetrated IR, and 44% of college women report experiencing IR. IR victims often report feeling 'set up' by the perpetrator, through his buying her multiple drinks, encouraging her to drink to intoxication in drinking game contexts, and isolation tactics (e.g., luring her to a bedroom). We will present two novel experimental approaches toward the assessment of men's IR intentions. First, we will describe a simulated drinking game paradigm for the unobtrusive observation of perpetrators' predatory beverage allocation behavior. Then we will discuss

a modified 2nd person, written scenario, designed to assess the iterative decision-making process that occurs across a night of drinking that culminates in IR. It specifically assesses beverage allocation, pressure to drink, and the decision to have sex with someone who is too intoxicated to consent and later on, passed out. Pilot study and online survey data will be presented to demonstrate the validity of these novel paradigms. Survey results indicate that, in a hypothetical drinking game, sexual assault perpetrators are more likely to assign drinks to a potential sexual partner than are nonperpetrators, who are more likely to assign drinks to their best male friend. The most common rationale for assigning drinks to a potential sexual partner was 'to loosen her up.' New IR research avenues will be discussed.

### **Alcohol and Sexual Assault Prevention for College Students: An mHealth Solution**

Amanda K. Gilmore | Medical University of South Carolina

Lindsay M. Orchowski | Brown University

Kelly Cue Davis | Arizona State University

Christine K. Hahn | Medical University of South Carolina

Heavy episodic drinking (HED) and sexual assault (SA) are problematic on college campuses. In response to high rates of SA on college campuses, U.S. federal guidelines recommend universal violence prevention, including bystander intervention. Although bystander intervention is evidence-based and engages all members of a campus in violence prevention, bystander intervention fails to address the gender-specific factors associated with SA victimization and perpetration risk, and fails to address the pervasive role of alcohol in SA. Further, many universities use commercially available mHealth (mobile health) products that currently show no documented efficacy in reducing SA rather than using evidence-based prevention programming to address this public health concern. A new approach is needed that can appeal to university administrators nationwide and includes evidencebased bystander and risk reduction content personalized by risk factors, including gender, sexual minority status, and alcohol use. In order to address the research-practice gap in college SA prevention it is imperative to develop and test theoretically-based and evidence-based interventions that: 1) target the role of alcohol in sexual assault 2) provide personalized information relevant to risk and protective factors for HED and SA, and 3) use a mode of delivery that is highly scalable (i.e., mHealth). We will present pilot data from a combined alcohol and SA risk reduction program for women, a combined alcohol and bystander prevention program for men, and focus group data regarding the current state of campus prevention programming from college students.

### **Community and Environmental Level Prevention of Sexual Assault through GIS Mapping and Bar Staff Bystander Intervention Training**

Elise C. Lopez | University of Arizona

Mary P. Koss | University of Arizona

Most interventions to prevent sexual assault focus on the individual and relational levels of the social-ecological model. Little attention has been paid to altering the contexts and situations that facilitate sexual and physical aggression. Safer Bars, developed by The University of Arizona and the Arizona Department of Health Services, is a bar staff bystander training program developed to teach barroom staff to recognize and safely and effectively respond to aggression that is perpetrated by

bar patrons. In addition to educational training for bar staff, the intervention also focuses on altering environmental risk factors. The training recruitment is focused on areas of high densities of alcohol-serving establishments, as determined by the results of the current study described in this paper. In 2017, Lopez et al. conducted GIS mapping of 2016 police reports of violent crime and liquor license density in the four major cities in Arizona, USA. GIS mapping showed an overlap of high-density areas of liquor licenses with 'hot spots' of police reports for physical and sexual violence. These areas tended to be adjacent to major university campuses, whose populations tend to be at high risk for both perpetration and victimization of sexual and physical aggression. This presentation will discuss the rationale and utility of GIS mapping to assess and target prevention programming to high-risk geographic areas, as well as the utility of partnering GIS mapping with bar bystander intervention training as a mechanism for community-level prevention.

## Thematic Paper Session Abstracts

### ***Paper Session 1: Aggression in a Group Context***

#### **Social Identity Theory, Social Exclusivity and Social Dominance as Predictors of Youth Aggression**

Thomas P. Gumpel | The Hebrew University of Jerusalem

The current research examined the perceived individual status of aggressors, whose behavior is intended to achieve and maintain higher status. Social Identity Theory relates to the individual's sense of membership in a particular group and how his or her social categorization aids to create mechanisms of mutual support and identification, vis-à-vis out-group members with which the individual cannot identify. Between-group comparisons are instrumental for developing social identity and understanding one's place in the social world and can increase aggression and the endorsement of aggressive behavioral responses. Social dominance theory proposes the existence of a basic human desire to establish and maintain a group based social hierarchy where groups are structured via group based social hierarchies, with several groups on the top and at least one group on the bottom. We know of no studies which examine such in-group favoritism and outgroup denigration and its effects on school violence and victimization. Data was gathered from 1,638 seventh, eighth and ninth graders from selected schools across Israel who completed questionnaires either by hand or electronically. Results indicated that individuals with high levels of perception of individual status, perception of group exclusivity and moral disengagement were more aggressive than individuals with medium or low levels. Perception of individual status, perception of group exclusivity, and level of moral disengagement were found to influence aggression, both individually and collectively. Perception of group exclusivity and level of moral disengagement were also found to act as mediating variables in the connection between individual status perception and aggression.

#### **The Contagious Effect of Deviant Behavior in Adolescence: A Longitudinal Multilevel Study**

Robert Busching | Universität Potsdam

Barbara Krahe | Universität Potsdam

This presentation investigated how the development of deviant behavior in adolescence is influenced by the variability of deviant behavior in the peer group. Based on the social information-processing (SIP) model, we predicted that peer groups with a low variability of deviant behavior (providing normative information that is easy to process) should have a main effect on the development of adolescents' deviant behavior over time, whereas peer groups in which deviant behavior is more variable (i.e., more difficult to process) should primarily impact the deviant behavior of initially nondeviant classroom members. These hypotheses were largely supported in a multilevel analysis using self-reports of deviant behavior in a sample of 16,891 adolescents in 1,308 classes assessed at two data waves about 1-year apart. The results demonstrate the advantages of studying cross-level interactions to clarify the impact of the peer environment on the development of deviant behavior in adolescence.



### **Intergroup Friendships and Bystanders' Helping in Response to Homophobic Incidents: The Role of Threat, Social Contagion and Identity**

Raquel António | Instituto Universitário de Lisboa

Rita Guerra | Instituto Universitário de Lisboa

Lindsey Cameron | Instituto Universitário de Lisboa

Intergroup friendships are valuable experiences and its positive impacts on improved intergroup relations and prejudice reduction are well established in research (e.g., Turner, Hewstone, & Voci, 2007; Vezzali et al., 2017). Having cross-group friends (i.e., direct contact) has been consistently linked with more positive outgroup attitudes (e.g., Pettigrew & Tropp, 2006) but knowing an ingroup member who has a close relationship with someone from another group is also an effective tool to improve intergroup attitudes and reduce prejudice (e.g., Wright et al., 1997). The current research focuses on the relation between two forms of intergroup contact (i.e., extended and direct contact) and people's responses to homophobic behaviors. Specifically, we examine if contact relates to more helping responses to homophobic behaviors, by reducing social contagion concerns (i.e., the fear of being misclassified as gay or lesbian) (H1), reducing threat to masculinity/femininity (H2), and increasing inclusive identity representations (H3). 219 heterosexual undergraduate students, aged 17 to 42 years, completed an online survey with the measures of interest. Results supported our hypotheses: extended and direct contact were associated with more helping responses to homophobic behaviors, 1) via decreased social contagion concerns; 2) decreased threat to masculinity/femininity, and 3) endorsement of more inclusive identity representations. These findings extended previous studies by illustrating the underlying mechanisms through which different forms of intergroup contact affect bystanders' interventions in homophobic incidents.

### **Aggression in Response to Being Excluded – If It Is All About Being in Control, Helping Works As Well As Hurting**

Hannah M. Schade | Universität des Saarlandes

Malte Frieze | Universität des Saarlandes

Ostracism, i.e. being socially excluded and ignored, is prominently discussed as precursor of aggression. However, experimental studies also found that ostracized participants help more than the control group, and that restoring a sense of control decreases post-ostracism aggressive behavior. This is in line with theoretical notions discussing aggression as a means to exert control and feel powerful. Thus, offering prosocial ways to make strong(er) impact may pull the ostracized towards positive behavior, thus preventing the vicious cycle of victims turning into perpetrators. Our studies investigate the hypothesis that ostracism enhances any type of social behavior, positive or negative, that allows the ostracized individual to exert social impact on others, thereby offering a feeling of efficacy. Specifically, participants are in- or excluded in a game of Cyberball, an established tool to manipulate ostracism. Afterwards, they are given the opportunity to determine another person's outcome: in Study 1, one half of participants gets to positively impact the other and the other half of participants gets to negatively impact the other. In Study 2, participants are given a free choice on a continuum

from very prosocial to very aggressive behavior. In Study 3, we vary whether the prosocial or aggressive behavior has the stronger impact. Indeed, excluded participants choose the stronger behavior much more often than the control group, largely independent of its prosocial or aggressive nature. We discuss how the results, if corroborated in future studies, can inform both theory and interventions.

**Teachers' Implicit Theories and Implementation of a School-Based Aggression Prevention Program: An Efficacy Assessment of a Brief Intervention.**

Madeleine Barrera | Universidad de los Andes  
Enrique Chaux | Universidad de los Andes

School-based aggression prevention programs, that have proven their efficacy through well-controlled evaluation studies, are now facing the challenge of scaling up their implementation without losing their achievements. Based on implementation science and inspired in recent brief social psychological intervention research (Walton, 2014), we evaluated a brief (45 minutes) teacher intervention on the implementation levels of Classrooms in Peace, a school-based aggression prevention program. The intervention targets teachers' implicit theories about their students' social behavior malleability, conveying the message that their students can change their behavior and teachers can promote this change even under very challenging conditions. A double-blind field trial was conducted for 5 months in two Colombian cities. The 82 teachers participating were assigned randomly to either the experimental or placebo activity at the beginning of program implementation. Within the experimental group, the intervention increased significantly teachers' self-efficacy in class management (based on self-reports) but decreased quality implementation and increased the number of adaptations they made. Teachers with more than a year in the program reduced their fixed mindset -their belief that students can't change- and increased their general teaching efficacy (both based on self-reports); furthermore, they increased their democratic teaching skills as well as the dose and quality of implementation. However, teachers within the first year in the program raised their fixed mindset and reduced implementation dose. This study portrays the potential of brief interventions on school aggression prevention program implementations along with the need to further research to improve the use of this new social-psychological intervention strategy.

***Paper Session 2: Psychopathology and Violent Offending***

**Externalising Symptoms Implicated in the Link between Childhood Trauma and Offending: A Systematic Review**

Sahar Shahid | Coventry University

An abundance of research supports a link between childhood trauma and subsequent offending behaviour. This link has been examined in both the community and incarcerated samples, highlighting that the association between childhood trauma and offending behaviour is not simple and/or direct. Examined closely, externalising behaviour such as aggression, hostile attributions, hyperarousal, and emotions such as anger, have been implicated as mediators in the processing of trauma into offending

behaviour. However, the wide variation in behavioural and emotional symptoms associated with offending after childhood trauma weakens the understanding of how they may facilitate this relationship. Preliminary findings from a systematic review conducted to counter this ambiguity and synthesise the current state of knowledge on the nuances between externalising symptoms that link trauma and offending, is presented. The systematic review will identify a) which externalising behavioural or emotional symptoms are associated with childhood trauma and offending behaviour, b) what role these symptoms play in the processing of that trauma into offending behaviour (are these direct links or further mediated by other factors) and c) whether there are particular symptoms or types of abuse that are most frequently associated with trauma and offending. Understanding the externalising symptoms that facilitate the relationship between trauma and offending has implications for the development of more focused interventions for all people who have experience trauma. In addition, therapy targeting the underlying mechanisms related to those externalising symptoms with abused children could enhance long term outcomes.

### **What Determines Violent Behavior in Men? A CART Approach**

Delia Vanessa Leiding | RWTH Aachen University

Dana Winkler | RWTH Aachen University

Franziska Kaiser | RWTH Aachen University

Ramona Kirchhart | RWTH Aachen University

René Bergs | RWTH Aachen University

Ute Habel | RWTH Aachen University, Jülich Aachen Research Alliance (JARA)

Data was collected as part of an epidemiological study on violence experiences in men by the Medical Faculty of the RWTH Aachen University. The study aims at exploring prevalence rates and making predictions for offending violent behavior in 5,000 male patients. Therefore, participants filled out an anonymous survey about their violence experiences, including information about exposed and exerted violence, age of violence experience, degree of severity, by / against whom the violence was directed, frequency of exposure, demographic information, psychosomatic complaints and risk behavior. A distinction was made between physical, psychological and sexual violence. Using first data from 2,490 participants a Classification and Regression Tree approach (CART, e.g. Breiman et al., 1984) was conducted to identify the relationship between violence exposure, risk behavior and psychiatric disorders in male victims and the main determinates of becoming perpetrators of physical violence. Additionally, a 10-fold cross-validation exercise was performed. Missing data were corrected using multiple imputations (Rubin, 1987) to reduce attrition. By using this approach high and low risk groups with probabilities ranging from 14.6% to 78.3% for offending physical violence could be indicated. The high scope of the survey allows for a level of prediction accuracy of 74.1% for violent behavior. The highest risk (78.3%) for physical offending was observed for individuals who experienced physical violence themselves, more than once, and by a stranger. This indicates that especially previous experiences of violence enhance the risk of becoming a perpetrator, while other risk factors such as demographic information are less predictive.

### **Validation of the Power and Dominance Systems Scale (PDSS): Exploring Dimensions of Power and Psychopathology**

Sean J. McKinley | University of South Florida

Acree Trivett | University of South Florida

Brett Murphy | University of South Florida

Edelyn Verona | University of South Florida

Feelings of power and dominance have been implicated in aggression (Anderson & Berdahl, 2002; Keltner et al., 2003), but research has focused on feeling powerful, neglecting other facets (e.g., desire for power). Thus, the Power and Dominance Systems Scale (PDSS; Murphy & Lilienfeld, 2016) was developed to capture dimensions of power - feelings of, attention to, and desire for power - which showed different relationships with measures of maladaptive traits (e.g., psychopathy) in undergraduates. The current study extended this work to examine relationships between PDSS dimensions, personality and clinical symptoms, and aggression among a community sample of 124 individuals with histories of substance use and criminality. Feelings of Power (FP) was associated with agentic positive emotionality (i.e., feelings of well-being, achievement;  $r = .36-.55$ ), reflecting an adaptive trait. Attention to Power (AP) was associated with borderline symptoms ( $r = .18$ ) and negative emotionality ( $r = .18$ ), suggesting a proneness to emotional distress and dysregulation. Desire for Power (DP) was associated with impulsivity and behavioral dyscontrol ( $r = -.20$ ). All subscales were associated with social potency ( $r = .36-.63$ ) and low harm avoidance ( $r = -.15-.37$ ) - indicating communities in fearlessness and social dominance. Unlike in undergraduates, psychopathic traits only modestly correlated with all PDSS subscales. While FP was only associated with physical aggression ( $r = .21$ ), AP and DP related to multiple aggression types (physical, verbal, anger, & indirect;  $r = .18-.32$ ). Results suggest that the PDSS reflects different aspects of power, with implications for pathological behaviors (e.g., psychopathy, aggression).

### **Heightened Salience of Anger and Aggression in Female Adolescents with Borderline Personality Disorder: A Script-Based fMRI Study**

Marlene Krauch | Universität Heidelberg

Kai Ueltzhöffer | Universität Heidelberg

Romuald Brunner | Universität Heidelberg

Michael Kaess | Universität Heidelberg

Saskia Hensel | Universität Heidelberg

Sabine C. Herpertz | Universität Heidelberg

Katja Bertsch | Universität Heidelberg

Intense feelings of anger and subsequent aggressive behaviors directed against the self or others belong to the core symptoms of borderline personality disorder (BPD). Despite its onset in childhood and adolescence research on neural correlates of anger and (auto-) aggression in adolescents with BPD is still missing. 20 female adolescents with BPD and 20 female healthy adolescents participated in this functional magnetic resonance imaging study. A script-driven imagery paradigm was used to induce rejection-based feelings of anger which was followed by descriptions of auto-aggressive or physically aggressive reactions against the rejecting person. To investigate the specificity of the neural activation patterns for adolescent patients, results were compared with data from 34 female adults with BPD and 32 female healthy adults. Adolescents with BPD showed increased activations in the left posterior

insula and left dorsal striatum as well as in the inferior frontal cortex. Also stronger activations in the middle temporal gyrus, superior temporal gyrus, and precuneus, central regions of the mentalizing network, were revealed. Notably, at least for the aggression phase, the specificity of these results for adolescents was confirmed by a significant group by age interaction. This is the first fMRI study investigating neural correlates of anger and aggression in adolescents with BPD. The results suggest an enhanced emotional reactivity to and higher effort in controlling anger and aggression evoked by social rejection situations at an early developmental stage in BPD. The results point to the need of appropriate early interventions for adolescents with BPD.

### ***Paper Session 3: Sexual Violence***

#### **The Trauma of Women who were raped and Children who were born as a Result of Rape during the Rwandan Genocide: Cases from the Rwandan Diaspora**

Jean D'Amour Banyanga | Åbo Akademi University

Kaj Björkqvist | Åbo Akademi University

Karin Österman | Åbo Akademi University

Throughout history, rape has been used as a weapon of war and genocide in conflict zones. The use of rape as a weapon is one of the most violent, traumatic and humiliating offenses inflicted on an enemy, leaving permanent scars on the victims' minds and often on their bodies. In the Rwandan genocide against the Tutsi population, the systematic sexual molestation, mutilation, and rape of Tutsi women and girls were used as a tool to terrorize and annihilate the ethnic Tutsis. The aim of this study is twofold: to investigate (1) the trauma experienced by women who were raped and (2) the trauma of children born as a result of rape during the 1994 Rwandan genocide against the Tutsis and its aftermath. A questionnaire was completed by 341 members of the Rwandan diaspora, over 20 years of age (166 males, 175 females), who are living in Finland and Belgium. Of the women, 18 (10.3%) had been exposed to rape, and 9 individuals (2.6%) were born as a result of rape. The findings indicate that the women who had been raped experienced a much more severe trauma than the children who were born as a result of rape.

#### **Why do Victims of Sexual Assault Endorse Rape Myths? A Moral Disengagement Perspective**

Suzanne Swan | University of South Carolina

Eveline Gutzwiller-Helfenfinger | University of Duisburg-Essen

After sexual assault or violence from a dating partner, victims are faced with the challenge of somehow coming to terms with what happened to them. We investigate the relationship between social cognitive processes (victim blame and justification of violence) and college women's experiences of sexual assault or dating violence. Based on theorizing and research on moral disengagement, belief in a just world, and system justification, we hypothesized that (1a) survivors of sexual violence would show greater endorsement of rape myth acceptance, while (1b) survivors of intimate partner violence would show greater endorsement of dating violence acceptance. Secondly, we hypothesized that rape myth acceptance and dating violence acceptance would be positively related as they both stem from

the same underlying moral disengagement processes serving to disengage perpetrators' moral responsibility and result in victim-blaming and perpetrator-exonerating cognitions. Methods: Data were derived from an online survey of 4,233 female college students at three US universities. Results: Women who had been sexually assaulted showed significantly greater rape myth acceptance than women who had never been sexually assaulted. Similarly, women who were victims of dating violence showed greater attitudes of dating violence acceptance than non-victims. Moreover, rape myth acceptance and dating violence acceptance were positively correlated. Given that everyone has been exposed, to some degree, to victim-blaming messages that are endemic to discourse about violence against women, it follows that victims will have been exposed to these messages as well, and may draw on these victim-blaming myths to make sense of their own experiences.

### **Witnessing Inter-Parental Physical Violence and Physical Dating Violence Perpetration: The Mediating Role of Attitudes towards Physical Violence**

Ezgi Toplu-Demirtaş | MEF University

Although studies on physical dating violence have mostly been carried out in individualistic, Western cultures, the prevalence rates of physical dating violence among college aged students have been unexpectedly high from the early studies in Turkey as well. The current study therefore investigated physical dating violence in a more collectivist, predominantly Muslim culture. Informed by the theory of social learning theory, it tested attitudes towards physical violence as a potential mechanism that might account for the association between witnessing inter-parental physical violence and physical dating violence perpetration. A sample of 804 dating college students (576 women, 224 men, and four missing) completed the Physical Assault subscale of the Conflict Tactics Scale-Revised, Violence subscale of the Intimate Partner Violence Attitude Scale- Revised, and Physical Assault subscale of the Conflict Tactics Scale Adult Recall Version. Among the current sample (Mage = 21.85; SDage = 2.03; min-maxage = 18-25), 32.1% and 20.5% of the college women and men, respectively, reported to have used physically violent behaviors towards their partners. Two separate mediation analyses performed via PROCESS (Version 2.041; Hayes, 2013) that uses bootstrapping (Preacher & Hayes, 2004) revealed that the indirect effects were both significant. Attitudes towards physical violence mediated the associations between (1) witnessing father to mother physical violence,  $b = .014$ ,  $SE = .009$ , 95% CI =  $.0017; .0430$  and (2) witnessing mother to father physical violence,  $b = .036$ ,  $SE = .017$ , 95% CI =  $.0133; .0852$  and physical dating violence perpetration. Findings are interpreted in light of physical dating violence research, with a focus on universal and culturally specific aspects.

### **Bystander Self – Efficacy Promotes Bystander Intervention to Stop Sexual Aggression only in Prosocial Contexts**

Ashlyn G. Swartout | Georgia State University  
 Kevin M. Swartout | Georgia State University  
 Wojciech Kaczkowski | Georgia State University

Male-to-female sexual aggression (SA) is an alarming problem, especially among college students. Peers often witness the pending assault or harassment; although, research has yet to examine how the combination of social context and individual traits may influence bystander behavior. We conducted two studies — one correlational and the other laboratory-based — each testing an interaction hypothesis that the effect of bystander self-efficacy on bystander intervention to stop SA is a function of social norms. Study 1: 2,519 college men and women completed a campus climate survey that included measures of peer support for SA, bystander self-efficacy, and past bystander behavior. In line with our hypothesis, bystander self-efficacy was positively related to bystander behavior for students who perceived their peers to be unsupportive of SA, but not for students who perceived their peers to be supportive of SA ( $B = -.45, p < .001$ ). Study 2: 68 college men engaged in a two-part study. Participants completed a previously-validated measure of bystander self-efficacy, then they took part in an experiment at least one week later where norms of an audience (prosocial/ambiguous) were manipulated and bystander intervention speed in a laboratory paradigm was measured. The effect of bystander self-efficacy on intervention speed was positive and statistically significant for the prosocial, but not the ambiguous audience condition ( $B = -2.19, p < .001$ ). Results of these two studies imply bystander education programs might address peer context in addition to current efforts to bolster bystander self-efficacy.

#### ***Paper Session 4: Aggression in Schools and Hospitals***

##### **School Violence and Students' Feeling of Safety**

Yaacov Yablon | Bar-Ilan University

Growing research attention is being given to understanding factors contributing to violence-free school environments and the need for improved school safety. One consistent finding in the area of school violence is that students who have been victimized at school are more likely to feel unsafe. This finding is based primarily on analysis of dichotomous measures of victimization. Little attention has been given to the effect of repeated victimization experiences on the feeling of safety. Furthermore, very little is known regarding possible differences between minority and majority groups. The main aim of the present study was to investigate students' feeling of safety in particular locations in school and to compare the feeling of safety and the contribution of school-related factors to Jewish majority and Arab minority students' safety in school using the theoretical framework of place-based crime. A random sample of 1384 sixth-, eighth-, and tenth-grade Israeli students (725 Jewish and 659 Arab) participated in the study. Overall, being a victim of school violence was found to decrease the feeling of safety, but suggests a nonlinear correlation between the number of times that a student was victimized and the feeling of safety. Using a micro-level perspective revealed that students feel different levels of safety in different locations in school and that school and student characteristics contribute differently to explaining safety in each location. Furthermore, Arab minority students feel less safe in school than Jewish majority students. Implications for students, schools and the study of violence will be discussed.

### **Hospital Load and Exposure to Violence in Emergency Departments: Its Relation to Personnel's Satisfaction with Security Arrangements**

Judy Ben-Dalak | The Hebrew University of Jerusalem

Simha Landau | The Hebrew University of Jerusalem

Victimization to violence in hospital emergency departments (EDs) is nowadays a widespread and increasing problem. This large scale study focuses on identifying the best predictors of ED's personnel satisfaction with hospital security arrangements. Method: Data were collected in the EDs of 25 major general hospitals in Israel (N=2,154), using self-report questionnaires of all ED functionaries. Victimization to violence was related to participants' personal and professional variables, as well as to structural and interactional variables regarding violent events, including participants' Satisfaction with Security Arrangements (SSA). Results: The variables of the multiple regression model explained 43.9% ( $R^2 = .439$ ) of SSA variance. As expected, high hospital objective load and high level of personal victimization were related to low scores of SSA. Highest levels of victimization were reported by nurses and security personnel. However, whereas nurses expressed the lowest level of SSA, among security personnel this score was the highest. This gap is explained in terms of the differential role identification of the two groups. Among nurses, violent victimization is a major obstacle interfering with their professional performance, but for security staff, level of SSA expresses the essence of their own job performance. Conclusions: The relation between victimization to violence and SSA in ED's has been neglected in past research on the subject. This study emphasizes the importance of subjective perception of SSA and analyzes its wider correlates. Practical policy implications of the findings are discussed.

### **Mass Shootings in the United States: Beyond Mental Illness**

Ma. Teresa Tuason | University of North Florida

C. Dominik Güss | University of North Florida

The year 2017 had the deadliest incidents of mass shootings ever in U.S. history. In this year alone, there have been 384 mass shootings (mass shooting defined as having 4 or more victims) with 466 people killed and 1,912 injured (Gun Violence Archive, 2017 Data). Although some of those who perpetrate mass shootings are deemed to have some mental illness, there is no reliable evidence to suggest that the majority of mass shooters are influenced by mental illness as opposed to some severe stressor or turmoil (Knoll & Annas, 2016). As the United States struggles to identify ways to stop mass shootings that are responsible for taking innocent lives, some of who are children, adolescents and the most vulnerable, researchers (e.g., Declercq & Audenaert 2011) recommend analyses of the causes of mass shootings using approaches that identify the complex interaction of sociocultural factors, traumatic events, mental illness, psychological turmoil, recent stressors, family/childhood history, socio-economic and ideological/political factors. In this study, we are analyzing the 384 incidents of mass shootings in 2017 with the goal of identifying patterns. Initial findings indicate that the shooters are mostly middle-adults White male, middle-income, divorced, and have recent economic stressors such as being laid off, long unemployment, loss of income. Predicaments over relationships are also common, having to do with partner conflict, custody over children, history of domestic violence,



physical abuse and assault arrests. Diagnosed mental illness is not common, but history of aggression, substance/drug use, and access to weapons are.

### **Student Firearm Access: Assessing the Limitations of Security Protocols in Student Perpetrated School Shootings**

Sarah P. Gammell | The University of Texas at Dallas

Nadine M. Connell | The University of Texas at Dallas

Joshua D. Freilich | John Jay College of Criminal Justice

Steven Chermak | Michigan State University

In light of recent school shootings, concern for student well-being is at the forefront of the minds of policy makers, parents, and students themselves. Previous research on school shootings finds that they occur in statistically safe rural or suburban areas (DeJong, Epstein & Hart, 2003; Newman, et al., 2004). One common theme in many student perpetrated shootings is that the offender had access to a firearm that he was not legally able to own or bring onto the school campus. However, despite a variety of security protocols, these students subverted prevention efforts with ease. In order to better address the gap between policy and practice, we use a case study methodology to investigate the ways that students bring weapons into school. We examine how guns are brought into schools in cases where students have fired a weapon at their campus during school operating hours. These include rampage style shootings, targeted killings, and student suicide. This type of incident is one in which schools are best placed to immediately prevent under the current policy landscape. The incidents included for this analysis includes all K-12 shootings in the United States between 1999 and 2017. This paper will explore a variety of situational factors and the security protocols in place by these schools during such incidents in order to better understand how current protocols can be improved and also how situational crime prevention elements can be incorporated into the school environment. Implications for schools, policy makers, and families will be addressed.

### **The Role of Shame in Developmental Trajectories towards Severe Targeted School Violence**

Friederike Sommer | Freie Universität Berlin

Vincenz Leuschner | Hochschule für Wirtschaft und Recht Berlin

Nora Fiedler | Freie Universität Berlin

Herbert Scheithauer | Freie Universität Berlin

Most research on severe targeted school violence (STSV) - defined as planned offenses committed by a former or current student, who intends to kill one or more persons associated with his or her school - is related to risk factor approaches or theoretically informed models and thus lacks an empirical explanation of underlying mechanisms and the dynamic of context variables that caused or accompanied the perpetrators' negative development towards violence. To contribute to a comprehensive and dynamic account of the social and psychological processes leading to STSV, we conducted a multiple in-depth case analysis in the tradition of Grounded Theory. Nineteen cases of STSV (perpetrated between 1999 and 2013 in Germany) were identified in a structured media search.

Using data about offenses and perpetrators from police investigation files, qualitative analysis revealed that developmental trajectories need to be understood in terms of emotions rather than of rational cognitive processes, and that one key emotion is shame. Different relevant psychological turning points (episodes that may alter life course and serve as an explanation for later personal choice, behaviors and values) in all life histories were found, in which shame and the perpetrators' coping to shame played a significant role resulting in two types of trajectories: Eight perpetrators showed internalized coping strategies (e.g. social withdrawal), eleven perpetrators responded with externalized coping (e.g. aggressive behavior). Relevant circumstances, conditions and personal factors that have an impact on the specific coping mechanism and according developmental pathway towards STSV will be presented and discussed.

***Paper Session 5: Aggression in Nonhuman Species***

**Using Principles from Evolutionary Biology to Address Aggression in Animal Welfare Contexts.**

Gareth Arnott | Queen's University Belfast

Irene Camerlink | Scotland's Rural College

Simon Turner | Scotland's Rural College

Aggression is a major animal welfare problem in many captive environments, including agriculture. Regrouping aggression in pigs is a particular problem as these animals form dominance hierarchies when unfamiliar individuals are mixed together, resulting in an intense period of aggression, which is a major welfare issue. Animal contest models from evolutionary biology and based on particular assessment strategies provide an opportunity to better understand the decisions used by pigs to resolve aggressive encounters. We have previously demonstrated the influence of aggressiveness, in terms of a stable personality trait, on contest dynamics, while also revealing that pigs require prior contest experience to become proficient at a sophisticated form of information gathering termed mutual assessment. In this conference we will provide results of an experiment using an early life manipulation, termed socialisation, during which adjacent litters of piglets were allowed to mix (14-28 days of age), with control litters remaining unmixed. Socialisation was hypothesised to equip individuals with enhanced social skills in terms of assessment ability in later life agonistic encounters. In resident-intruder tests at seven weeks of age socialised pigs had a shorter attack latency, while in dyadic contests at eight weeks of age they had shorter contests, with fewer skin lesions consistent with enhanced assessment. The role of play fighting during the pre-weaning period in mediating these changes will also be discussed. Thus, early life socialisation offers a potential intervention that could be adopted on-farm to reduce aggression.

**Enhanced Aggressive Phenotype of Tph2 Knockout Rats Is Associated with Diminished 5-HT<sub>1A</sub> Receptor Sensitivity: A Combined Behavioural Pharmacological and Neurobiological C-Fos Study**

Deborah Peeters | Donders Institute for Brain, Cognition and Behaviour

A. Terneusen | Donders Institute for Brain, Cognition and Behaviour

L. van der Wal | Donders Institute for Brain, Cognition and Behaviour

Sietse F. de Boer | Groningen Institute for Evolutionary Life Sciences

Adrian Newman-Tancredi | Neurolix Inc, Dana Point, CA, USA

Robbert-Jan Verkes | Radboud University Medical Centre

Judith R. Homberg | Donders Institute for Brain, Cognition and Behaviour

Serotonin plays a key role in aggressive behaviours and related psychopathologies, but its precise neural hotspots and molecular mechanism of action remains elusive. Although low brain serotonin functioning has been associated with increased aggression and clinical studies show that selective serotonin reuptake inhibitors (SSRIs) reduce aggressive behaviour, not all aggressive individuals benefit from SSRI treatment. Genetic animal models may provide a tool to elucidate this relationship between aggression and serotonin. We previously showed that serotonin transporter knockout (KO) rats with increased extracellular serotonin levels spent less time on aggressive behaviour in a resident intruder test (RIT). In line with this, the present study showed that tryptophan hydroxylase 2 (tph2) KO rats show increased aggressive behaviour. The low serotonin levels resulting from tph2 deficiency may lead to a compensatory decrease in the sensitivity of the presynaptic 5-HT<sub>1A</sub> autoreceptor in the dorsal raphe nucleus, providing diminished serotonergic negative feedback inhibitory control. To investigate whether such an attenuated 5-HT<sub>1A</sub> receptor functionality may underlie the differences in aggression observed here, we tested the anti-aggressive potency of the highly selective full 5-HT<sub>1A</sub> agonist befiradol in a dose response experiment. Additionally, the precise neuronal hotspots of befiradol will be investigated by looking at c-Fos activation patterns in the brain of high aggressive wild type Groningen rats. Preliminary data show that compared to the tph2 WT and wild type Groningen animals, the befiradol dose-effect curve was shifted to the right in tph2 KO animals, demonstrating the hypothesized decrement in 5-HT<sub>1A</sub> (auto)receptor sensitivity.

### **Communication and Combat: The Function of Ultrafast, Ritualized Striking in Mantis Shrimp**

Patrick Green | Duke University

Sheila N. Patek | Duke University

Animal behavior theory predicts that animals resolve conflicts safely, yet many animals use potentially dangerous “weapons” during contests. How do animals use weapons to resolve conflict while minimizing costs? We used behavioral and biomechanical techniques to test contest assessment and resolution in the mantis shrimp *Neogonodactylus bredini*. During territorial contests, *N. bredini* presents visual displays and delivers high-force strikes with weaponized raptorial appendages. We first tested if visual displays signaled strike performance and could resolve conflicts without potentially-dangerous striking. We measured competitor’s weapon morphology and maximum strike force, then analyzed size-matched contest behavior. Displays did not signal performance or resolve contests: morphology did not correlate with strike force and 33/34 contests involved striking. Interestingly, 94 % of strikes were exchanged on competitors’ armored tailplates, a ritualized behavior we termed “telson parring”. To test whether telson sparring lets competitors assess relative ability or simply inflicts costs, we matched contest dynamics to theoretical assessment models. Using correlations and a network analysis of behavioral sequences, we found that sparring functions to assess relative ability. Finally, we tested the energetic costs of striking. We filmed sparring strikes with high speed video, measured strike velocity, and used a biomechanical model to calculate strike potential energy.

Energetic costs increased as body size increased; higher-energy strikes required a greater compression of the spring that powers appendage movement and resulted in constant strike velocity across size. Combined, these results reveal the behavioral and biomechanical function of high-force weapons and inspire future integrative work studying competitive weapon use.

### **Immune Function as a Cause and Consequence of Animal Weapon Use**

Sarah M. Lane | University of Plymouth

In animal contests it is traditionally thought that damage costs are only incurred by the recipients of agonistic behaviour. However, recent work has emphasised that attackers often injure themselves as well as their opponent by inflicting an attack, a phenomenon known as self-inflicted damage (DSI). Under this scenario inflicting attacks will be costly to both the recipient and the attacker and thus the relative costs to each contestant will be important in determining an individual's decision to attack and to give up. However, to date, no empirical studies have investigated self-inflicted damage during contests. Here, we examine the relative costs of inflicting and receiving injury in the beadlet sea anemone *Actinia equina*, a species in which DSI is functionally linked to the use of weapons. These anemones possess specialised stinging structures (acrorhagi) which they inflate and scrape across their opponent. During these assaults the attacker rips off pieces of its own acrorhagi in order to sting its opponent, injuring itself as well as its rival. Using an immune assay, we assess the relative costs of inflicting and receiving injuries in *A. equina* by measuring antimicrobial (lysozyme) activity before and after a contest. We then compare the change in lysozyme activity across the two situations between individuals who have received attacks, inflicted attacks, fought non-injurious or not fought at all (control). Our findings indicate that immune state can influence strategic fighting decisions and moreover that fight outcome and the agonistic behaviours expressed can significantly affect subsequent immunity.

### ***Paper Session 6: Social Information Processing and Aggression***

#### **Tracking the Biased Eye: How Sensitivity to Provocation Shapes Encoding and Interpretation of Ambivalent Scenes in an Eye Tracking Study**

Anna Zajenkowska | Maria Grzegorzewska University

Joanna Rajchert | Maria Grzegorzewska University

People with a high level of sensitivity to provocation, as well as trait anger, may display a tendency for hostile perception of reality. Some results of eye-tracking studies indicate that this might be due to the fact that hostile interpretation is prior to encoding of hostile and non-hostile cues. We have decided to separate interpretation and encoding into two studies. In Study 1. (N = 58, 27 men), we have found that in the other-referent position, opposite to what was expected, high sensitivity to provocation individuals ascribe less intention to harm to the protagonist, especially in ambivalent scenes. Moreover in Study 2. (N = 75, 43 women), it was found that individuals with higher sensitivity to provocation focused their gaze longer on hostile than on non-hostile cues in ambivalent scenes of social

encounters. Additionally our study showed that people encode social cues differently in scenes presenting aggressive men and women.

### **Anger Control as a Mechanism Explaining Socioeconomic Status Health Disparities**

Samuele Zilioli | Wayne State University

Ledina Imami | Wayne State University

Anthony Ong | Cornell University

Mark A. Lumle | Wayne State University

Tara Gruenewald | Chapman University

Members of socioeconomically disadvantaged groups can be targets of many negative stereotypes; in turn, discrimination based on socioeconomic status (SES) can take a toll on health. Recent studies, for example, have shown that individuals from low SES backgrounds often perceive themselves as targets of daily acts of discrimination, which can lead to negative emotional responses and unhealthy behaviors. The current project focused explicitly on the experience and regulation of anger—an expected emotional response to discrimination—and the role played by this emotion as a mediator for the previously documented links between low SES, discrimination, and allostatic load. Allostatic load is a biological index that summarizes dysregulation across several physiological systems and is predictive of a variety of poor health outcomes, including greater risk of chronic disease, cognitive decline, and early mortality. We used data from the second wave of the Midlife Development in the U.S. study. Analyses were restricted to White participants to avoid any confounding between ethnicity/race and perceived discrimination (N = 924). We found not only that higher perceived discrimination was associated with higher levels of allostatic load, but also that greater discrimination was associated with lower levels of anger control, which, in turn, accounted for the effects of discrimination on increased allostatic load. Our findings suggest that low anger control may be an important psychological pathway through which experiences of discrimination influence our health, contributing new insights to our understanding of the factors that influence emotional regulation and their role in health and well-being.

### **Reduced Stimulus Evaluation of Ambiguous Faces in Aggressive Individuals**

Jennifer R. Fanning | University of Chicago

Nicole Sullivan | University of Chicago

Mitchell E. Berman | Mississippi State University

Royce Lee | University of Chicago

Background: Social information processing theories posit that biases in encoding social cues and attributing intent contribute to aggression. Facial expressions convey information about others' emotional state and intent. Aggressive individuals show biased perception of facial affect and a tendency to interpret neutral faces and ambiguous social cues as more hostile. In EEG research, the P3/LPP component of the event-related potential has been shown to be enhanced in response to salient stimuli. P3/LPP is also enhanced by stimulus relevance and modulated by individual differences.

The purpose of this study was to evaluate the psychophysiological response to unambiguous angry face expressions and ambiguous neutral face expressions in healthy and aggressive research participants. Methods: Non-aggressive healthy adults (n=27) and aggressive adults (n=27) completed two facial emotion recognition tasks that presented frequent happy targets and infrequent angry and neutral targets, respectively. Participants responded to all three expression categories while EEG was recorded using 128 channels. Results: Compared to happy faces, healthy subjects engaged in more stimulus evaluation of neutral (ambiguous) faces, but not of angry faces, as indexed by the P3/LPP amplitude. Aggressive subjects showed no differences in P3/LPP as a function of face expression. Non-aggressive and aggressive subjects did not show overall differences in P3/LPP amplitude. Discussion: Aggressive subjects show reduced effects of facial expression on stimulus evaluation. In the current study, non-aggressive subjects engaged in greater stimulus evaluation of ambiguous facial expressions compared to happy expressions. The results are interpreted in light of previous research on emotional reactivity to threat in aggression.

### **Physical Aggression and Attentional Bias to Angry Faces: An Event Related Potential Study**

Rebecca V. Crago | University of East Anglia

Louis Renoult | University of East Anglia

Laura Biggart | University of East Anglia

Gavin Nobes | University of East Anglia

Tamara Satmarean | University of East Anglia

Jennifer O. Bowler | University of East Anglia

This study investigated the aetiology of physical aggression by identifying the neural correlates of aggression-related attentional selectivity to angry faces. Physical aggression in a non-clinical sample of young men (N = 35) was measured using an aggression questionnaire. Visual attentional bias to angry faces was assessed using a dot-probe task during which angry and neutral faces were presented simultaneously, and electroencephalogram (EEG) was recorded. Median split and correlational analyses were conducted to assess the relationship between physical aggression and attentional bias. Behavioural results indicated that higher levels of physical aggression were associated with faster attentional orienting to angry faces. Event-related potential (ERP) results revealed an interaction where individuals with higher physical aggression had undifferentiated P300 amplitudes to angry and neutral trials, whereas low physical aggression participants exhibited greater P300 amplitude to angry than to neutral trials. Increased levels of physical aggression were significantly related to increased P300 amplitude on neutral trials only. It was concluded that the aggressive brain selectively orients to angry faces, and that this attentional bias results from an inferior ability to downregulate competing angry face distractors when responding to probes replacing neutral faces. These findings highlight that attentional bias to angry faces in individuals with higher physical aggression is characterized by a distinctive ERP signature, which could help inform the development of therapeutic interventions seeking to reduce aggression.

### **Brain Response to Negative Facial Expressions in Male and Female Youths with Conduct Disorder: Preliminary Findings from the Femnat-CD Consortium**

Stephane de Brito | University of Birmingham  
 Jack Rogers | University of Birmingham  
 Areti Smaragdi | University of Southampton  
 Karen Gonzalez | University of Southampton  
 Rosalind Baker | University of Birmingham  
 Roberta Clanton | University of Birmingham  
 Ruth Pauli | University of Birmingham  
 Justina Sidlauskaitė | University of Southampton  
 Roberta Ricelli | University of Southampton  
 Gregor Kohls | Uniklinikum Aachen  
 Sarah Baumann | Uniklinikum Aachen  
 Caroline Biskup | Uniklinikum Aachen  
 Kerstin Konrad | Uniklinikum Aachen  
 Beate Herpertz-Dahlmann | Uniklinikum Aachen  
 Anne Martinelli | Goethe University Frankfurt  
 Anka Bernhard | Goethe University Frankfurt  
 Katharina Hackermann | Goethe University Frankfurt  
 Christine Freitag | Goethe University Frankfurt  
 Graeme Fairchild | University of Southampton  
 the FemNAT-CD consortium

**Objectives.** Several studies have investigated the neural correlates of emotion processing in conduct disorder (CD), but the vast majority of these have focused on males. The aim of this study was to brain response during the processing of negative facial expressions in male and female adolescents with CD with that of typically developing (TD) males and females. **Methods.** Functional magnetic resonance imaging data across 4 sites were obtained from 161 adolescents (74 females) with CD and 250 TD youths (142 females; 9-18 years old). A gender discrimination paradigm was employed, in which participants viewed photographs of male and female negative facial expressions (angry and fearful) and neutral expressions. We tested for main effects of diagnosis, sex, and sex-by-diagnosis interactions on brain activity for the contrasts angry>neutral, fearful>neutral, and all facial expressions. All analyses controlled for age, IQ, and sites. **Results.** Preliminary analyses revealed a main effect of diagnosis in the right amygdala for the contrast all faces > fixation indicating that youths with CD showed reduced response compared to the TD youths. We also observed a sex-by-diagnosis in the left amygdala for the contrast angry > neutral whereby females with CD showed reduced responses to angry faces compared to TD females, while an opposite effect was observed for males. **Conclusion.** These preliminary data suggest that youths with CD, irrespective of their sex, show reduced right amygdala response to facial expressions. However, these data also suggest that CD might affect the processing of angry faces differently in males and females.

***Paper Session 7: Early Childhood Aggression***

**Are Reciprocal ‘Effects’ between Conflicted Student-Teacher Relationship and Children’s Externalizing Behavior Truly Causal? A Dynamic Panel Model Approach**

Lars Wichstrøm | Norwegian University of Psychology  
 Vera Skalicka | Norwegian University of Psychology  
 Zhi Li | University Rochester  
 Jay Belsky | University of California, Davis  
 Silje Margrete Husby | Norwegian University of Psychology

Given the amount of time children spend in school and the hypothesized important role of the teacher in children's lives several scholars have suggested, and found support for, the proposition that a conflicted student-teacher relationship increase the risk of developing future externalizing problems (i.e., rule-breaking and aggressive behavior), and vice-versa, even when several confounders have been measured and adjusted for. However, unmeasured confounders such as teacher and child genetics and temperament/personality may still influence the results. To adjust for all unmeasured time-invariant confounders we applied a dynamic panel modelling approach within a structural equation framework to two large community samples of children (Norway n=1,042 and USA n=1,150) followed from preschool to middle childhood over five waves of observation. Conflictual relationship was rated by the teacher by means of the student-teacher relationship scale and externalizing problems were assessed through the ASEBA by teachers and parents. Autoregressive cross-lagged analyses showed that in both samples more externalizing problems (both teacher and parent rated) predicted increased conflict with the teacher. In the sample from USA and from age 4 to 6 years in Norway, more student-teacher conflict predicted more externalizing behavior. However, when all unmeasured time-invariant confounders were adjusted for, there was no prospective relation between student-teacher conflict and externalizing behavior. Hence, the seeming impact of a conflictual relationship with the teacher on later externalizing behavior (and vice-versa) is likely attributable to stable factors (e.g., genetics, personality, school characteristics) affecting the two, and not to any causal impact.

### **Children's Reaction to Social Exclusion: An Experimental Study of Aggression and Moral Reasoning**

Erin R. Baker | University at Albany, State University of New York  
 Amanda Mae Woodward | University of Maryland, College Park

Early childhood aggression undergoes tremendous change due to cognitive and social maturation. However, these changes are dynamic, and therefore, children may display behavior incongruent with their beliefs. These disparities may become more pronounced under strain as children's nascent reasoning gives way to emotionality. In this ongoing study, we examine how exclusion exposure impacts young children's aggressive expression and moral reasoning. To date, data have been collected for 58 children (Mage=59.8 months). At T1, children completed the Accidental and Prototypic Transgressor Tasks (Killen et al., 2011), providing insights into children's moral reasoning, and a structured self-report moral behavior interview. At T2, children were randomly assigned to one of two conditions (i.e., exclusion, or control) in the game Cyberball (Williams et al., 2000) and upon completing the game children again answered the Accidental and Prototypic Transgressor tasks and the behavior interview. Preliminary findings suggest exposure to exclusion significantly affected children's behavioral reports. At baseline, the two groups did not differ in their self-reported aggression; however, at T2, children in the experimental condition reported more proactive-relational aggression



( $\eta^2=.175$ ), and less reactive-physical aggression ( $\eta^2=.275$ ), compared to controls. Additionally, numerous differences emerged for children's moral reasoning by way of exclusion; for instance, children in the experimental condition were more likely to, at T2, state that an overt transgressor would have positive feelings about harm, and, again at T2, to attempt to empathize with the transgressor (e.g., "he didn't mean to do it"). Additional findings, interpretations, and implications will be discussed.

### **Children's Autonomic Functioning Moderates Links between Maternal Rejecting Attitudes and Preschool Aggressive Behaviors**

Nicholas J. Wagner | University of Maryland

Research shows that the extent to which children's early experiences contribute to the development of aggressive behaviors depends on the psychophysiological regulatory capacities of the child. This study adds to this literature by examining the relations between mothers' rejecting child-rearing attitudes, assessed using the Child-Rearing Practices Report (Block, 1961), and children's aggressive behaviors, assessed using the Child Behavior Checklist (Achenbach, 1991), as well as if children's parasympathetic regulation, both at rest and in response to an anger-inducing film, moderate these links. Using data collected from 88 preschoolers, results show that mothers' rejecting child-rearing attitudes predicted more aggression at age 4. Children's RSA suppression moderated the effects of rejecting attitudes on aggression such that low levels of rejecting attitudes predicted less aggression and very high rejecting attitudes predicted more aggression, but only for children who demonstrated no RSA suppression (i.e., decrease) or demonstrated RSA augmentation (i.e., increase) in response to the anger-inducing film. Consistent with a differential susceptibility framework, this study found that rejecting child-rearing attitudes predicted children's aggression, but only for children who demonstrated an RSA response contrary to what might be considered 'adaptive' (i.e., moderate suppression). A failure to adaptively regulate during emotionally salient experiences is thought to be linked with aggressive behaviors via the promotion of stimulation-seeking behaviors or a failure to adequately inhibit inappropriate or aggressive responses. These processes may be exacerbated in caregiving environments characterized by rejecting child-rearing attitudes, whereas a supportive and validating caregiving may be particularly beneficial for children who have emotion regulation difficulties.

### **Pairing Aggressive Preschoolers with a Socially Competent Classmate in a Dyadic Intervention Improves Their Social Status but Does Not Reduce Their Aggression**

Francois Poulin | Universite du Quebec a Montreal

Stephane Cantin | Universite de Montreal

Frank Vitaro | Universite de Montreal

France Capuano | Universite de Montreal

Aggressive preschoolers are often rejected by their classmates and tend to befriend with aggressive peers. These negative social experiences in turn contribute to an escalation in their aggression. One

prevention strategy designed to break this spiral is to pair the aggressive child with a socially competent classmate in a series of supervised play sessions. This dyadic intervention has two goals: 1) teach alternate behavior such as social skills and provide opportunities to practice them, and 2) support the formation of a positive relationship with the competent peer, which could in turn facilitate social integration in the classroom. The goal of this study was to test such an intervention using a RCT design. A sample of 202 aggressive preschoolers (70% boys; mean age = 65 months) were recruited using a screening procedure based on parents' and teacher' ratings in 180 kindergarten classrooms. Participants in the experimental condition were paired with a socially competent classmate for a series of 10 bi-weekly 30-minute supervised play sessions. Social status, aggression and social skills were assessed before and after the intervention using sociometric nominations and teacher reports. Therapists also reported on the quality of the relationships within each dyad during the sessions. Analyses revealed that the aggressive children significantly improved their social status. However, they maintain the same level of aggression and did not increase their social skills. Interestingly, the quality of the relationship with the competent peer significantly contributed to the improvement of the targeted children's social status in the classroom.

### **General Aggression and Bullying Subtypes during Early Childhood: Testing Differential Predictions**

Jamie M. Ostrov | University at Buffalo, The State University of New York

Kimberly E. Kamper-DeMarco | University at Buffalo, The State University of New York

Sarah J. Blakely-McClure | University at Buffalo, The State University of New York

Kristin J. Perry | University at Buffalo, The State University of New York

Lauren Mutignani | University of Arkansas

Two short-term longitudinal studies were conducted to examine if relational aggression and relational bullying are differential predictors of adjustment problems. In Study 1, teachers completed reports of preschoolers' (N = 124; M age = 44.88 months; SD = 4.52; 41.1% girls) physical and relational aggression, bullying behavior, and peer victimization at two time points. Hierarchical models revealed that, consistent with study hypotheses, relational aggression ( $\beta = .56, p < .01$ ) but not relational bullying ( $\beta = -.16, p > .05$ ) predicted increases in relational victimization. Study 2 (N = 105; M age = 46.78 months; SD = 7.47; 52.4% girls) had multiple informants and addressed collinearity concerns. Specifically, two variables were created. Relational Severity is the average Z score of the relational bullying and aggression variables. Relational Directionality is the standardized half difference between relational bullying and aggression, with negative scores representing a propensity for aggression relative to bullying behaviors. Results of Study 2 indicated that severity was positively ( $\beta = .22, p < .05$ ) and directionality ( $\beta = -.19, p < .05$ ) was negatively predictive of increases in relational victimization. In addition, relational directionality ( $\beta = -.08, p < .08$ ) tended to be negatively associated with increases in social maladjustment problems (i.e., peer rejection, deception, and hyperactivity). Relative to relational bullying, relational aggression was associated with increases in relational victimization and tended to be associated with increases in social maladjustment problems.

### ***Paper Session 8: Measurement of Aggression***

### **Assessing Digital Aggression in Real-time: Validation of a Novel Laboratory Task**

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 Mikayla Kim | Michigan State University  
 Saleem A. Alhabash | Michigan State University

Digital aggression (DA), or the use of information communication technologies to inflict harm on others, is an emerging public health crisis. Unfortunately, our ability to assess DA remains limited, curtailing research in this important issue. We sought to fill this gap in the literature, developing a 'chat' version of the Taylor Aggression paradigm. To assess digital aggression, we altered the TAP to more closely resemble a social gaming format (the TAP-Chat). In our version, participants have a chat function available to communicate with their (fictitious) co-player. Following loss trials, s/he receives a "mean chat" from the co-player. Participant messages to their (fictitious) co-player are coded for aggressive content by a team of trained research assistants, and via a linguistic software program. The current study will evaluate the predictive validity of our coding scheme, evaluating both the TAP-Chat task and the coding scheme in 3 large independent samples (N=391, 684, and 515 respectively). We specifically evaluated how well the TAP-Chat predicted two related outcomes: DA questionnaires, and DA observed in the participants' recent tweets (which are publicly available). Preliminary analyses suggest that, although it can be completed in only a few minutes, the TAP-Chat does indeed predict both Twitter behavior ( $r \sim .25$  across the samples) and questionnaires ( $r \sim .15$ ). They also predicted Twitter behavior somewhat better than the questionnaires ( $r \sim .15$ ). Although there are still several issues to address, it is our hope that this approach will eventuate in an ecologically-valid behavioral assessment of digital aggression.

### **The Complexity of Aggressive Behavior: Validating a Laboratory Aggression Paradigm**

Carmen Weidler | RWTH Aachen  
 Ute Habel | Research Center Jülich and RWTH Aachen  
 Lisa Wagels | Research Center Jülich and RWTH Aachen

Aggression research demands carefully planned experimental set-ups, challenging the investigation of human aggression in laboratory settings. Paradigms measuring aggression differ with regard to their implementation, their potential to analyze and interpret the results. Therefore, reliable experimental set-ups which can be used to investigate underlying and contributing factors of aggression are warranted. The present study aims to compare and validate different modifications of the Taylor Aggression Paradigm (TAP). Three experiments, each including 26 participants, were conducted to examine different combinations of provocation and punishment modalities (monetary subtraction, thermal punishments). Across all modalities, we observed an effect of provocation level with higher provocation levels leading to increased reciprocal punishing. This was accompanied by a decrease in positive affect and an increase of angry and hostile feelings following the TAP. While overall punishment levels were associated with trait aggression, reactions towards provocation and success within the task were related to the current emotional state of participants. Comparing the different versions, monetary deduction seemed to be the most effective provocation and also led to an increased infliction of physical punishment. Self-reported motives of selected

punishment levels were the induction or reduction of harm rather than the maximization of monetary gains. The TAP reliably induces provocation related aggressive responding independent of the provocation stimulus. Depending on the setting, we suggest to use the monetary or mixed version of the TAP and to report overall punishment levels as a measure for trait aggression, and provocation related punishments as a state dependent reactivity index.

### **Enhancing Anger Regulation with Neurostimulation of the vmPFC during the Anger-Infused Ultimatum Game: A Simultaneous tDCS-fMRI Study**

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School of Medicine

Rany Abend | Tel Aviv Sourasky Medical Center; Tel-Aviv University and National Institute of  
Mental Health

Guy Gurevitch | Tel Aviv Sourasky Medical Center and Tel-Aviv University

Alon Erdman | Tel Aviv Sourasky Medical Center and Tel-Aviv University

Halen Baker | Tel Aviv Sourasky Medical Center

Ziv Ben-Zion | Tel Aviv Sourasky Medical Center and Tel-Aviv University

Talma Hendler | Tel Aviv Sourasky Medical Center and Tel-Aviv University

The anger-infused Ultimatum game (UG) is a recently developed reliable and valid paradigm to induce and assess the experience and expression of realistic interpersonal anger. In this paradigm, unfair monetary offers accompanied by written provocations induce anger. Rejection of such offers by responders relates to aggression, whereas acceptance is linked to anger regulation. We previously demonstrated that ventro-medial prefrontal cortex (vmPFC) activation positively associated with acceptance rates and negatively with self-reported anger in an anger-infused UG. Here, we tested whether transcranial Direct Current Stimulation (tDCS) targeting the vmPFC would increase acceptance of unfair offers and decrease self-reported anger in the anger-infused UG. We further examined whether the effects of stimulation will transfer to a subsequent angering interaction by administering the Taylor Aggression Paradigm (TAP), in which noise-blast intensities inflicted to an opponent reflect provoked aggression. We conducted a double-blind crossover study (N=25) comparing the effects of active vs. sham stimulation during fMRI. Participants reported their anger before and after the tasks. Results indicate that active stimulation led to increased acceptance of unfair offers, and mitigated an increase in self-reported anger following the anger-infused UG. Brain analysis revealed increased activation of vmPFC for unfair offers during active vs. sham stimulation. More vmPFC activation during active stimulation associated with less increase in provoked aggression in the TAP. Findings suggest a causal link between vmPFC functionality and the experience and expression of anger, supporting vmPFC's role in anger regulation and providing a promising avenue for reducing angry and aggressive outbursts during interpersonal provocations.

### **Pain and Aggression in Humans**

Mitchell E. Berman | Mississippi State University

Michael S. McCloskey | Temple University

Jennifer R. Fanning | University of Chicago  
 Nathan Barclay | Mississippi State University  
 Richard K. Nelson | Mississippi State University

Pain is a universal, regularly occurring, cradle to grave human experience. Both situational (response to painful stimuli) and dispositional (individual differences in pain tolerance) have been associated with aggression in humans. However, few studies have examined this relationship under controlled, laboratory conditions. The purpose of this talk is to review issues relevant to the study of the pain-aggression linkage in humans, and to present data that illustrate potential avenues for research using a classic laboratory measure of aggression (the Taylor Aggression Paradigm: TAP) as well as a well-validated laboratory measure of self-aggression (the Self-Aggression Paradigm: SAP). Using the TAP, we found that past aggressive behaviors were positively associated with aggression observed prospectively in the laboratory (defined as the number of intense shocks administered to an increasingly provocative fictitious opponent during a competitive reaction-time game). This relationship was mediated by individual differences in pain tolerance to shock stimuli. That is, life-history of aggression was positively associated with pain tolerance, and pain tolerance was in turn associated with aggression observed in the laboratory. Using the SAP, we found that experimentally manipulated alcohol intoxication was positively associated with self-aggressive behavior (number of intense shocks self-administered) in the laboratory in a dose-dependent fashion. This effect, however, was mediated by changes in pain threshold as a function of increasing blood alcohol concentration. Together, these studies support the notion that dispositional and situational aspects of pain can play a role in the expression of human aggression.

### **From Fantasy to Reality – Evaluating a Questionnaire for Aggressive Sexual Fantasy Assessment**

Joseph Birke | University of Potsdam  
 Rebecca Bondü | Psychologische Hochschule Berlin

Aggressive sexual fantasies are considered a risk factor for aggressive sexual behavior, even in the general population. However, in recent years little research has examined this relationship. In the present study, we further evaluated a questionnaire used in previous studies by comparing it with an additional indirect measure for sexual preference, the Viewing-Time procedure. A total of  $N = 428$  individuals (61.9 % women; 38.1% men) between 18 and 83 years ( $M = 28.17$ ,  $SD = 9.7$ ) reported their aggressive sexual fantasies and their preference for sexual, aggressive, and sexual aggressive pictures during an online experiment. Response latencies for picture evaluations were interpreted as viewing time, which served as the indirect measure for sexual preference. In line with our hypotheses, we found that on average, men reported more aggressive sexual fantasies than women. Women reported more masochistic fantasies than men. Furthermore, aggressive sexual fantasies positively correlated with the explicit and implicit preference for aggressive as well as sexual aggressive pictures. Aggressive sexual fantasies were the strongest predictor for self-reported aggressive sexual behavior, even when controlled for preferred sexual practices, gender, age as well as implicit and explicit preferences for sexual aggressive pictures. These results underline the validity of the questionnaire and the importance of aggressive sexual fantasies in predicting aggressive sexual behavior.

**Paper Session 9: Bullying****Genetic and Environmental Effects on Bullying and Victimization: A Study of Twins from the KiVa Antibullying Program**

Ada Johansson | Åbo Akademi University  
 Anne Huhtamäki | Åbo Akademi University  
 Miia Sainio | University of Turku  
 Michel Boivin | Laval University  
 Elisa Poskiparta | University of Turku  
 Christina Salmivalli | University of Turku

Bullying affects approximately a quarter of schoolchildren and is connected to a wide range of psychological, somatic, and social problems. Even though distinct risk factors for bullying and victimization have been identified, few studies have investigated the genetic and environmental underpinnings of bullying and victimization. The main aim of this study was, therefore, to examine the contributions of genetic and environmental factors to bullying and victimization. The second aim was to analyze whether the KiVa antibullying program moderated the magnitude of these contributions by comparing the estimates derived for the intervention versus the control group. The sample comprised students from schools that participated in the evaluation of the KiVa antibullying program in Finland during the years 2007-2009. Bullying and victimization were measured using peer nominations by classmates. The sample for the twin modeling analyses comprised of 447 twin individuals (107 monozygotic and 340 dizygotic twins) aged 7-15. Consistent with previous findings, genetic contributions accounted for 62% and 77% of the variance in bullying and in victimization, respectively. There was also a post-intervention difference in the overall role of genetic and environmental contributions between the intervention and the control group, with non-shared environmental effects playing a larger role (and genes a lesser role) in the control group than in the intervention context. This study provides preliminary evidence that a school-based antibullying program could reduce the influence of non-shared environmental factors on bullying.

**Preventing Cyberbullying in Schools: Adaptation of the German Medienhelden Program for Implementation and Evaluation in Schools in Colombia (Ciberhéroes)**

Enrique Chaux | Universidad de los Andes  
 Anja Schultze-Krumbholz | Technische Universität Berlin  
 Pavle Zagorscak | Freie Universität Berlin  
 Herbert Scheithauer | Freie Universität Berlin

Cyberbullying is a particularly severe type of bullying that is not easy to prevent. Medienhelden is a school-based program developed in Germany which has shown positive impact in prevention of cyberbullying. It is based on promoting empathy for potential victims, knowledge about risks and safety measures, and assertive intervention by bystanders. In this study, we adapted Medienhelden to the urban Colombian context and conducted an evaluation with 1,114 6th- (53%) and 7th-grade (47%) students (10 to 16 year-olds; 55% girls) from 9 schools (4 public, 5 private) from Cali, Colombia. Classrooms were randomly assigned to experimental or control groups. Students answered a series of

measures before program implementation and 9 months later. Sessions were implemented by their ethics teachers, who participated in 20 hours of training. Results showed significant reductions in victimization by traditional bullying, disposition to use electronic aggression, and moral disengagement about relational aggression, as well as improvements in classroom climate and physical well-being. In addition, a significant reduction in self-reported cyberbullying was found for 6th-graders (but not for 7th-graders) and for girls (but not for boys). All other changes in traditional and cyberbullying were in the expected direction but did not reach statistical significance. No significant changes were found for empathy, disposition to defend or denounce, moral disengagement about electronic aggression, or self-esteem. Although there were implementation challenges in some of the schools, and not all measures showed significant changes, the study brings hope to adapting a cyberbullying prevention program from one cultural context to another.

### **Development and Validation of ICT Self-Efficacy Scale: Exploring the Relationship with Cyberbullying and Victimization**

Sadia Musharraf | Quaid-i-Azam University  
Sheri Bauman | University of Arizona

The purpose of this study was to develop and validate the Internet and Communication Technology (ICT) Self-Efficacy Scale and the association of cyberbullying and victimization with ICT Self-Efficacy. Sample 1 (436 university students) was used to identify the factor structure of the Scale, and sample 2 (1115 university students) provided the data to confirm the factor structure (CFA), and to compute the internal consistency reliability, convergent validity of the scale and the relationship of ICT self-efficacy with cyberbullying and victimization. Findings demonstrate that the new scale is a reliable and valid domain-specific measure to assess ICT Self-Efficacy for university students. Furthermore, a significant relationship was found between cyberbullying, and the composite ICT self-efficacy score. Suggestions for further research with the scale are provided.

### **Influence Versus Alliance: Is Adolescent Bullying Associated with Both Forms of Social Resources?**

Andrew V. Dane | Brock University  
Ann H. Farrell | Brock University

According to the Resource Control Theory, two primary but contrasting strategies for obtaining social resources are through coercive or prosocial behavior. However, few studies have examined whether these strategies are associated with different forms of social resources. Interpersonal influence can be an explicit, immediate form of social power, while alliance formation can be an implicit resource that relies on reciprocal altruism. Adolescent bullying may be one form of coercive behavior to obtain social power. Using path analyses, we examined whether bullying perpetration was associated with higher interpersonal influence, but not alliance formation, and whether victimization was associated with lower levels of both social resources. We also examined whether these associations would be moderated by prosocial behavior and gender. Adolescents (N = 396; Mage = 14.64, SDage = 1.52; 58% girls) recruited from extracurricular activities in Canada completed self-report measures on bullying,

interpersonal influence, alliance formation, and prosocial behavior. As predicted, bullying perpetration was associated with higher interpersonal influence but not alliance formation, while victimization was associated with lower alliance formation. Perpetration and victimization also interacted with prosocial behavior for girls. Both were associated with higher alliance formation when prosocial behavior was also high. Results suggest that bullying, a coercive resource control strategy, is associated with explicit social power and influence. However, bullying can also be associated with alliances when used in combination with prosocial behavior. Findings highlight the limitations of bullying used in the absence of prosocial strategies, and the benefits of prosocial behavior to victimized adolescents seeking social support.

### **Psychological Contract Violation or Basic Need Frustration? Psychological Mechanisms behind the Effects of Workplace Bullying.**

Philipp E. Sischka | University of Luxembourg

Workplace bullying is a serious phenomenon that has serious detrimental effects on victim's health, attitudes, and work-related behavior. However, research that examines the mechanisms behind these relations is still sparse. Two theories that may explain the links between workplace bullying and various negative outcomes are social exchange theory and self-determination theory. Drawing on these theories, we hypothesized that the relationship between workplace bullying and various outcomes is mediated by perceptions of psychological contract violation and the frustration of basic psychological needs (i.e. autonomy, competence, relatedness). Therefore, the aim of our study was to test these mediators separately and simultaneously to see whether they have an incremental mediation effect between workplace bullying and well-being, work satisfaction, engagement, performance, burnout, workplace deviance and turnover intentions. An online survey design was employed and data were collected among U.S. employees. The final sample consists of 1,408 respondents (56.6% females,  $n=798$ , age:  $M=37.3$ ,  $SD=10.4$ ). Single mediation analysis within a structural equation modeling framework revealed that psychological contract violation acted as a mediator for all outcome variables. Furthermore, basic need frustrations were also meaningfully mediators between workplace bullying and all outcomes, but different need frustration were differently linked with them. The multiple mediation analyses mainly supported the hypothesized importance of the mediators for the different outcomes. The study findings advance the field through identifying the most important mediators between workplace bullying and several outcome variables guiding possible interventions.

### ***Paper Session 10: Hypothalamus and Aggression***

#### ***Hypothalamic Control of Aggression Seeking Behaviors***

Dayu Lin | New York University School of Medicine

Aggressive motivation can be defined as the internal state that drives animals to seek out opportunities to perform aggressive actions. As with other motivated state behaviors, internally generated motivations may promote seeking behaviors that are independent of incoming sensory information.



However, the neural substrates controlling aggressive motivation are not known. While the ventromedial hypothalamus, ventrolateral area (VMHvl) of male mice has recently been identified to have a critical role in promoting aggressive actions including attack, its role in sensory-independent aggression-seeking has been unclear. In order to assay aggressive motivation, we have trained mice on a novel operant paradigm where animals self-initiate aggression “trials” by nosepoking for access to a social “reward” of a submissive male mouse. Over successive days of training, we find clear task learning in ~50% of trained mice and observe that task learning is correlated with aggression on an independent aggression assay. We demonstrate bi-directional control of task response rate using both a pharmacogenetic and optogenetic approach in the VMHvl. Reversible inactivation using the DREADD Gi system reduces task response rate for the social “reward” but not for a corresponding nonsocial reward (water). In contrast, optogenetic activation of VMHvl neurons and disinhibition of surrounding GABAergic neurons during the interpoke interval decreases response initiation latency for single trials. To assay the neurons response during this task during natural conditions we recorded from populations of VMHvl neurons during this task and used a principal component analysis based approach to identify neurons with preferred response selectivity during distinct phases of the task, including the aggressive social interaction, the nosepoke response, ramping prior to the response initiation, and the delay period. We find that a subpopulation of cells slowly ramp up activity during interpoke interval and their responses during poking is correlated with the occurrence of future attacks after intruder introduction. These results support a model by which VMHvl cell activity accumulates during the inter-poke interval to drive self-initiated aggression.

### **Prefrontal Control of Hypothalamic Aggression**

Jozsef Haller | Institute of Behavioral Sciences and Law Enforcement, Budapest, Hungary

This presentation aims at elucidating certain aspects of the mechanisms that underlie abnormal aggression i.e. those forms aggression that surpass species typical levels, and deviate from species-typical rules. First we will focus on the prefrontal cortex, demonstrating that a laboratory model of early neglect – a major etiological factor of aggression-related psychopathologies – induces epigenetic changes in the infralimbic cortex and in addition, it alters the connectivity of this prefrontal brain area. Thereafter, we will present our recent optogenetic findings, which show that particular aspects of aggression e.g. its quantity and its violent nature are separately controlled by distinct prefrontal neural populations that directly target either the mediobasal or the lateral hypothalamus. Finally, we will investigate how this prefrontal-hypothalamic mechanism integrates into the larger network that controls aggression, with special reference to particular amygdala subnuclei.

### **Psychopathology of Positive Fighting Experience: Experimental Study**

Nataliya Kudryavtseva | Institute of Cytology and Genetics SB RAS

It is well known that aggressive behavior in animals and humans is strongly influenced by the previous experience of aggression. It has been shown that male mice that have a long positive fighting history developed behavioral psychopathology, which includes abnormal aggression, high impulsivity, enhanced anxiety, disturbances in social recognition, stereotypic and hyperkinetic reactions among

others. Hedonic behavior is disturbed in the chronically winning mice and aggressive motivation dominates in any social situation. Winners deprived from fighting develop an elevated level of aggression as compared to the period before the fight deprivation. Rearrangement of brain regulation involving the processes of neurotransmitters' synthesis, catabolism, receptors and gene expression has been shown in experimental study: balance between the activities of the brain's neurotransmitter systems is disturbed due to a reduced activity of the serotonergic system and an enhanced activity of the dopaminergic systems in brain regions. As a result, the inhibitory processes become overwhelmed by excitation processes and normal innate mechanisms regulating aggressive behavior are transformed into pathological ones. Pharmacological studies have demonstrated involvement of the opioidergic systems in the effects of repeated aggression: opioid receptors may be desensitized or sensitized depending on the amount of aggression experience and these changes may be comparable to those in drug addicts. Medicine treatment used in clinics for correction of enhanced aggression had minor effects. Thus, long positive fighting experience in animals leads to development of psychopathology, and enhanced aggression is one of psychoneurological symptoms in the frame of comorbidity with psychotic disorder. Supported by Russian Science Foundation (No14-15-00063).

***Paper Session 11: Intimate Partner Violence***

**Macrosocial and Individual Factors Involved In Violence against Women by Their Partners in Europe: A Multilevel Analysis**

Antonella Ludmila Zapata-Calvente | University of Granada

Jesús L. Megías | University of Granada

Miguel Moya | University of Granada

Dominik Schoebi | University of Fribourg

Intimate Partner Violence against Women (IPVAW) is a phenomenon with multiple causes, but much of the research continues to focus on individual-level factors, ignoring the role of macrosocial variables and possible interactions between them. This study explored how gender-related macrofactors (beliefs about traditional gender roles –TGR-, attitudes towards equality, economic Gender Equality Index –GEI-) are related to IPVAW in Europe and how these factors interact with individual-level ones (age, education, childhood victimization, partner's alcohol consumption, aggressive partner) in the prediction of this violence. Our analysis of the FRA VAW survey (2015) highlighted that 26.1% of women in Europe asserted having suffered at least one act of physical, emotional or sexual violence from their current partners, with variation across countries. Taking this data and those from the Eurobarometer of Gender Equality and from the GEI, and using generalized linear mixed models, we found that at country level, attitudes more favourable to equality were related to lower rates of women victimization, and TGR beliefs did not predict victimization, although they played an important role in cross-level interactions with individual-level factors. Individual-level factors were also related to IPVAW victimization. These findings suggest that addressing social attitudes towards equality and focusing on changing TGR socialization are likely to reduce the rates of IPVAW victimization.

### **Low Intensity Intimate Partner Aggression in Ghana: Support for the Revised Gender Symmetry Theory in an African Country**

Kaj Björkqvist | Åbo Akademi University  
 George Darko | Åbo Akademi University  
 Karin Österman | Åbo Akademi University

There is an ongoing controversy about whether there are sex differences regarding the use of different forms of intimate partner aggression (IPA). The view that men are more aggressive than women has been referred to as gender asymmetry theory, while the theory that men and women are more or less equally aggressive has been called gender symmetry theory. Archer (2018) has suggested a revised gender symmetry theory, according to which gender symmetry holds only for low intensity aggression, while as far as high intensity aggression is concerned, males are perpetrators to a higher degree than females. Archer suggests that gender symmetry should be expected to be found only in societies with a relatively high degree of gender equality. In this study, sex differences regarding the perpetration and victimization of low intensity IPA in Ghana were investigated. The sample consisted of 1,204 adults (mean age 44.1 yrs., SD 13.5), with 602 males and 602 females. IPA was measured with the DIAS-Adult questionnaire (Österman & Björkqvist, 2009). Males scored higher than females on being victimized by their partner from physical, indirect, and nonverbal aggression, while females scored higher than males on being perpetrators of physical, indirect, nonverbal, and cyber aggression. This is the second study to report men being more victimized from low intensity IPA than women in an African nation, thus finding support for Archer's revised gender symmetry theory of IPA but showing that it holds not only in Western, but also in African countries with a patriarchal structure.

### **Sex Differences in Perpetration of Low Intensity Intimate Partner Aggression in South Sudan**

Karin Österman | Åbo Akademi University  
 Owen Ndoromo | Åbo Akademi University  
 Kaj Björkqvist | Åbo Akademi University

The aim of the study was to investigate sex differences in perpetration of low intensity intimate partner aggression in South Sudan, to compare levels of perpetration and victimisation, and further to test whether the revised gender symmetry theory (Archer, 2018) could be applicable in an African country. A questionnaire was filled in by 302 females and 118 males in South Sudan, the mean age was 22.5 years (SD 8.4) for women, and 25.6 years (SD 7.8) for men. Intimate partner aggression was measured with self-reports using both the perpetrator and the victim versions of the Direct Indirect Aggression Scales for Adults (DIAS-Adult; Österman & Björkqvist, 2009), which measures seven types of aggressive behaviours. The results showed no significant difference between females and males on perpetration of five out of seven types of aggression; physical, verbal and nonverbal aggression, as well as direct and indirect aggressive social manipulation. For females, levels of victimisation and perpetration of aggression were equally high; this was the case for all seven types of aggression while, for males, victimisation was significantly higher than perpetration on three types of aggression. The results provide support for the revised gender symmetry theory in an African developing country.

### **Regional Differences in Intimate Partner Homicide (IPH), 2005-2015**

M. Nicole Warehime | University of Central Oklahoma

Karen Longest | Oklahoma Baptist University

Elizabeth M. Green | University of Oklahoma

It has been established that there are regional differences in homicide in the United States. Most notably, the southern states have reported higher rates of homicide and violence, resulting in a notion of the southern culture of violence (Nisbett, 1993; Hayes & Lee, 2005; Miner & Smittick, 2016). Additional research has begun investigating the role of the southern culture of honor in intimate partner violence (IPV), finding that in honor cultures, IPV may be expected or at least supported, especially if female infidelity is found (Vandello & Cohen 2003; Vandello & Cohen 2008). However, do these trends follow in IPH? Data from the Uniform Crime Reporting Program Supplementary Homicide Reports from 2005 to 2015 was used to create a subset of heterosexual, single-offender/single victim IPH cases (N=13,106). Additionally, through data from the 2010 U.S. Census, we investigated the descriptive demographics of IPH by US regions. Generally, regional IPH matches overall homicide patterns. The rate of IPH in the south is approximately 40% higher than other regions. Interestingly though, the rate of female-perpetrated IPH is nearly doubled in the south, compared to other regions. Traditionally, the southern culture of honor focuses on white male offenders. However, relative to other regions, we found that white males commit the lowest percentage of IPH in the south. Instead, black males and white females commit the highest percentage of IPH in the south, relative to other regions. This research highlights differences between general homicide and IPH indicating a need for different policies by homicide type.

### **Distinguishing Reciprocal versus Nonreciprocal Intimate Partner Violence**

Doris F. Pu | University of Alabama at Birmingham

Christina M. Rodriguez | University of Alabama at Birmingham

Intimate partner violence (IPV) is often conceptualized as occurring unilaterally, with one perpetrator aggressing against one victim. However, bidirectional violence is actually the most prevalent pattern of IPV (Caetano, Ramisetty-Mikler, & Field, 2005). Researchers are increasingly recognizing the need to examine reciprocal IPV, as perpetrated by both partners, versus nonreciprocal IPV, which is committed by only one partner; but further inquiry is necessary (Forgey & Badger, 2010). Additionally, risk factors that are differentially associated with reciprocal and nonreciprocal IPV should be identified for both males and females, as each can be perpetrators and/or victims of IPV (Renner & Whitney, 2012). As part of a prospective longitudinal study, 203 primiparous women and 151 of their male partners reported on the frequency of their experiences of IPV perpetration and victimization using the Revised Conflict Tactics Scale (Straus & Douglas, 2004). Participants were classified into one of four groups: those experiencing reciprocal violence, those perpetrating violence only, those experiencing victimization only, and those experiencing no violence. Analyses of variances were conducted, demonstrating that these groups could be differentiated by unique characteristics, including risk factors related to personal adjustment (e.g., symptoms of psychopathology, substance use), psychosocial resources (coping skills, social support satisfaction), sociodemographic characteristics

(e.g., age, annual household income, education level), and sociocultural factors (e.g., attitudes towards sex-role egalitarianism). Gender differences in predictors were also found, suggesting that differing risk factors may need to be targeted when designing intervention programs to prevent IPV among males and females.

### ***Paper Session 12: Violent Offenders***

#### **Neural Connectivity during Reward Expectation Dissociates Impulsive-Antisocial Violent Offenders from Impulsive-Antisocial Non-Offending Individuals**

Robbert-Jan Verkes | Radboud University Medical Center

Dirk E. Geurts | Radboud University Medical Center

Katinka von Borries | Radboud University Medical Center

Inge Volman | Radboud University Medical Center

Berend H. Bulten | Radboud University Medical Center

Roshan Cools | Radboud University Medical Center

Antisocial-impulsive personality traits increase the risk of violent aggressive behavior. Understanding the neurobiological mechanisms underlying an enduring pattern of antisocial-impulsive behavior can be used to optimize prevention and management strategies for individual offenders. Recent studies show that aberrant neural mechanisms underpinning reward expectation might be critical to understanding impulsive-antisocial behavior. To test this hypothesis further, we assessed the neurobiological mechanisms of reward expectation in incarcerated male offenders meeting the criteria for psychopathy according to the Psychopathy Checklist-Revised. We focused on impulsive-antisocial traits, because these traits best predict future violence. We compared this group (n=14) to two groups of non-criminal male individuals: one with high levels of impulsive-antisocial traits (n=10) and another with low levels of these traits (n=10). Functional magnetic resonance imaging (fMRI) was used to quantify neural responses to reward expectancy in these three groups. Psychophysiological interaction analyses were performed to examine differences in functional connectivity patterns of reward-related regions. The data suggest that incarcerated psychopathic offenders can be dissociated from noncriminal individuals with comparable impulsive-antisocial personality tendencies based on the degree to which reward-related brain regions interact with brain regions that control behavior. These findings give further insight into the neural pathways that are involved in behavioral control, which is pivotal to improve interventions to decrease the risk of future violent aggressive behavior.

#### **Effectiveness of Neurostimulation on Emotion Regulation in Criminal Offenders**

Lena Hofhansel | RWTH Aachen and Research Center Jülich

Christina Regenbogen | RWTH Aachen

Carmen Weidler | RWTH Aachen

Ute Habel | RWTH Aachen and Research Center Jülich

Adrian Raine | University of Pennsylvania

Benjamin Clemens | RWTH Aachen

The inability to regulate negative emotions is a key indicator for criminal behavior. Neurostimulation (transcranial direct current stimulation) may be a candidate to improve neural correlates of deficient cognitive control. In our double-blind sham-controlled study we implemented an emotion regulation paradigm in an fMRI setting and applied tDCS (1.5mA) for 20 minutes to the right dorsolateral prefrontal cortex of 25 criminal offenders to counteract the anticipated prefrontal activation deficits. FMRI data was compared between offenders and 21 healthy controls regarding the effect of anodal tDCS on the behavioral and neural correlates of emotion regulation. Significant lower overall brain activation is present in the emotion regulation network (i.e. left anterior cingulate cortex (ACC) and the inferior frontal gyrus (IFG)/insula) in criminal offenders compared to healthy controls. In contrast, there are no significant differences in self-ratings of experienced valence. Contrary to our hypotheses, anodal tDCS stimulation led to an overall reduction of brain activation across groups. This effect manifests itself differently in controls and offenders leading us to suspect distinct connectivity patterns in each group. While we find significantly less activation in controls in the left middle frontal and precentral gyrus (tDCS > sham), the effect in the offenders is present in the cerebellum, the left superior parietal lobe, the left inferior/superior temporal gyrus, medial and middle frontal gyrus. Two alternative explanations are given for this incongruence between brain and behavior: Either the offenders' display incongruence between reported and experienced emotions or they activate differently structured, compensatory networks during the emotion regulation.

### **From Avoiding Risk to Learning the Optimal Level – tDCS Modulates Risk Taking in Criminal Offenders**

Leandra Nolte | RWTH Aachen  
 Lisa Wagens | RWTH Aachen and Research Center Jülich  
 Lena Hofhansel | RWTH Aachen  
 Lara Keller | RWTH Aachen  
 Olivia Choy | University of Pennsylvania  
 Adrian Raine | University of Pennsylvania  
 Ute Habel | RWTH Aachen and Research Center Jülich

Detrimental decision making is a major problem among criminal offenders. Non-invasive brain stimulation offers a promising method to directly influence decision making and has already been shown to modulate risk taking in healthy controls. In the current study, 15 male criminal offenders and 15 male healthy controls took part in a randomized double-blind placebo-controlled cross-over study applying transcranial direct current stimulation (tDCS). Participants received anodal tDCS and sham stimulation over the right dorsolateral prefrontal cortex on two separate days. Subsequently, participants performed the Balloon Analogue Risk Task (BART) during functional magnetic resonance imaging (fMRI). Criminal offenders showed significantly less optimal decision making compared to healthy controls after receiving sham tDCS. After active tDCS, the offenders' performance approximated the healthy control group so they did not differ significantly. Especially at the second assessment, offenders benefited from active tDCS. On the neural level, risky decision making was associated with increased activation in the right dorsolateral prefrontal cortex, dorsal striatum, thalamus, anterior insula and anterior cingulate cortex. Criminal offenders showed reduced activation in the middle cingulate cortex, superior and middle frontal gyrus, inferior frontal gyrus and precentral

gyrus compared to the controls. However, tDCS did not modulate brain activity. The results reveal pronounced differences between criminal offenders and healthy controls on behavioral and neural level. Alterations in frontal network activity might underlie the impaired decision making process in criminal offenders. Behavioral findings cautiously indicate that such difficulties could be overcome by enhanced learning of the optimal risk level after active tDCS.

### **Drug Use among Peruvian Young Offenders: An Evaluative Research from a Developmental Approach**

Hugo Morales Córdova | Pontifical Catholic University of Peru

As has happened in Latin America, the juvenile delinquency in Peru has increased significantly over the five last years (MINJUS, 2013). This unprecedented increase has been significantly exacerbated by a high percentage of juveniles who have problematic drinking and dependence of drugs (DEVIDA, 2013). According to the international literature (Killias & Ribeaud, 1999 and Farabee, et. al, 2001), there is an interdependent and complex relationship between drug use and crime. Using the Framework of Developmental Criminology (Farrington, 2003) and drug use Risk Assessment, and quantitative and qualitative methods of research; we analyse the possible relationships between antisocial behaviour, drug use, and associated risk-protective factors to these both ones behaviours; employing a national database ( $N=1,233$ ;  $M=16.8$   $DE=1.2$  years old) about the re-offending and some psychological characteristics between Peruvian young offenders (94.8% males and 5.2% females), and seven focus groups (71.4% males and 28.6% females). Furthermore, the effects of a treatment non-residential program for drug intervention in young offenders were evaluated to identify if psychological variables such as personality characteristics and coping strategies, positively affect to drug abuse risk (reducing it), using a quasi-experimental design. For this purpose, we developed a drug intervention program, applied for three months to a group of  $N=85$  youth offenders ( $M=17.4$   $DE=1.2$  years old; 94.1% males and 5.9% females) with problematic use/abuse of alcohol, tobacco, marijuana (cannabis) and cocaine. The homoscedasticity of the variance of all dependent and independent variables was guaranteed through balance procedures between the control and experimental groups. The findings were consistent with international evidence, highlighting the predictive ability of alcohol abuse and cannabis dependence over the recidivism, of the coping strategies as protective factors of the risk of drug abuse, and of the antisocial personality characteristics as risk factors. However, the effect size measured through of the application of intervention program, employing those predictors, was small over the reducing of the drug abuse risk. The motivations and expectancies associated to use of alcohol and cannabis, and to the antisocial behaviour were consistent with the initial prevalence and with the intervention effects over the young offenders with and without treatment. The internal and external validity of the final evidence generated by our research was examined, to explain and understand juvenile delinquency in Peru, and inform to design of public policies that reduce the impact of drug use on the etiology and course of juvenile delinquency. The need to conduct further studies of drug use trajectories from a development perspective is discussed, as well as to explore the typology of drug users limited to adolescence.

**Recidivism Project: Effectiveness of Portuguese Juvenile Justice Measures**

Hugo S. Gomes | University of Minho

Ângela Maia | University of Minho

The Effectiveness of Juvenile Justice Measures Study is part of the Recidivism Project and follows a longitudinal design with three moments of evaluation: T1 - Start of the interventions; T2 - End of the interventions; T3 - Follow-up two years after the end of the interventions. The main objective of this study was to evaluate the effectiveness of the juvenile justice measures, namely the Educational Monitoring and Placement in Educational Centre, through recidivism predictors and evidence of criminal desistance. At T1, the sample consisted of 412 adolescents (345 males, 67 females) aged between 12 and 20 years old ( $M=15.78$ ,  $SD=1.35$ ), averaging 4.54 offenses. The majority integrated the Educational Monitoring measure (69.7%,  $n=287$ ), while the remaining subjects integrated the Placement measure (30.3%,  $n=125$ ). This is an ongoing project and, currently, at T2 the sample is comprised of 257 adolescents, and at T3 the sample is comprised of 144 adolescents (125 males, 19 females), aged between 16 and 23 years (Educational Monitoring:  $n=96$ ; Placement:  $n=48$ ). At T3, the recidivism rate was 29.9%, where 43 participants had re-offended in a total of 105 new offenses. The recidivism rate was very similar in both measures (Educational Monitoring: 30.2%; Placement: 29.2%). Comparisons between T1 and T3 showed that both interventions promoted a significant reduction in the total crime frequency, as well as on the seriousness and violence of the re-offenses. Our results point to a significant decrease in the participants' criminal behavior after the intervention, providing evidence of the effectiveness of the juvenile justice interventions.

***Paper Session 13: Neurobiology of Aggression*****The Effects of Exposure to Pornography on Testosterone, Dehumanization and Sexual Aggression**

Valentina Proietti | Nipissing University and University of Vienna

Shawn N. Geniole | Nipissing University

Triana L. Ortiz | Nipissing University

Meghan McLaren | Nipissing University

Megan Phillips | Nipissing University

Gordon Hodson | Brock University

Steven Arnocky | Nipissing University

Antonia Abbey | Wayne State University

Justin M. Carré | Nipissing University

Correlational and experimental work suggests pornography consumption in men is linked to sexually aggressive behavior towards women. However, the psychological and hormonal mechanisms through which pornography consumption modulates men's sexual aggression toward women are not clear. In two experiments, we investigated the extent to which exposure to pornography (vs. control condition) modulated men's testosterone concentrations, dehumanization, and sexual aggression toward



women. In Experiment 1 (N = 84), exposure to pornography (vs control video) caused men to dehumanize a third-party female not featured in either video, but did not modulate testosterone concentrations. Results from Experiment 2 (a pre-registered replication/extension experiment with a larger sample; N = 160), were in the same direction, although the effect was not as strong as in Experiment 1. In addition, Experiment 2 yielded novel evidence of dehumanization at the level of perception. Specifically, after watching a pornographic video, men relied more on featural information when processing female faces, a strategy used to a greater extent when processing objects compared to faces. Despite the effects of pornography exposure on the psychological and perceptual measures of dehumanization, there was no effect on sexual aggression (as measured by comparing the latency to stop the audio tape of a Date-Rape). Collectively, these experiments indicate that acute exposure to pornography leads to psychological and perceptual dehumanization of women, but this dehumanization did not appear to translate to one's propensity toward sexual aggression, as assessed using the date rape analogue task.

### **Implicit Power Motivation Modulates the Effects of Male-Male Competition on Testosterone and Empathy**

John G. Vongas | Ithaca College

Raghd Al Hajj | Concordia University

We tracked changes in men's testosterone following status competitions and explored whether such changes were associated with differences in emotion recognition and two aggression subtypes (proactive, reactive) among winners and losers. We also explored the extent to which implicit power motivation (p Power) moderated these relationships. In Study 1, 84 males competed on a spatial-cognitive task, in dyads, after which they interpreted emotions from facial expressions using the Montreal Set of Facial Displays of Emotion. In Study 2, 72 males competed on the same task after which they participated in the Hot Sauce Paradigm (proactive) and the Point Subtraction Aggression Paradigm (reactive). In both studies, winners' testosterone fell significantly while losers' level rose (albeit in direction). Moreover, in both studies, personalized power moderated the link between contest outcome and androgen change; compared to losers, the effect of reduced testosterone in winners was significant for males low in p Power but not for those having medium-to-high p Power. Although testosterone change was positively associated with emotion recognition, it was unrelated to either aggression subtype. In addition, p Power moderated the direct (or non-hormonal mediated) path between contest outcome and emotion recognition and both aggressive behaviors: high p-Power winners performed better at gauging others' emotions than high p-Power losers. Finally, among those high in p Power, male winners aggressed more proactively than losers, while losers aggressed more reactively than winners. Collectively, these studies demonstrate the relevance of the power motive in moderating hormonal, cognitive, and behavioral responses emanating from human status contests.

### **Impact of a Psychosocial Intervention on Cortisol Secretion and Disruptive Behaviors among Preschoolers in Childcare Center: A Cluster-Randomized Controlled Trial**

Marie-Pier Larose | University de Montréal  
 Isabelle Ouellet-Morin | University de Montréal  
 Marie Claude Geoffroy | University McGill  
 Frank Vitaro | University de Montréal  
 Richard E. Tremblay | University College Dublin  
 Sylvana M. Côté | University de Montréal and University de Bordeaux

**Background:** Meta-analytic data suggested that childcare might be a stressful experience, especially for children between 3 and 4 years old who have disruptive behaviors (i.e., high level of aggressiveness, opposition and hyperactivity). One of the most plausible explanations for children's higher stress levels in childcare is related to the quality of social interactions, which are characterized by frequent conflicts at these ages. The aim of this study is to assess the impact of a child care-based psychosocial intervention aiming at improving social skills on preschooler's stress levels. **Method:** We used a cluster randomized control trial (cRCT) where nineteen public Child Care Centers (n=362, 3 years old preschoolers) of underprivileged neighborhoods in Montreal were randomized to one of those two conditions: 1) intervention group (n=10 centers, 184 preschoolers) or 2) waiting list (n= 9 centers, 178 preschoolers). Cortisol secretion levels were taken at three different times during the day, before and after the intervention. Parents and childcare educators assessed children' disruptive behaviors by questionnaire in pre- and post-intervention. We used a mixed linear model for repeated measures to test the impact of the intervention on cortisol levels in post-intervention, and disruptive behaviors. **Results:** At post-intervention, children in the intervention group had less aggressive behaviors and showed a decreasing diurnal cortisol secretion compared to an increasing diurnal cortisol pattern in the control group. The impact of a social skills training demonstrated in the current study provides a promising solution to address high stress level and disruptiveness among children who attend childcare.

### **A Putative Social Chemosignal Modulates Aggression in Humans**

Eva Mishor | Weizmann Institute of Science  
 Aharon Ravia | Weizmann Institute of Science  
 Daniel Amir | Weizmann Institute of Science  
 Ethan Livne | Weizmann Institute of Science  
 Shani Agron | Weizmann Institute of Science  
 Yaara Endevelt-Shapira | Weizmann Institute of Science  
 Noam Sobel | Weizmann Institute of Science

Terrestrial mammals use their sense of smell for a variety of social interactions. Bodily-odors guide mammalian behaviors from simple automatic actions to complex behaviors. Growing evidence suggests that humans also communicate via chemosignals, yet the mechanisms remain poorly understood. Hexadecanal (HEX) has been proposed as a general mammalian chemosignal (Klein et al). Given that HEX is expressed in human secretions, we set out to investigate its impact on aggressive behavior. 127 participants (67 men) participated in a modified Taylor aggression paradigm where they were first antagonized towards their fictitious game-partner. Aggressive behavior was then assessed using the volume of noise-blasts applied by participants to their fictitious partners. In an across-

subjects design, half of participants were concomitantly exposed to the odor of cloves and half to cloves with added undetected HEX. We found that HEX impacted aggressive behavior in a sex-specific manner: increasing aggression in women (Vol: cont=2.84 $\pm$ 0.55, HEX=3.34 $\pm$ 0.33,  $t(15)=4.70, p<0.0003$ ) yet decreasing it in men (Vol: cont=3.57  $\pm$ 0.34, HEX=2.91  $\pm$ 0.39,  $t(16)=-6.37, p<10^{-5}$ ), indicating a significant dissociation between the two sexes ( $t(15)=-11.18, p<10^{-7}$ ). These results suggest that undetected HEX may indeed impact human aggressive behavior in a sex-dependent manner. In a separate experiment we measured ongoing changes in skin conductance, a measure for sympathetic arousal, under exposure to undetected HEX. We found an increase in the HEX condition for women, yet a decrease for men (Women: HEX-control=0.08 $\pm$ 0.30, Men: HEX-control=0.25 $\pm$ 0.42,  $t(28)=-2.47, p<0.02$ ). This provides physiological support to the behavioral effect found. Currently, we are using fMRI to reveal brain substrates underlying HEX effect on aggressive behavior.

### **Aggression and Biobehavioral Systems in the Broader Psychopathology Literature**

Edelyn Verona | University of South Florida

Melanie Bozzay | University of South Florida

Violence and aggression are of major concern to society, and can be observed across mental health problems. This talk will address the intersections of aggression research and the larger psychopathology literature, and efforts to understand aggression in regard to basic biobehavioral domains of functioning, including those incorporated in the National Institute of Mental Health's (NIMH) Research Domain Criteria (RDoC). Based on the existing theoretical and empirical literature, we convey a process model of aggression involving negative valence and cognitive systems of functioning, which helps position aggression in this larger transdiagnostic framework. Then, we describe our own work that has tested aspects of this model. In particular, our research has found that aggression proneness is not necessarily associated with hyperreactivity to emotional stimuli, and instead with increased problems with inhibitory and cognitive control in the context of emotional or stress contexts. Implications will be discussed, including possibilities to identify mechanisms of action that characterize different psychological disorders presenting with and without aggression.

## Poster Abstracts

*Poster Session 1 : Thursday, July 12, 17 :30 – 18 :30 Cordelier, Marie Curie*

### ***Aggression across cultures***

#### **1. The Experience and Expression of Anger by Lithuanian Women: The Mixed-Methods Approach**

Juliana Lozovska | Lund University

Daiva Daukantaitė | Lund University

Background and aim. Anger is a contradictory emotion, capable of causing aggression and destruction, as well as inspiring courage to protect oneself, take constructive actions and make a change. Although in theory this paradox of anger is widely acknowledged and discussed, in reality women often struggle with their doubts around the appropriateness and sanity of anger. In the present project, we aim to investigate the types and functions of women's and girl's anger and aggression in relation to coercive (i.e. aggressive) and prosocial (i.e. cooperative) resource control strategies, anger discomfort and assertiveness in a sample of Lithuanian women. Methods. To explore anger and aggression, we employed a mixed-method approach. In the first phase of the study, quantitative data were collected. Two hundred and fifteen women (mean age 30.9,  $SD \pm 5.3$ ), completed the Resource control strategy inventory (Hawley, 2006), the State-Trait Anger Expression Inventory-2 (Spielberger, 1999), the Anger discomfort scale (Sharkin & Gelso, 1991), and the Short form of the Simple Rathus Assertiveness Schedule (Jenerette & Dixon, 2010). Out of 215 respondents, 16 were selected and invited to participate in the qualitative part of the project. Data collected by semi-structured interviews were analyzed using thematic analysis method (Clarke & Brown, 2013). Results. In the conference, both quantitative and qualitative results will be presented. Preliminary analysis of quantitative data (data are still being analyzed) indicated that women who adopted particular resource control strategies differed significantly regarding aggression, anger discomfort and assertiveness. Implications for clinical practice, education, directions for future research will be discussed

#### **2. The Longitudinal Transactional Associations between Beliefs Favouring Overt Aggression and Overt Aggressive Behavior in Vietnamese Youth**

Vu Ba Tuan | KU Leuven and Hanoi National University of Education

Martijn van Heel | KU Leuven

Katja Petry | KU Leuven

Guy Bosmans | KU Leuven

Introduction. Social Information Processing (SIP) models state that Normative Beliefs Favoring Overt Aggression (NBFOA) have a reciprocal influence on aggressive behavior. However, few studies investigate the association in non-Western countries, such as Vietnam. In the present study, we examined (a) whether OAB and normative beliefs favoring overt aggression (NBFOA) are stable over time, (b) whether there are transactional associations between OAB and NBFOA, and (c) whether there are gender differences in the pattern of the transactional associations between the two constructs.

Method. In a three-wave accelerated study with a four-month interval, Vietnamese adolescents completed a questionnaire asking about OBA and NBFOA, such as Aggression is Legitimate (AL) and Aggression Pays (AP). The initial sample comprised of 632 adolescents (51.4% boys, Mage = 13.00 [11; 15], SD = 0.85). Results. A cross-lagged panel model in Mplus indicated that OBA and NBFOA were stable over time and that there was a significant transactional association between OBA and AL. More specifically, OBA (W1) significantly predicted AL (W2), and in its turn AL (W2) significantly predicted OBA (W3). Finally, the model did not show significant differences between boys and girls. Discussion. The present study is in line with previous research that suggests that normative beliefs about aggression explain the development of aggressive behavior. Our results indicate that intervention programs should focus on both beliefs about aggression and aggressive behavior.

### **3. Frequency and Acceptance of Physical Punishment by a Teacher among Students from Three School Systems in Pakistan**

Nazia Nazar | Åbo Akademi University

Karin Österman | Åbo Akademi University

Kaj Björkqvist | Åbo Akademi University

A questionnaire was filled in by 1100 students (550 girls, mean age 13.3 years, SD 1.0; 550 boys, mean age 14.1, SD 1.0) from three types of schools in Pakistan; Urdu medium, Elite English medium, and Madrassa, including five scales measuring frequency of victimisation from physical punishment by a teacher, physical injuries from being punished by a teacher, negative feelings after physical punishment by a teacher, reasons for being punished by a teacher, and acceptance of physical punishment at school. Boys had significantly more often been victimised from physical punishment than girls, with boys from Madrassas being more often victimised than all other groups. Students from English medium schools scored significantly lower on all scales than students from Urdu medium and Madrassas. Girls reported a significantly more accepting attitude towards physical punishment in school than boys. Students from Urdu medium schools scored significantly highest on acceptance of physical punishment at school, while boys from English mediums schools reported the significantly lowest level of acceptance. For both girls and boys, acceptance of physical punishment at school was positively correlated with the other scales.

### **4. Aggressive behavior in children and adolescents from Africa: Avatime (Ghana) and Meru cases (Tanzania)**

Valentina Burkova | Russian Academy of Sciences

M. **Vorname fehlt** Butovskaya | Russian Academy of Sciences; Moscow State University; National Research University; High School of Economics Moscow

Lapushkina | Russian Academy of Sciences

The goal of this research was to study aggressive behavior among children and adolescents from two traditional African cultures – Avatime of Ghana and Meru of Tanzania. With this aim we collected data on self-ratings on aggression and 2D:4D digit ratio. The study sample was composed of 97 Avatime (51 boys and 46 girls) and 186 Meru (91 boys and 95 girls) schoolchildren. The 2D:4D was calculated from direct measurements of the fingers, and aggression scores were obtained from completed Buss and Perry (1992) aggression questionnaires. Data were analyzed in SPSS-23. Meru (Vameru) is one of the

ethnic groups residing on the southeastern and eastern slopes of Mount Meru (Tanzania). Avatime (Kedone) resides in the Volta region in the southeast of Ghana. Both groups are agriculturalists. Our study revealed significant sex differences in 2D:4D ratio on right and left hands in the total sample of children and physical aggression. Significant ethnic differences in aggressive behavior were demonstrated: Avatime scored higher on physical aggression and anger in both sexes, and higher hostility in boys. Meru girls was more verbally aggressive compared to Avatime girls. Significant negative correlations between the right 2D:4D ratio and physical aggression was found for only for Avatime boys. The findings are discussed in the light of other data about the influence of prenatal androgenization on aggression in children. Supported by RFBR, grant No17-29-02203.

### **5. Satisfaction with Life, Social Skills, Physical Activity and Level of Aggression of Young People**

Hanna Liberska | Kazimierz Wielki University

Alicja Szmaus-Jackowska | Kazimierz Wielki University

Everyday life provides us with many examples of aggression among people, i.e. Tendencies to frequent use of violence in relationships with others as a way to resolve conflicts or achieve life goals. Aggressive behavior is interpreted as a behavior directed against people or things, transferring damage to the subject of aggression, taking the form of an attack, i.e. physical or verbal attack. The highest level of satisfaction with life, social skills and physical activity seems to be a factor protecting young people against aggressive behavior (the role of offender or victim). The study includes 200 young people aged 16-18 (50% - girls, 50% - boys) from the Kuyavian-Pomeranian region in Poland. The study used the Satisfaction with Life Scale ( E. Diener, R. A. Emmons, R. J. Larson, S. Griffin; Polish adaptation by Z.Juczyński), The Buss-Perry Aggression Questionnaire (AQ), interview and Questionnaire of Social Competencies (A.Matczak). Research results indicate the relationship of life satisfaction and aggression - moreover, the results confirm the moderating role of gender, physical activity and social competence in this relationship

### ***Socio-cognitive processes***

### **6. Effects of Emotional Victim Responses on Aggressive Behaviour**

Vanessa Mitschke | University of Würzburg

Mario Gollwitzer | University of Marburg

Andreas B. Eder | University of Würzburg

Aggressive actions are carried out with the intention to harm another person. Consequently, the aggressor has to monitor the victim to match perceived and desired harm doing for a regulation of aggressive acts. In research on aggressive revenge, there is a discussion whether the aggressor wants to see the victim suffer in a comparable way or if the aggressor wants to deliver a particular message with retaliative punishment. In two studies, we modified a competitive reaction time aggression paradigm that included emotional feedback from the victim via video clips. Participants were provoked and given the opportunity to punish their opponent. The punishment was followed by a short video clip featuring three distinct emotional reactions of the opponent: (1) anger, (2) sadness, (3) pain (and neutral displays as controls). We compared the punishment intensity that was selected by the aggressor in the trials preceding and following the emotional victim feedback. Study 1 showed that the

pain displays of the victim decreased punishment intensity most relative to the other displays. Study 2 additionally disambiguated the meaning of the opponent's anger expression to retaliative punishment. Results showed a lowered aggression following pain displays and no decrease following facial displays of anger. The findings suggest that emotional reactions of the victim regulate revenge-seeking motivations.

### **7. Social cues shaping distress and aggressive responses to exclusion**

Joanna Rajchert | The Maria Grzegorzewska University

The review of definitions regarding social exclusion suggests that exclusion is a simple episode of obtaining a negative evaluation or being ignored. However, we find rejection, and primarily ostracism as interpersonal process engaging encoding and evaluation of social cues in line with Social Information Processing model. We propose that interactions of two social cues 1) attention from the other and 2) feedback regarding relational value (acceptance, rejection or no feedback) will differently influence measures of distress which will in turn have an effect on social behavior. We assumed that situation characterized by lack of attention and direct feedback could represent ostracism incident, whereas obtaining direct feedback preceded by attention would lead to feeling accepted or rejected. We wanted to verify in which condition (ostracism or rejection) belonging, control needs and emotions would be affected the most, and whether those states would predict behavior toward the ostracizer or rejecter. Results showed that belonging was thwarted the most by lack of attention, however, only under the lack of negative feedback; presence of negative feedback decreased belonging independently of attention cue. On the other hand, control need and positive mood was decreased the most by discrepant cues (lack of attention followed by acceptance and attention followed by rejection), which affected the ability to effectively predict the other's behavior. Results also showed that decrement in positive mood and control need, as well as in belonging and increase in anger induced more aggressive behavior and diminished helping behavior in Tangram help/hurt task.

### **8. Physically aggressive individuals gather less information during social decision-making**

Grace M. Brennan | Yale University

Arielle R. Baskin-Sommers | Yale University

Physically aggressive individuals exhibit deficits in interpersonal functioning. Previous research suggests a role for aberrant social decision-making in these interpersonal deficits. One key process that influences decision-making is the extent to which individuals gather information before making a decision. Individuals with higher levels of reflection impulsivity display a tendency to gather less information before making a decision. However, few studies examined the information-gathering stage of social decision-making in aggression, and no studies specifically examined the role of reflection impulsivity in aggression. Additionally, it remains unclear whether reflection impulsivity in aggression would be specific to social decision-making or would apply to decision-making more broadly. In a sample of adult male inmates, we measured reflection impulsivity using a modified information sampling task and examined its association with physical aggression. During the task, participants were presented with 25 boxes. Within each box was a description of a behavior that a stranger engaged in, and participants were instructed to determine how much information to gather (i.e., how many boxes to open) before deciding whether that person was "nasty" or "nice." Participants also made analogous decisions in a non-social context. Results indicated that physical aggression was associated with higher

reflection impulsivity ( $p=.041$ ) in the context of social decision-making. Aggression was not, however, associated with reflection impulsivity ( $p=.508$ ) in a non-social decision-making context. These results suggest that aggressive individuals gather less information when making judgments about the character of others, and that this impulsive style appears to be specific to social decision-making.

### **9. Neural Mechanisms Underlying Facial Perception of Trustworthiness in Relation to Approach Avoidance and Aggressive Behavior in Externalizing Individuals**

Shou-An Ariel Chang | Yale University

Arielle Baskin-Sommers | Yale University

Trustworthiness is an important social signal that is the foundation of meaningful relationships. Research shows that one way individuals determine this social cue is by evaluating facial features, and this judgement of trustworthiness guides subsequent decisions to engage with that person. However, no studies have investigated individual differences in perception of facial trustworthiness and behavioral response to trustworthiness. Importantly, individuals high on externalizing (i.e., a latent trait representing impulsivity and antisocial behavior) exhibit aberrant processing of facial affect, a tendency toward hostile attribution, and increased rates of aggression and violent behavior. Despite the significant social-emotional dysfunctions in externalizing individuals, it remains unclear how trustworthiness is perceived by and responded to in these individuals. In a sample enriched for externalizing and aggression, individuals rated faces on trustworthiness while electroencephalography was recorded. Participants then completed an approach avoidance task utilizing the subjectively rated faces. Preliminary results showed that individuals high on externalizing displayed increased late positive potential to faces rated as untrustworthy. However, their approach-avoidance behavior was not adequately modulated by this neural processing. Relationships between task measures and real-world aggression also were examined. These data suggest that externalizing individuals might be neurally more sensitive to social signals indicating threat, but this sensitivity is not reflected in their avoidance of those cues. Understanding the neural mechanisms underlying different ways trustworthiness is perceived and used may shed light on the types of aggressive behavior engaged in, broadly, and specifically by externalizing individuals.

### **10. Testing aggression as a consequence of stereotype threat**

Lisa Fourgassie | Université de Bordeaux

Baptiste Subra | Université de Bordeaux

Rasyid Bo Sanitioso | Université Paris Descartes

François Ric | Université de Bordeaux

Identifying causes of aggressive behaviors is particularly important, especially when we know the aversive consequences of such behaviors for the victim and the aggressor. One of the main methods used in provoking aggression is ego-threat. For instance, Bushman & Baumeister (1998) found that participants who received a bogus negative feedback reacted in an aggressive way. Ego-threat has also been proposed as a cause of aggression and violence in the real world (Katz, 1999). In our research we are interested in the consequences of a certain type of ego-threat on aggressive behavior, namely, threat to social identity. The effect of stereotype threat on aggressive behavior was studied. We hypothesized that a) stereotype threat situations should increase accessibility of hostile thoughts and b) should increase actual aggressive behavior. In Study 1 (N=140) women randomly assigned to a



control or stereotype threat condition took a math test. Then, aggressive thoughts accessibility was measured with a lexical decision task. No significant effect was found on performance or thoughts accessibility. In Study 2 (N=140) women randomly assigned to a control or stereotype threat condition took a working memory test presented as a mental flexibility or math test respectively. Aggressive behavior was measured by using allocation of hot sauce. No significant effect was found on aggression but there was an effect on performance. We replicated the results of Schmader & Johns (2003) as participants had poorer working memory scores in the stereotype threat condition. The results and methodological questions arising from these results will be discussed.

### **11. Perceived Arousal Mediates the Link between Anger and Aggression**

Youssef Hasan | Qatar University

Previous research pointed to a strong connection between anger and aggressive behavior. This study further investigates the mediating effect of perceived arousal on the link between anger and aggression. 78 female participants from Qatar University were presented with 20 fashion pictures showing various styles of clothing and must choose the top 10 pictures among them according to their own fashion perception. Then, they were randomly assigned to two groups according to the experimental instruction that highlights the presence of peer in the room next-door working on the same task (Non-existing participant). After finishing this first step, participants were informed that their choices will be evaluated by the peer and vice-versa. Half of the participants received a text containing a negative peer feedback (i.e., Anger group). Previous studies have shown that this procedure triggers anger among participants (e.g., Bushman & Phillips, 2001), whereas, the other half received a positive peer feedback (i.e., Non-anger group). Afterwards, they were asked to complete the perceived arousal scale, which contains 24 items. Then, they completed the hot sauce paradigm to assess aggressive behavior. As hypothesized, those who received negative feedback on their choices exhibited more aggression reflected by their higher hot sauce scores relative to those who received positive feedback. These findings further support the idea that perceived arousal can be a reliable mediator between anger and aggression.

### **12. Psychometric and Behavioral Evidence for Distinct Forms of Aggression**

Julia McDonald | University of South Florida

Neha Pathak | University of South Florida

Meghan McNaull | University of South Florida

Edelyn Verona | University of South Florida

Prior research has found that aggression is a broad, heterogeneous construct, encompassing a wide-variety of behaviors (e.g., verbal aggression, physical violence), with differential correlates and etiology. Attempts have been made to distinguish forms and functions of aggression into distinguishable subtypes (Little et al., 2003). The Forms of Aggression questionnaire (FOA; Verona et al., 2008) was developed to encompass the different forms that aggression may take (physical, property, verbal, relational, and passive-rational). FOA's factor structure and construct validity has only been tested in high-school and college samples, requiring further validation in samples with higher base rates and more severe forms of aggression. The present study expanded on previous validation of the FOA in a large and diverse sample of jail inmates and community-dwelling offenders (N = 475).

Confirmatory factor analyses were conducted to test the factor structure, and Cronbach's alpha was computed to assess the internal validity of the FOA questionnaire. Lastly, convergent and discriminative validity for each facet was explored. Results revealed that the five-factor structure was an adequate fitting model (CFI = .84, SRMR = .07, RMSEA = .05). Internal reliability was good to excellent for the subscales ( $\alpha$ 's  $\geq$  .82). Finally, the facets demonstrated convergent and discriminative validity compared to other measures of aggression and external behavioral correlates. For example, physical aggression seems to be associated with more severe violent behavior. Overall, the factor structure and internal consistency of the FOA replicated in this large sample of offenders, and the different facets do indeed have distinct behavioral correlates.

### **13. Facets of Externalizing in Relation to Forms of Aggression**

Beatriz Mendez | University of South Florida

Melanie Bozzay | University of South Florida

Edelyn Verona | University of South Florida

Although research indicates aggression has transdiagnostic relevance, relationships between spectra of psychopathology and various forms of aggression remain understudied in the literature. Aggression manifests in different forms and severity levels; therefore, we need to study aggressive behaviors more comprehensively. The relationship between externalizing and aggression can be clarified by examining the subfactors of externalizing (i.e., callous aggression, substance use). Whereas substance use is primarily marked by higher disinhibition and related tendencies (e.g., impulsivity), callous aggression is distinguished by factors (e.g., callousness, antagonism) implicated in more severe behavior (i.e., antisocial conduct). Given differences in the etiology of these facets, it is likely they contribute differently to forms of aggression. We hypothesized that callous aggression would more strongly predict physical and destructive forms of aggression relative to substance use, which was expected to be associated with less harmful manifestations of aggression (e.g., verbal). This study examined relationships between callous aggression (i.e., conduct disorder, antisocial personality disorder) and substance use (alcohol use, drug use) facets of externalizing with forms of aggression (i.e., physical, property, verbal, relational, passive-rational) in a sample of 318 adults with histories of substance abuse and/or criminality. Callous aggression significantly predicted all forms of aggression, whereas the substance use facet was nonsignificant. Findings suggest callous aggression in particular may confer increased liability for engaging in different forms of aggressive behavior. This research can help inform interventions aimed at reducing aggression by targeting individuals with higher levels of this facet.

### **14. Gaze-contingent Attention Bias Modification Training and its Effect on Attention, Interpretations, Mood, and Aggressive Behavior**

Nouran AlMoghrabi | Erasmus University Rotterdam

Jorg Huijding | Utrecht University

Ingmar H.A. Franken | Erasmus University Rotterdam

Cognitive theories propose that aggression is associated with specific patterns of attention to social cues, and suggest that cognitive biases in attention and interpretation are interrelated. The current study tested whether these attention patterns can be altered to influence interpretation bias, aggressive behavior and mood using a single session of a novel gaze-contingent cognitive bias

modification paradigm (CBM-A). University students aged 18–31 years old were randomly assigned to either a single session of positive training (n = 40), aimed at increasing attention to pro-social cues or negative training (n = 40), aimed at increasing attention to hostile cues. Results showed that the positive training indeed resulted in an increase in pro-social attention bias, while the negative training seemed not to have an effect on attention to hostile cues. Both groups did not differ on their interpretations, mood levels, self-reported aggression and the behavioral aggression task. Findings suggest that this novel gaze-contingent CBM-A paradigm can alter biased gaze processes, but may not impact interpretations, aggression and mood. However, the current study was conducted with a non-clinical sample, further research with an aggressive sample is necessary to further explore these issues.

### ***Offending and Psychopathology***

#### **15. Exploring the association between social problem-solving and risk of violent reoffending among prison inmates in Singapore**

Celeste Wee | Criminal Psychology Unit Singapore Prison Service

Charmaine Chee | Criminal Psychology Unit Singapore Prison Service

Georgina Tay | Criminal Psychology Unit Singapore Prison Service

Many violent offenders use aggression as a maladaptive means of resolving problems in social situations. This study aimed to investigate how problem-solving orientation and style are associated with risk of violent reoffending among Singaporean offenders. The sample comprised 80 adult male inmates with prior or current violent offences. Participants were classified as low, moderate or high risk of violence based on Historical-Clinical-Risk Management 20 version 3 assessments conducted by prison psychologists. Participants were also administered the Social Problem-Solving Inventory – Revised (Short Form), which measures different dimensions of problem-solving: positive problem orientation, negative problem orientation, rational problem-solving, impulsivity/carelessness style and avoidance style. A multinomial logistic regression was performed to determine whether any problem-solving dimension predicted violence risk. The results showed that participants with avoidance style were more likely to be of high violence risk, suggesting that offenders who opt to ignore problems may resort to violence eventually when these problems worsen. Conversely, positive problem orientation and impulsivity/carelessness style decreased participants' likelihood of having a high violence risk. This suggests that offenders who are optimistic about their problem-solving ability tend to solve problems without violence. Additionally, offenders who quickly employ the first solution they generate, rather than ignoring problems until they escalate, may instead resolve the problem adequately enough to avoid violence. The study's findings suggest that social problem-solving deficits may be associated with violence use among high-risk violent offenders. This implies that interventions to enhance social problem-solving skills may contribute to the management of these offenders' violence risk.

#### **16. Emotional Awareness in Intermittent Explosive Disorder**

Michael S. McCloskey | Temple University

Martha Fahlgren | Temple University

Introduction: Intermittent Explosive Disorder (IED) is a disabling psychiatric condition characterized by recurrent, aggressive outbursts. Anger dyscontrol and a hostile attribution bias are common in IED,

suggesting poor awareness of self and other's emotion. However, no studies have examined alexithymia or empathy in IED as compared to non-aggressive individuals with and without other forms of psychopathology. Methods: 249 participants with either (1) IED,  $n = 83$ , (2) a non-IED psychiatric disorder,  $n = 110$ , or (3) healthy volunteers without any lifetime psychiatric disorder,  $n = 66$ . All participants completed a structured diagnostic interview, as well as self-report measures of empathy (Basic Empathy Scale [BES]), and Alexithymia (Toronto Alexithymia Scale [TAS-20]). Results: There was a significant multivariate effect of group on the TAS-20,  $F(6,900) = 17.36$ ,  $p < .001$ , Wilks'  $\Lambda = 0.803$ , partial  $\eta^2 = 0.104$ . Follow-up ANOVAs showed group effects for identifying and describing feelings subscales ( $F_s = 32.26-53.01$ ,  $p_s < .001$ ). Participants with IED reported greater difficulty identifying their emotions relative to both other groups, and greater difficulty describing their emotions relative to healthy control participants ( $p_s < .05$ ). There was no multivariate group effect for the BES ( $F < 1$ ). Discussion: Those with IED appear to have difficulty with understanding and describing their own emotions, particularly with regard to identifying their emotions. In contrast, they do not seem have difficulty understanding others emotions. Thus, aggression in IED may be in part the result of poor self-emotional awareness that reduces the ability to control ones negative affect.

### **17. Neurocognitive Profiles of Substance Users who have a History of Offending Behaviour**

Ashlee Curtis | Deakin University; Odyssey House Victoria

Victoria Manning | Turning Point; Monash University

James R. Gooden | Turning Point; Monash University Clayton

Catherine A. Cox | Turning Point

Neurocognitive impairment is a common characteristic among people with a history of substance use and violent offending. Understanding the severity and nature of these impairments is critical for developing effective interventions. Impairment of some key neurocognitive functions may reduce responsivity to treatment approaches that require higher-order cognitive functioning (e.g., CBT). This project specifically focusses on the identification of neurocognitive strengths and weaknesses that should be considered when recommending such individuals for substance use or offender treatment programs. A retrospective case file audit was undertaken, utilising a community-based clinical sample who were referred for neuropsychological assessment in Melbourne, Australia by community-agencies or justice-services. One hundred and ninety case files of both current and previous substance users were reviewed, including assessment reports and neuropsychological test data. Substance users with a history of violent offending were compared to healthy population norms on standardised common neuropsychological tests. Over one – quarter of violent offenders demonstrated performances in the borderline or extremely - low range on a measure of estimated premorbid intellectual functioning, and one -in-five demonstrated verbal comprehension and perceptual reasoning in this range. In addition, half demonstrated working memory in the borderline or extremely-low range, and one-third performed in this range for processing speed. Half of the sample showed impaired response inhibition and three-quarters showed impaired divided attention (mental flexibility). Finally, one-in-five exhibited impaired verbal fluency and semantic fluency. It is argued that treatments that are responsive to people's cognitive capacity and accommodate their relative cognitive strengths and weaknesses are likely to improve long-term outcomes for these individuals.

### **18. A Word to the Wise: Pondering the Parlance of Psychopathic Individuals as it Pertains to Violence Perpetration**

Michael Woodworth | University of British Columbia  
 Jeff Hancock | Stanford University

Psychopathy is a personality disorder linked to a wide range of violent and aggressive behavior including the manipulation of others and criminality, including the commission of violence. A line of research by the authors examined the motivations and strategies of those scoring in the high range of psychopathy by using recent advances in language analysis technology to investigate both conscious and unconscious elements of speech. Spontaneous language is arguably one of the best ways to glean insight into people's thoughts, attention, emotion and general outlook. Results indicate that many aspects of the psychopath's disposition, including their severe lack of appropriate emotionality and self-serving instrumental nature, can be revealed through a computational analysis of their language. While most of this research has been conducted with a forensic population, a more recent line of enquiry has examined their language in a non-forensic sample communicating in an online environment. Results suggest that psychopaths display a more aggressive and generally less appealing language pattern when interacting with others. For example, their language is more self-centered, less cohesive, negative in tone, and far more likely to include less conventional or inappropriate language, such as swear words. Implications will be explored for both law enforcement (including interrogation strategies) and treatment providers in forensic contexts (including therapeutic recommendations). While not only enhancing our understanding of a psychopath's underlying motivations, these results also provide additional insights into ways in which the violence and harm created by these individuals can be reduced.

#### **19. The Role of Callous-Unemotional (CU) Traits for Youth Receiving Functional Family Therapy (FFT) when in Treatment for Serious Behavioral Problems**

Dagfinn Mørkrid Thøgersen | The University of Southern Denmark  
 Gunnar Bjørnebekk | The Norwegian Center for Child Behavioral Development  
 Mette Elmo Andersen | The University of Southern Denmark  
 Rikke Holm Bramsen | The University of Southern Denmark  
 Christoffer Schavenius | The Danish Center for Social Science Research

In DSM-V, the sub-type «with Limited Prosocial Emotions» was introduced for the Conduct Disorder (CD) diagnosis. It serves as an indicator for the high-risk group of children showing lack of empathy, lack of remorse and guilt, and shallow affect. Often termed "Callous-Unemotional"(CU)-traits in research, children and youth with this profile are shown to have increased levels of proactive aggression, sustained behavior problems, poorer treatment outcomes, reduced amygdala responses in face of fearful stimuli and increased risk of adult anti-social behavior. It is important to assess if established evidence-based treatment programs for children with conduct problems, can be of help for this high-risk group of children and youth with CD. Two studies have been conducted to investigate this. A randomized controlled trial of Functional Family Therapy (FFT) in a Norwegian sample of 161 youth with behavior problems, included measures of CU-traits to analyze its influence on treatment outcomes and processes. A single group pre-/post-evaluation of FFT in a Danish sample of 428 youth also included CU-measures to shed light on this subject. Based on these two studies, the presentation will briefly review data on the validity of the measures used to assess CU-traits in these samples. Furthermore, the presentation will review analysis of what impact FFT-treatment might have on

reducing the youth's level of CU-traits, and to what extent CU-traits could moderate or mediate specific treatment outcomes.

## **20. Till Death Do Us Part: A Study of Weapon Usage in Intimate Partner Homicide (IPH), 2005-2015**

Elizabeth M. Green | University of Oklahoma

In all homicides with a known victim/offender relationship, 16.3% were killed by an intimate partner (Cooper & Smith, 2011). While guns were used in 78% of all homicides in 2008, they were used in only 51% of IPH (Cooper & Smith, 2011). Allen and Fox (2013) study of married IPH cases found older male victims were overrepresented in being killed with handguns, while younger husband victims were more often killed with knives. Younger wives were overrepresented for strangulation and no weapons used, while older wives were killed more by long guns, blunt objects, and other weapons (Allen & Fox, 2013). IPH is more prevalent among intimates with a large age discrepancy (Garcia, Soria, & Hurwitz, 2007). Using a subset of data from the Uniform Crime Reporting (UCR) Program Supplementary Homicide Reports (SHR), 2005-2015, that included heterosexual single-offender/single-victim IPH relationships, we examined the association between age discrepancy between the victim and offender and offender sex and weapon usage in IPH. Binary and multinomial logistic regression models were estimated across 13,106 cases. The findings reveal statistically significant differences in weapon usage by age difference category and by offender sex. Specifically, female offenders that are younger than their male victims, have higher log odds of gun usage. Male offenders that are younger than their female victims, have higher log odds of using other weapons, relative to guns. The findings of this study have implications in criminal investigations and in educational prevention and social system intervention policy to ultimately reduce IPH and save lives.

## **21. Provocations in Individuals with Narcissistic and Psychopathic Traits: An Experimental Comparison of Social Exclusion and Insult**

Martijn van Teffelen | Maastricht University

Linda Vancleef | Maastricht University

Jill Lobbestael | Maastricht University

A converging body of literature is showing that personality traits such as psychopathy and narcissism predict aggressive behavior after provocation. Some provocations prove to be meta-analytically more potent than others. Although a large number of controlled studies exist, experimental head-to-head comparisons of provocations in psychopathy and narcissism are relatively sparse. This study attempted primarily to compare two psychological provocations (i.e., social exclusion and insult) in N=94 men in terms of threat perception, negative affect and aggressive behavior (before and after receiving noise blasts) during a competitive reaction time task (CRRT). Also, moderating effects of psychopathic and narcissistic traits on these relationships were examined. We found that, generally, social exclusion and insult proved equally efficacious in producing threat perception, negative affective change and aggressive behavior. These effects were not moderated by narcissistic or psychopathic traits. Explorative correlations showed that narcissistic traits were weakly positively related to aggression (only after receiving the first noise blast of the CRRT-opponent) and threat-perception, and unrelated to change in negative affect. Psychopathic personality traits were marginally negatively related to change in negative affect, marginally positively related to threat perception, but unrelated to

aggression. From this it appears that social exclusion and insult do not trigger differential effects. On top of that, narcissistic and psychopathic individuals perceive provocation as threatening. Specifically, narcissistic individuals respond with aggression when another provocation is added (i.e., noise blasts) which replicates ego-threat accounts of aggression. Psychopathic individuals react with dampened change in negative affect, which may reflect emotional blunting.

## **22. Sex Differences in Affective and Antisocial Dimensions of Psychopathy**

Diana Moreira | University of Porto

Fernando Barbosa | University of Porto

Psychopathy can be defined as a constellation of traits that comprises affective characteristics, interpersonal characteristics, as well as impulsive and antisocial behavior. These psychopathic features may be differently expressed in women and men. The main goal of this review was to examine differential characteristics of psychopathic personality between women and men. Profound affective deficits, including shallow affect and reduced empathy, is possibly more pronounced in women than the antisocial component of psychopathy. This last one is possibly more prominent in men, representing important gender differences. The identification of psychopathy in women seems to be more difficult, as antisocial behavior may be less obvious, especially when it comes to overt aggression, a feature that is easily visible and more present in psychopathic men. However, there are dissimilarities reported in the literature regarding the prevalence, incidence, course, and age of onset between sexes. In women, the first manifestations tend to appear during the pre-puberty period, whereas in men their emergence is prior to this phase. The prevalence and incidence of psychopathy in women seems to be less than half than that of men. Most studies show a lower prevalence rate of psychopathy in female offenders than in male offenders. The prevalence of psychopathy in female offenders generally ranges from 8% to 23%, while in male offenders it ranges from 15% to 30%.

### ***Crime Victimization***

## **23. Assessing General Strain Theory and Measures of Victimization, 2002-2017**

Nina Barbieri | University of Houston-Downtown

Stephen J. Clipper | The University of Alabama

General Strain Theory (GST) is one of the leading theoretical explanations of delinquency in the field of criminology, with victimization identified as a leading source of strain due to the frequency and prevalence of its experience. However, measures of victimization differ widely across empirical studies, ranging from direct experiences of physical or violent victimization to vicarious or even anticipated victimization. Furthermore, there is great variety in outcomes, such as substance use, bullying, and even recidivism, making it difficult to pinpoint the extent of the explanatory contribution of GST to crime and deviant behavior. A systematic review of the literature was conducted of approximately 130 peer-reviewed articles on GST in order to provide a concise understanding of the relationship between victimization and delinquent or criminal behaviors. Particular attention was given to how victimization was defined and operationalized as well as to how outcomes were measured. Preliminary findings suggest a strong correlation between physical victimization measures and engagement in substance use, bullying behaviors, and general delinquency. However, these findings may be conditioned by the

exact operationalization of victimization and outcome measures utilized. More nuanced discussions of the findings, as well as theoretical and empirical implications, are included.

### ***Aggression in Childhood***

#### **24. Intent Attributions and Emotional Distress: Variations among Prosocial Children and Defenders**

Mikaila L. Schoenfeld | Brigham Young University

David A. Nelson | Brigham Young University

Nelson and Crick (1999) have shown that intent attributions are a continuum, ranging from hostile to benign. Highly prosocial children, in comparison to average peers, are less likely to perceive harmful intent in response to hypothetical ambiguous provocations (benign attributional bias). These children also report diminished angry or upset feelings in response to such scenarios. These findings have never been replicated with another sample. The intent of this poster is to conduct similar analyses with the same scenarios utilized in the Nelson and Crick (1999) study. We also extend the original study by considering both traditional prosocial behavior (helping, inclusive, and comforting behaviors) and defending behaviors (a unique form of prosocial behavior in which the child seeks to diffuse bullying). We first collected behavior nominations of physical and relational aggression, prosocial behavior, and defending among fourth-graders. Children who were extreme ( $>1$  SD beyond the mean) for either form of aggression were removed from the analyses (as they tend to hold hostile intent attributions). Children also reported their attributions of hostile intent and mad/upset feelings in response to ambiguous provocations. We then compared highly prosocial children to their average peers (with peer nomination scores  $<1$  SD beyond the mean for aggression or prosocial behaviors). The results for traditional prosocial behavior mostly paralleled the Nelson and Crick (1999) findings. The defending behavior results differed, however, with female defenders being more likely to be mad or upset with instrumental provocations.

#### **25. The Role of Female and Male Play Partners in the Development of Early Childhood Relational and Physical Aggression**

Kristin J. Perry | University at Buffalo

Jamie M. Ostrov | University at Buffalo

The current study assessed the relations between male and female play partners and aggression in a short-term longitudinal study ( $N= 164$ , 47.4% girls,  $M$  age = 47.11 months). Female and male play partners were measured through observation sessions in the classroom and on the playground during unstructured periods where children could choose their play partners. These observations were reliable at Time 1 (T1) and Time 2 (T2), four months after T1 (ICCs  $> .91$ ). The relational aggression (RA) and physical aggression (PA) subscales of the Preschool Social Behavior Scale- Observer Report were used to assess aggression (Cronbach's  $\alpha > .90$ ). A cross-lagged path analysis was used to examine the reciprocal relations between play partners and aggression while controlling for age. The measurement invariance of the model was tested across gender. The model was a good fit to the data [ $\chi^2(4) = 9.99$ ,  $p = .04$ , CFI = .98, SRMR = .05]. Notable findings include, T1 male play partners predicted higher T2 PA ( $\beta = .19$ ,  $p < .01$ ), T1 RA predicted increased T2 female play partners ( $\beta = .21$ ,  $p < .01$ ), and PA at T1



predicted fewer female play partners at T2 ( $\beta = -.25, p < .01$ ). Additionally, based on the measurement invariance analysis, the effect of T1 female play partners on T2 RA was moderated by gender. For boys, T1 female play partners predicted a decrease in T2 RA ( $\beta = -.29, p < .01$ ) and for girls, there is a trend towards T1 female play partners predicting an increase in T2 RA ( $\beta = .14, p = .10$ ).

## **26. Behavioral and Psychological Differences between the Different Dominance Groups**

Eider Pascual-Sagastizabal | University of the Basque Country

Nora del Puerto | University of the Basque Country

Aitziber Azurmendi | University of the Basque Country

José Ramón Sánchez-Martín | University of the Basque Country

Jaione Cardas | University of the Basque Country

Rosario Carreras | University of the Basque Country

Paloma Braza | University of the Basque Country

José Manuel Muñoz | University of the Basque Country

The main purpose of this investigation was to explore the difference between the different strategies of resource control (dominance groups) on aggressive behavior and different psychological variables. To this end, we analyzed the strategies of resource control using a teacher rating tool called the Resource control strategies that allowed us to extract different dominance group taking into account the type of strategy the child used to control resources. Aggressive behavior was assessed using the DIAS (Direct and Indirect Aggression Scales) which is a peer-estimation test. Different psychological variables were measured by using several questionnaires: empathy (EQ, Empathy Quotient), fear (FSSC-R, Fear Survey Schedule for Children Revised), anger and anger control (STAXI-NA, State-Trait Anger Expression Inventory's adaptation for children and adolescents) and self-esteem (A-EP, Evaluación de la Autoestima en Educación Primaria). ANOVA analyses were conducted to analyze the potential differences in different behavioral and psychological variables. The results show that both the bistrategic and the coercive child-group score higher on physical and verbal aggression. It was also revealed that the bistrategic group uses more indirect aggression and has better access to control of resources. Finally, the results indicate that the coercive group had the higher score on trait anger. No more behavioral and psychological differences were found between the dominance groups. These results highlight the importance of investigating the psychological and behavioral characteristic that may be related to the different strategies of control in order to better understand the social networks.

## **27. Explaining the Link between Genetic Risk and Externalizing and Internalizing Problems in Young Children: The Role of Emotion Dysregulation**

Alexis M. Garcia | Florida International University

Jennifer Coto | Florida International University

Melanie Stollstorff | Florida International University

Paulo A. Graziano | Florida International University

Behavioral genetics research has identified several candidate genes (i.e., DRD4 7+, SERT, and DAT1) involved in externalizing (EXT; e.g., Attention-Deficit/Hyperactivity Disorder [ADHD]) and internalizing disorders (INT; e.g., Anxiety/Depression). Given the comorbidity of EXT and INT, identifying mechanisms that may explain such overlap and shared genetic risk factors is critical. The current study focuses on emotion dysregulation, specifically emotion regulation (EREG) and emotional

reactivity/lability/negativity (ERNL), given its association with both EXT and INT. The goal of this study was to examine the associations between candidate genes, emotion dysregulation, and EXT and INT problems in a sample of young children. Participants included 202 children (Mean=4.95, 72% male, 86% Latino), 72 of which were typically developing (TD) while 130 carried a diagnosis (ADHD, ADHD+ODD). ERNL, EREG, EXT, and INT were all measured at one time point via a combination of parent and teacher (PT) report. DRD4 7+ was the only gene associated with INT, ODD, ADHD, ERNL, and EREG ( $r_s = -.25$  to  $-.17$ ,  $p < .05$ ). Analyses of indirect bias-corrected effects revealed that ERNL ( $ab = -.36$ ;  $-2.93$ ) and EREG ( $ab = -.29$ ;  $-3.19$ ) mediated the association between DRD4 7+ and ODD as well as INT. DRD4 7+ was related to more ERNL and worse EREG, which then predicted worse ODD severity and INT, respectively. While speculative due to the cross-sectional nature of our study, our findings suggest that DRD4 7+ may be a genetic biomarker for emotion dysregulation which places children at-risk for the development of both externalizing and internalizing problems.

### **28. Executive Functions and ODD, CD and ADHD: A Systematic Review**

Patricia Figueiredo | University of Porto

Eduarda Ramião | University of Porto

Fernando Barbosa | University of Porto

Children's antisocial behavior may be associated with neuropsychological deficits, namely in executive functions (EFs). Executive dysfunctions may give rise to early childhood problems that may lead to antisocial behavior (AB) in the experiential course. Thus, the main objective of this systematic review was to obtain a vision of the relationship between EF performance and AB in children and adolescents. The selection and analysis of the studies followed PRISMA-P and Cochrane Collaboration Guidelines. Twenty-two empirical studies were included in this review. All examined the possible relations between the EF performance and behavioral problems in children and adolescence using comparison designs. Results suggest that individuals with behavioral problems show higher deficits in neuropsychological performance, specifically in executive function measures, although the role of comorbid disorders (such as ADHD) are not always examined and appear to play a decisive role. However, we observed a considerable heterogeneity regarding the instruments that were used and the EF components that were evaluated in the different studies. Thus, recommendations for future studies are advanced in order to overcome these potential limitations.

### **29. Behavioral and Hormonal Predictors of Peer Acceptance**

Nora del Puerto | University of the Basque Country

Eider Pascual-Sagastizabal | University of the Basque Country

José Ramón Sánchez-Martín | University of the Basque Country

Jaione Cardas | University of the Basque Country

Rosario Carreras | University of the Basque Country

Paloma Braza | University of the Basque Country

José Manuel Muñoz | University of the Basque Country

Aitziber Azurmendi | University of the Basque Country

Peer relationships are important to children's social and emotional development. Many factors have been identified as contributing to social acceptance or rejection. When examining these among children, researchers usually look at psychological and social factors that are related with it. But these

factors do not act in isolation; there are some biological factors that contribute too. Therefore, the aim of this study was to explore whether the relationship between the predictors of acceptance and rejection and social behavior is moderated by androgens in 5-year-old boys and girls. To this end, a sample comprising 129 children from 3 public schools was used. Subjects were filmed in free play context to evaluate their behavior by analyzing the recordings using the Observer 4.1 behavior analysis software package. Behavioral patterns were grouped into categories and factors (3 factors of aggression, 2 factors of government and 3 factors of affiliation). Acceptance/rejection data were collected with sociometric methods and ratings. To measure hormone levels (testosterone, DHEA and androstenedione) saliva samples were collected at 9 am and analyzed by ELISA. The results revealed a moderated relationship between rejection and dominance (androstenedione) and prosociality (androstenedione and testosterone) in girls. Furthermore, the three androgens also moderate the relation between acceptance and affectivity and dominance in girls. Regarding boys, testosterone moderates the relationships between victimization and rejection. Finally, the three hormones moderate the relation between acceptance and victimization. These results demonstrate the importance of studying children's peer social acceptance or rejection from a biopsychosocial perspective.

### **30. Examining Associations between Aggression and Peer Victimization Subtypes in Early Childhood**

Sarah J. Blakely-McClure | University at Buffalo

Jamie M. Ostrov | University at Buffalo

Previous research examining peer aggression and victimization and future risk of maladjustment have often separated out these two constructs (e.g., Ostrov, 2010; Reijntjes et al., 2011). However, researchers have identified children who are high on both aggression and victimization and have labeled these children "aggressive victims" (Schwartz et al., 1997). Although research has examined numerous adjustment factors associated with aggressive victims, there has been relatively little examination of aggressive victims engagement in future aggression and bullying behaviors, especially among young children. In addition, rarely have nonphysical forms of aggression been considered. Using a relatively diverse early childhood sample and multiple reporters (N = 124; 51 girls; M = 44.88 months old, SD = 4.51) we examined the associations between teacher reported victimization and aggression with future relational and physical bullying and aggression as reported by classroom observers. Models include the interaction term between aggression and victimization to model the impact of "aggressive victim" behaviors. Preliminary analyses revealed that general relational aggression at time one predicted an increase in relational bullying at time three (B = .74,  $p < .01$ ). In addition, physical bullying was moderately stable across the 12-month period. Furthermore, positive associations between the interaction of aggression and victimization at time one with time three bullying behaviors were revealed. These preliminary findings provide insight into victim's and aggressive victim's experiences in predicting bullying and aggressive behavior. In time for the meeting, analyses will include additional children, other informants, and gender will be examined as a potential moderator.

### **31. The Evolution of the Relation between Multidimensional Social Competence, Aggression and Victimization. A Study with Children and Adolescents**

Rocío Luque González | Universidad de Córdoba

Eva M<sup>a</sup> Romera Félix | Universidad de Córdoba

Rosario Ortega Ruiz | Universidad de Córdoba

**Background:** The level of social competence largely defines the interpersonal relationships of boys and girls, especially at the key moment from the evolutionary point of view, the transition from childhood to adolescence. These interactions can lead to participation in risk behaviors, such as those of the bullying phenomenon. The first objective of this research was to describe the level of social competence in a representative sample of the Andalusian population. In addition, the second objective was to know the influence of social competence in the involvement in bullying. **Method:** The representative sample consisted of 2,661 students (674 of Primary Education and 1987 of Secondary Education). Two instruments were used: the AMSCQ, which measures the level of social competence based on five factors (prosocial behavior, social adjustment, normative adjustment, social efficacy and cognitive reevaluation) and EBIPQ, to know the implication in phenomena of aggression and victimization in bullying. **Results:** The dimensions of social competence shows similar scores, except of the cognitive reevaluation, which is the lowest. A mutual influence model reveals the inverse relationship between normative adjustment and involvement in aggression, as well as poor social adjustment is related to victimization behaviors. **Conclusions:** The similarity between the models obtained for the educational stages studied reveals a parallel evolution in the relationship between social competence and bullying in Andalusian students. This work highlights the importance of releasing the relationship between both constructs for incorporation into policies for the prevention of school violence.

### **32. Can Global Or Domain Specific Self-Esteem Predict Aggression? Promoting Healthy Developmental Trajectories**

Christine Descartes | The University of the West Indies

Mala Ramesar | The University of the West Indies

Janelle Mills | The University of the West Indies

Priya Maharaj | The University of the West Indies

Historical and contemporary stronghold views of childhood aggression in the Caribbean have been linked disproportionately with pathophysiology (i.e. an innate and incontrovertible failure of the child) and punitive attempts at correction. These are primarily based on tangible symptomatology that are commonplace rather than on the complex milieu of pathogenesis that should include a poverty of protective environmental factors, the cultural norm of corporal punishment, interactions with psychopathology and other myriad culturally-contexted factors that place childhood aggression in the Caribbean within a space of intersectionality. In exploring the pathogenesis of childhood aggression, self-worth has been conceptualized a key variable that can be extrapolated to various domains (e.g. home, school, self) and more accurately explain the manifestation of aggression than reductionist measures. This study examined whether self-esteem predicted aggression among children and adolescents in the Caribbean. Through multistage sampling, 170 participants from primary and secondary schools across Trinidad were surveyed on measures of self-esteem (Culture Free Self Esteem Inventory [CFSEI]) and aggression (Direct and Indirect Aggression Scale [DIAS]). Hierarchical regression analyses revealed that global self-esteem was a stronger predictor of aggression for children than domain specific self-esteem while domain specific self-esteem was a stronger predictor of aggression among adolescents, indicating differential developmental pathways and moderating impacts of self-worth. Implications of self-worth sub-typing at the individual level are discussed to more effectively

address pre-symptomatic aggression to promote healthy developmental trajectories. Additionally, policy and programming recommendations for children and adolescents at risk for developing harmful aggressive behaviours, particularly those with compromised self-worth, are proposed.

### **33. Distinguishing between Play and Sibling Aggression: The Development of the Experiences of Sibling Aggression Scale (ESAS)**

Natalie Harrison | Birmingham City University

Nicola Graham-Kevan | University of Central Lancashire

Cath Sullivan | University of Central Lancashire

Roxanne Khan | University of Central Lancashire

Michelle Lowe | University of Bolton

This presentation will explore sibling aggression, with a specific focus on how participants make sense of it as distinct from play fighting. Eighteen participants, recruited from a UK university, took part in semi-structured interviews where they retrospectively discussed their experiences of play and aggression with a sibling. Thematic Analysis of these accounts produced two main themes; (1) emotion and aggression, and (2) accounting for sibling aggression. Participants' accounts reveal a clear distinction between sibling aggression and play fighting that was not about the behaviors that each of these comprises. The motivations behind sibling aggression often concern the need to overcome negative emotions or solve conflicts that cannot be settled verbally, whereas play fighting tended to be characterized as enjoyable and as not being designed to cause harm. These findings indicate that future research should look beyond the behavioral acts of aggression and instead at their functions and motivations to avoid the unintentional inclusion of play fighting. They also highlight that, in relevant areas of practice, it is important to acknowledge that sibling aggression is experienced as a different behavioral construct from play fighting. The findings from this study helped to inform the Experiences of Sibling Aggression Scale (ESAS) which was developed to look beyond the behavioural acts of aggression and instead at the context and motivations of the behaviors. The factor structure and validity of the measure will be discussed, including implications for research and practice.

### **34. Justice Sensitivity, Aggressive Behavior and Social Competencies in Middle Childhood**

Nina Böhm | Psychologische Hochschule Berlin

Rebecca Bondü | Psychologische Hochschule Berlin

Current studies show that inter-individual differences in justice sensitivity, the tendency to perceive injustice and intensely respond to it, can be measured from age 10 onwards, but little is known about earlier developmental stages. Justice sensitivity has been reliably related to aggression and prosocial behavior in adolescents and adults, but possible relations in middle childhood and links of justice sensitivity with social skills and temperament still have to be examined. We asked the parents of 249 children between 6 and 9 years about their children's justice sensitivity, aggressive behavior, social skills, and temperament. Parent ratings revealed the expected positive relations of victim sensitivity with aggressive behavior, positive relations of perpetrator and observer sensitivity with prosocial behavior, and a negative relation of perpetrator sensitivity and aggression. Furthermore, both observer and perpetrator showed positive relations to prerequisites for prosocial behavior: cognitive and affective theory of mind, empathy, effortful control, and inhibition. Victim sensitivity also showed

positive links with theory of mind and empathy. Hence, positive links with aggression may apparently not be explained by deficits in social competencies among children high in victim sensitivity. Whereas inhibition and effortful control were not linked to victim sensitivity, it correlated positively with anger reactivity and negative affect. Thus, the tendency towards aggressive behavior found in victim-sensitive children may be better explained by a tendency towards negative affect, particularly anger. Justice sensitivity shows links to prosocial and antisocial behavior early on and should, therefore, be considered in aggression research at least from middle childhood onwards.

### ***Evolution of Aggression***

#### **35. Discovery of Two Human Species, a Biological Factor tied to Conflict: Brain Laterality Differences of Opponents at Sites of Recurring Aggression**

Bruce Eldine Morton | University of Hawaii

Recent quantitative measurements of brain laterality-based behaviors has enabled reconstitution of “hemisphericity” within a new binary context called “Hemicity”. That is, about half of males and females are born with their unilateral brain executive located in the functionally asymmetric left hemisphere, biasing them as more sensitive, top-down, deductive “splitters”. The other half with their executives on the right tend to be more intense, bottom-up, inductive “lumpers”. Observations that in most marriages hemicity “opposites attract” led to the discovery of the Matripolar and Patripolar race-independent, true breeding lineages of Familial Polarity. In humans, these consist of two species: *Homo sapiens patripolaris* with Right Male-LF reproductive pairs, and *Homo sapiens matripolaris* with RF-LM pairs. Found throughout evolution, these parallel lineages are based upon two distinctive reproductive strategies: polygynous patripolar males directly battled for reproductive access; while competition among the matripolar males occurred at the organ and cellular levels (sperm wars) in polyandry. Sequential patripolar and matripolar ape-hominid migrations out of Africa appear to have created familial polarity striations in the eastern hemisphere. Subsequently, the opposite hemisities and reproductive strategies between these human familial polarity groups have been sources of multilevel global conflict, repeatedly manifest as terrorism, war, and genocide at their interfaces. Examples are the immiscible matripolar Shia and patripolar Sunnis of the Middle East, the matripolar English and the patripolar Scots, and the matripolar Serbians and the patripolar Albanians. Sexual and learning abnormalities, such as homosexuality and dyslexia, are common in hybrids. Awareness of familial polarity brings opportunities for peace.

### ***Media and Aggression***

#### **36. The Relationship between Violent Video Game Exposure and Response Rates in the Police Officer's Dilemma**

Riccarda Kersten | University of Innsbruck

Tobias Greitemeyer | University of Innsbruck

Previous research suggests that participants show implicit anti-Black racial bias in the decision to shoot potentially hostile targets. The present research examined whether there was a positive correlation between implicit racial bias and violent video game exposure, the Dark Triad, everyday sadism, and

trait aggression. It was also hypothesized that violent video game exposure would be related to decreased reaction times when the target was armed and an increased tendency to shoot unarmed targets. Using Correll's Police Officer's Dilemma Task, we found that Austrian and German participants did show implicit racial bias. Participants shot an armed African American target faster than an armed White target, whereas the opposite effect was found when the target was unarmed. Moreover, participants shot unarmed African American targets more frequently than White targets, whereas participants were more likely to miss armed White targets than armed African American targets. Unexpectedly, participants that showed higher implicit racial bias did not exhibit higher trait aggression, higher everyday sadism, or higher dark triad personality traits. Frequency of violent video game play in everyday life did also not correlate with implicit racial bias and was not related to any of the reaction time and error measures.

### **37. Virtual Reality Game as Treatment Tool**

Danique Smeijers | Vrije Universiteit Amsterdam

It is thought that anger is a difficult emotion to control, presumably because it is accompanied by intense impulses to strike back at others. The latter might be because anger is thought to be an approach-related affect. It is repeatedly found that individuals display automatic approach tendencies in response to positive stimuli whereas one tends to respond with automatic avoidance behavior towards negative stimuli. However, individuals high in trait anger seem to be an exception to this general rule: individuals high in trait anger tend to approach, instead of avoid, socially threatening stimuli. Recent studies suggest that it may be possible to modify the motivational core of anger by training people to make avoidance movements towards angry faces. This training was found to be successful in reducing angry feelings and aggressive impulses. Based on this paradigm a game in virtual reality was developed as additional treatment tool for the treatment of aggressive behavior: the Virtual Reality Game Aggression Impulsive Management (VR-GAIME). Approach motivation was trained by letting participant leaning forward towards avatars with happy facial expressions whereas avoidance motivation was trained by letting participants leaning backwards from avatars with angry facial expressions. The VR-GAIME was provided alongside general aggression treatment among forensic psychiatric outpatients with aggression regulation problems. Patients were randomly allocated to condition: VR-GAME vs. VR placebo game. The aim was to investigate the effectiveness of this treatment tool alongside general aggression treatment using a randomized controlled trial. The preliminary results of this innovative study will be presented.

### **38. Be a Buddy, not a Bully: Child Outcomes of Defending Behaviors in the Media**

Kjersti M. Summers | Brigham Young University

Sarah M. Coyne | Brigham Young University

In the media, it is common to see defending behavior, both aggressive and nonaggressive; however, there has been little research done to explore the effects of aggressive and nonaggressive defending behaviors in the media on a child's aggressive and nonaggressive defending behavior. The purpose of this study is to explore connections between nonaggressive and aggressive defending behavior in media and children's defending behavior. Participants consisted of 240 preschool age children and their parents reporting on media and defending behaviors over a span of one year. Results found that children who viewed more aggressive defending behavior in the media displayed less nonaggressive

defending behavior. Parents and caregivers should be aware of types of defending behavior in the media because it can have effects on their children's defending behavior in negative ways.

### ***Aggression Reduction***

#### **39. The Development of a Cumulative Risk and Resilience Framework for Aggression**

Chanelle Tarabay | Macquarie University

Wayne Warburton | Macquarie University

Previous research links aggression with a range of internal and external risk factors (e.g., impulsivity, violent media, hot temperatures, unpleasant odours) as well as protective factors (e.g., self-control, warm, authoritative parenting, prosocial peers). Most of the relevant research to date has examined risk factors for aggression in isolation, and increasingly there has been a call for researchers to consider risk factors for aggression within a cumulative risk and resiliency framework (i.e., with aggression being more likely where there are accumulated risk factors for aggression and a lack of protective factors: see Gentile, 2014). In this paper relevant empirical findings will be noted and two key dimensions on which aggression risk factors might differ will be discussed – whether they are internal or environmental, and proximal or distal. Results of an experimental study which used single and then aggregated aggression risk factors (violent media, heat, unpleasant odour) will also be reported. Results will be discussed in terms of their theoretical implications for a proposed cumulative risk and resilience model.

#### **40. Modulation of Learned Aggressive Retaliatory Behaviour Using Affective Touch**

Sumaiya Shaikh | Linköping University Hospital

Håkan Olausson | Linköping University Hospital

Aggression can be retaliatory (i.e., reactive), which is a result of an initial stimulus or a learned aversiveness; or it can be instrumental (or goal-oriented), where no initial stimulus or aversion is primed to evoke such behaviour (Bredemeier, 1975; Crick & Dodge, 1996). Aversive learning, i.e. a method of learning to attribute an aversion stimulus or emotion, to an individual or a group of individuals, is one of the major determinants of aggressive behaviours towards those who have been associated with aversion. Moreover, repeated association of such emotions or stimuli can actively engage in self-reinforced aggression, that doesn't require a stimulus to evoke. In this study (Molapour et al. 2016), a classical Pavlovian conditioning (Pavlov, 1927; Phelps and LeDoux, 2005), was used to study the learning mechanisms that underpin learned aversions that may explain anti-social behaviours in a normal population. Also, recent studies have found unmyelinated low threshold C-fibers, most sensitive to stimuli resembling human touch (Vallbo et al., 1993; Loken et al., 2009). Hence, superimposing CT touch with learning stage and/or retaliatory stage of the conditioning process, we aim to explore the cognitive, emotional and behavioral effects of touch, in relation to aggressive behavior. Our hypothesis is that whether pleasant tactile stimulation (social touch) during the conditioned or during retaliatory phase following aversive learning impact the likelihood of such retaliatory attacks.



#### **41. Behaviour Change Techniques to Reduce Aggressive Behaviour in Adolescents: A Systematic Review and Meta-Analysis**

Laura Castillo-Eito | University of Sheffield  
 Marianne R. Day | University of Sheffield  
 Paul Norman | University of Sheffield  
 Christopher J. Armitage | University of Manchester  
 Richard Rowe | University of Sheffield

Physically aggressive behaviours during adolescence such as bullying or fighting are associated with negative immediate and long-term outcomes for both perpetrator and victim. Many interventions have been developed to prevent and reduce these behaviours. These interventions are varied in techniques used and form of implementation. Several systematic reviews and meta-analysis have estimated small to moderate effect sizes. They have found heterogeneity within effect sizes but have not been able to identify the common characteristics that effective interventions share. This poster reports the results of a systematic review and meta-analysis that aims to identify the most effective active contents of interventions addressing adolescent aggressive behaviour. A systematic search has been conducted to find all the Randomised Controlled Trials of interventions directed to adolescents that measure violence or aggressive behaviour as an outcome. Fifty studies have been included in the meta-analysis with a small pooled effect size (SMD = 0.17). In addition, the interventions used in the identified studies have been categorised following the Behaviour Change Technique Taxonomy (v1; Michie, Atkins, & West, 2014). Finally, subgroup analyses have been conducted to find which techniques are more effective in reducing aggressive behaviours in adolescents. The results presented in this poster can have great implications on the violence prevention research. Knowing which techniques are more effective, shorter interventions can be developed focusing on those techniques, thus needing fewer resources. Future research should conduct trials using these techniques in isolation and combined to test their differential effectiveness and isolate the most potent ingredients.

#### **42. Development of the Frustration Response to Goal-Blocking During Adolescence**

Rachael Lickley | University of London  
 Catherine L. Sebastian | University of London  
 Gary Lewis | University of London

Frustration is an antecedent process to reactive aggressive behaviour. Reactive aggression peaks during adolescence, a period of ongoing development in related processes such as emotional reactivity, emotion regulation, and inhibitory control. However, there is a paucity of research in a) developmental change in the ability to manage frustration during adolescence; b) how such changes may relate to reactive aggressive behaviour; c) whether the ability to manage frustration may be underpinned by development in inhibitory control. To address these questions we experimentally induced frustration using an age-appropriate goal-blocking paradigm in 73 adolescents (11-16 years). Frustration induction and reactive aggression were measured via self-report. Inhibitory control was assessed using a Go/No-Go task. Results indicated that frustration was induced successfully across the sample, and mean frustration was also significantly positively related to reactive aggression tendencies. Age exerted a linear effect on mean frustration levels when controlling for internalising and externalising behaviours; only age and reactive aggression were significant predictors of frustration. Inhibitory control improved linearly with age but did not correlate with frustration or

reactive aggression. Results suggest developmental change in the ability to manage frustration during adolescence, but do not suggest a strong role for inhibitory control development in this effect.

#### **43. Long-Term Consequences of Physical Fighting in Adolescence – The Interplay with Intelligence**

Lars Froyland | Oslo Metropolitan University

Several studies have shown that adolescent physical aggression and delinquent behavior have negative consequences for future employment, education, family formation, and criminal behavior. Studies have also found that intelligent people more often are successful in school, work-life, and family life, and less often participate in negative acts like delinquency and crime. However, research on the interplay of physical aggression and intelligence in predicting future social marginalization in adulthood is sparse. Based on a sample of 1,248 boys from the nationally representative Young in Norway longitudinal survey following students in junior high and senior high school from 1992 to 2006 and data from official registers up to 2015, this paper shows that physical fighting in adolescence predicted later employment, education, and criminal behavior. Moreover, the participants' general level of intelligence was positively related to most measured favorable life outcomes, and negatively related to the adverse outcomes. Intelligence was further a confounding factor in the relationship between physical fighting and several of the life outcomes, where intelligent adolescents less often participated in physical fighting, but the effects of physical fighting in adolescence were not moderated by intelligence. Even after controlling for the participants' social background and previous antisocial behavior, physical fighting in adolescence was related to adverse life outcomes in young adulthood. This shows the importance of also considering boys' physical fighting as a possible indicator of future social marginalization, net of participation in other problem behavior.

#### **44. Victimization and Perpetration of Aggression Behavior among Young People: Results of the ViolenceMeter Project**

Patricia Figueiredo | University of Porto

Ricardo Barroso | University of Trás-os-Montes and Alto Douro; University of Porto

Eduarda Ramião | University of Porto

**INTRODUCTION:** Violence in interpersonal relationships is considered a public mental health problem, once the developed behaviour patterns tend to persist in adult life. **OBJECTIVE:** A school-based prevention programme for middle school students was designed to stop or prevent victimization and perpetration of aggression behavior among youth. Included in this Project, in a first phase, the aim of the present study was to verify how juveniles commit or are victims of violent behaviours in their relationships. **METHODS:** The data collection was carried out in public schools in Portugal. The sample consisted of 3448 juveniles, aged between 11 and 21 years ( $M = 15.03$ ), 1785 (51.8%) are female adolescents. A specific instrument called "ViolenceMeter" was used to assess violent behaviours, allowing the perspective for adolescents as an aggressor and/or as a victim. **RESULTS:** Differences between female juveniles and male juveniles concerning victimization and perpetration of aggressive behaviours was found. Adolescents report more victimization than the perpetration of violent behaviours. These behaviours are more prevalent in males, excluding the behaviours that concern to Lie/Misleading, Invoke Jealousy and Pinch/Scratch dimensions, which are more prevalent in female juveniles. Regarding victimization behaviours are most prevalent the Lie/Misleading, Aggressive Jokes

and Blame, perpetrated mostly by friends, schoolmates and the boyfriend/girlfriend. CONCLUSIONS: The identification of these behaviours in the relational dynamics of juveniles becomes important not only for a more detailed knowledge about the phenomenon, but also to enable a more focused intervention among adolescents, making possible the prevention of violence and the promotion of healthy relationships.

***Poster Session II Thursday, July 12, 2018, 18:45 – 1945, Cordeliers, Marie Curie***

***Intergroup Aggression***

**45. Experiences of Discrimination among Ethnic Groups in Florida**

C. Dominik Güss | University of North Florida

Ma. Teresa Tuason | University of North Florida

The current study investigated discrimination experiences through a phone survey in a randomized and representative sample of 619 registered voters in the State of Florida and compared this with a sample of 513 participants from a phone survey from Duval County, one of the poorest counties in the state of Florida. Discrimination experiences based on ethnicity were assessed. In the state of Florida 20% of Whites, 63% of African Americans, and 43% of Hispanics self-reported having been discriminated against. In Duval County, 20% of Whites and 71% of Blacks reported discrimination experiences. Other races were not represented in large enough numbers in both samples. There were no gender differences regarding self-reported discrimination, neither for the State of Florida nor for Duval County. A marginal significant interaction, however, for gender and race was found in the State of Florida. For African Americans, men reported more frequent experiences of being discriminated against; for Hispanics, women reported more frequent experiences of being discriminated against; and for Whites, men and women equally reported discrimination. In the state of Florida, more experiences of discrimination were reported among residents who had less income and were less educated. In Duval County alone, more experiences of discrimination were reported by those who had less income. One finding shows relatively high numbers of Whites self-reporting discrimination experiences, but results show that ethnic minorities experienced much more discrimination. In this day and age of inclusion and explicit efforts to end discrimination, still two thirds of African Americans reported being discriminated against.

**46. Severity and Reasons behind Religious Intolerance in Pakistan: Perceptions of Sunnis, Shias, Ahmadis, and Christians**

Taalía Khan | Åbo Akademi University

Karin Österman | Åbo Akademi University

The aim of the study was to investigate a perceived severity of religious intolerance, and reasons behind it, among different religious groups in Pakistan. A questionnaire measuring religious intolerance was completed by 199 university students (females  $M = 23.8$  yrs,  $SD 5.3$ , and males  $M = 24.6$  yrs,  $SD 5.6$ ) from four religious groups: Sunni, Shia, Ahmadi, and Christian. Questions regarding the severity of intolerance were included as well as the following seven scales measuring possible causes for it: impact of the school curriculum, lack of knowledge about other groups, impact of hate

literature, lack of social justice, family background and peer pressure, media impact, as well as external power influence and history. Respondents of all groups agreed upon the severe level of religious intolerance towards Ahmadis. Regarding the other religious groups, opinions differed. Sunni respondents rated the seven causes for religious intolerance as lower than the others. Sunni and Shia respondents rated the impact of the school curriculum as the significantly most important reason behind religious intolerance, whereas the Ahmadis and Christians rated hate literature as the most important reason. The results suggest that there is a need for further research into social factors that could reduce religious intolerance in Pakistan. Views of different religious groups need to be taken in consideration.

#### **47. Precarious Manhood and Negative Affect, Prejudices toward Homosexual People and Aggression: Evidence from Poland**

Karolina Konopka | Academy of Special Education Warsaw

Monika Dominiak-Kochanek | Academy of Special Education Warsaw

Joanna Rajchert | Academy of Special Education Warsaw

Men who obtain feedback about possessing attributes that are typical for the opposite gender may experience masculinity threat, which then instigates compensatory mechanisms aimed to restore masculine status. Numerous studies conducted mainly in US (Vandello & Bosson, 2013 for review) have shown that this phenomenon applies only to men, whereas women are not susceptible for gender - incongruent feedback. In four experiments the influence of gender threat on the negative affect ( $n = 80$ ), state-anger ( $n = 81$ ), prejudices toward homosexual individuals ( $n = 164$ ) as well as aggression ( $n = 218$ ) in Polish men and women was verified. In gender threatening or affirming procedure participants were informed that they possessed high level of feminine or masculine attributes. The results showed that both men and women experienced higher negative affect in Gender Threat than Gender Affirmation condition, but only men declared higher anger and higher prejudices toward homosexual individuals after gender threat. However, masculinity threat did not elicit higher aggression measured by the Hurt-Help Task. Additionally, the most pronounced effects of masculinity threat in studies 1-3 were observed among men declaring high masculinity, whereas men high on femininity were not susceptible for gender - incongruent feedback. These results provide further support for precarious manhood perspective beyond American cultural context, but also indicated that femininity might be a protective factor which impaired harmful effects of masculinity threat among men.

#### **48. Effect of Meta-Stereotype on Direct and Indirect Aggressive Attitude toward Conflicting Outgroup**

Tomohiro Kumagai | Hosei University

Aggressive attitudes toward an outgroup are affected by how group members recognize a meta-stereotype (assumed ingroup image by outgroup). A negative image of the conflicting outgroup strengthens aggressive attitudes toward the outgroup. That outgroup image would not only be moderated by intergroup relations, but also by the meta-stereotype by which ingroup members assume they are viewed by outgroup members. In this study, I examined the effect of three types of meta-stereotypes: competence, warmth, and respected, on direct (action by Japanese self-defense force) and indirect (economic sanction) intergroup aggressive attitudes. It was assumed that meta-

competence would cause individuals to see themselves as powerful, so it would enhance negative attitudes toward the outgroup. Meta-respect would lead to a sense of security because outgroup members would have a secondary emotion such as "respect." This sense would enhance positive attitudes toward conflicting outgroup members. Path analysis indicated that meta-competence strengthened the perceived threat of the Chinese army and the economic power of China in international society. The perceived threat of the Chinese army enhanced supportive attitudes toward direct intergroup aggression. However, the perceived economic power of China, strengthened by meta-competence, weakened support for direct and indirect intergroup aggression. Contrary to the effect of meta-competence, meta-respect weakened the perceived outgroup threat and then enhanced positive intergroup attitudes toward the conflicted outgroup. This finding indicates that it is not simply the positive ingroup image that enhanced intergroup aggressive attitudes, but rather one part of its factors that may produce a sense of security.

#### **49. A Combative Response towards Discrimination: Confrontation and its Relation with Evaluative Concerns**

Gloria Jiménez-Moya | Pontificia Universidad Católica de Chile

Manuela Barreto | University of Exeter

Roberto González | Pontificia Universidad Católica de Chile

Prejudice is an important source of social inequalities, and members of disadvantaged groups often protest against discriminatory treatment through direct confrontation. However, those who protest against prejudice are not always well received particularly by advantaged outgroup members, partly because confrontation might be seen as an aggressive response, thus confronters are perceived as problematic and argumentative. Given the importance of confrontation in unveiling unfair treatment, in this work we aim to clarify how and when what might be evaluated as a combative response against prejudice, is well-received by advantaged group members. We focus on actual social distance that advantaged individuals show towards disadvantaged group members who confront or not prejudice, and on the role of evaluative concerns in this process. In a single study (n=191) participants from an advantaged group were exposed to a prejudiced comment by an advantaged ingroup member, and a member of the disadvantaged group (i.e., confederates) confronted or not the prejudiced comment, according to the experimental condition. Consistent with our predictions, results show an interaction between evaluative concerns and confrontation: participants who witnessed confrontation and reported high evaluative concerns, exhibited higher social distance towards disadvantaged group members, compared to those who were lower in evaluative concerns. The opposite effects emerged among participants who did not witness confrontation: those high (vs. low) in evaluative concerns exhibited less social distance towards the victims of prejudice. These effects were also moderated by gender and found only for female participants. Conceptual and practical implications are discussed.

#### ***Individual Differences and Gender***

#### **50. Benign Masochism Mediates the Association between Bitter Taste Preferences and Antisocial Personality Traits**

Alisa Kronthaler | University of Innsbruck

Christina Sagioglou | University of Innsbruck

Tobias Greitemeyer | University of Innsbruck

Prior research found a positive relation between bitter taste preferences and antagonistic traits such as subclinical sadism and psychopathy. In this research we examine whether this is accounted for by benign masochism, a tendency to enjoy inherently negative stimuli such as a fear-inducing roller-coaster ride. In fact, masochism and antagonistic traits were recently found to be positively related, and thus the overall enjoyment of experiencing threatening bodily stimuli may explain the relationship between bitter taste preferences and antisocial traits. We tested this mediation hypothesis in two studies. The results of an online ( $n = 801$ ) and a lab study ( $n = 452$ ) show the expected positive correlations between bitter taste preferences and both benign masochism and antisocial traits. Moreover, mediation analyses revealed that trait masochism indeed mediates the association between antisocial traits and bitter taste preferences. Importantly, in the lab study participants actually tasted and rated a number of oral stimuli, demonstrating that the results hold for individuals' actual, not just semantic, taste preferences. In sum, we replicate the recent finding that subclinical nonsexual forms of masochism and the Dark Tetrad factors are correlated and additionally show that bitter taste preferences are related to antisocial traits because people who enjoy negativity on themselves also enjoy it when others experience such states.

### **51. Social Isolation Facilitates Internet Trolling in Individuals with High Psychological Entitlement**

Keita Masui | Otemon Gakuin University

Psychological entitlement (PE) is defined as a general belief that one deserves, or is entitled to more than others. Previous research has shown that PE is vulnerable to unmet expectations and increases the risk of interpersonal conflict. One previous study has indicated that individuals with high PE are more prone to aggression. The present study investigated whether social isolation is an environmental factor that increases psychological distress resulting in aggressive behavior in individuals with high levels of PE. In this study, internet trolling, defined as aggressive, deceptive, and maladaptive behaviors on the internet was assessed as an index of aggressive behaviors. Japanese participants ( $N = 509$ ) completed questionnaires assessing the degree of PE, social isolation, and internet trolling. Results indicated that individuals with high PE (mean + 1 SD) trolled more than those with low PE. Socially isolated participants (mean + 1 SD) also trolled more than those that were less isolated. Furthermore, the interaction between PE  $\times$  social isolation was significant. Socially isolated individuals with high PE engaged more in internet trolling than individuals with low PE, or non-isolated individuals with high PE. These results indicate that social isolation facilitates aggressive behavior in people with high PE. These findings contribute to expanding the framework of interactive effects theory, which describes interactions between personality and the external environment as a cause of human behaviors.

### **52. Do the Origins of the Covariation between Social and Physical Aggression Vary Across Sex?**

Brooke L. Slawinski | Michigan State University

Kelly L. Klum | Michigan State University

S. Alexandra Burt | Michigan State University

Although there is substantial theoretical and empirical overlap between social and physical aggression, the extent to which their covariance can be explained by the same underlying genetic or environmental

factors remains unknown. It is further unknown whether or how the origins of their covariance might vary across sex. The current study sought to fill these gaps in the literature. We examined maternal- and teacher-reports of youth physical and social aggression in over 1,000 twin pairs from the Michigan State University Twin Registry. We made use of the bivariate correlated factors model to clarify the origins of their association. We further tested both sex difference and no-sex difference versions of that model to determine whether there are sex differences in the association between social and physical aggression, as often assumed. The covariation between social and physical aggression was due to overlapping genes and common environmental conditions. Specifically, 50-57% of the genetic factors, 74-100% of the shared environmental factors, and 28-40% of the unique environmental factors influencing social and physical aggression overlap according to both mother and teacher reports. Perhaps most importantly, these shared etiological factors did not differ across sex. These findings argue against the common assumption that social aggression is the ‘female version’ of male physical aggression, and instead suggest that social aggression may be best conceptualized as a form of antisocial behavior that shares developmental pathways with other manifestations of externalizing pathology.

### **53. The Association between Endorsement of Male Role Norms and Psychological Aggression: Racial and Gender Differences**

Hsiu-Lan Cheng | University of San Francisco

Ryon McDermott | University of South Alabama

Endorsement of male role norms (MRN) rooted in traditional U.S. masculinity ideology has been associated with intimate partner violence attitudes. Recent studies have found that endorsement of MRN pertains not only to White American men, but men of color and women also report endorsement of MRN because of mainstream cultural socialization. Nevertheless, little research has examined the roles of race and gender in the relationship between MRN endorsement and psychological aggression. Psychological aggression between romantic partners has been conceptualized into four domains: restrictive engulfment (i.e., behaviors intended to restrict social activities of one’s partner), denigration (i.e., attacks of a partner’s self-esteem), hostile withdrawal (i.e., use of withdrawal to promote insecurity in a partner), and dominance and intimidation (i.e., promotion of fear and submission in one’s partner). The present study examined the relationship between MRN endorsement and psychological aggression among White American and Asian American participants who had been in a romantic relationship for six months or longer at the time of study (total N = 1215). Results indicate that while White men's endorsement of MRN was only statistically significantly associated with denigration of a partner, White women's MRN endorsement was only associated with restrictive engulfment of a partner. For Asian American men, MRN endorsement was associated with all four domains of psychological aggression toward one's partner. For Asian American women, MRN endorsement was not associated with any domains of psychological aggression. Detailed findings will be discussed in the conference Poster.

### **54. The Role of Provocateur Status in Provocation-Related Aggression among Females**

Monika Dominiak-Kochanek | The Maria Grzegorzewska Pedagogical University

Marta Rutkowska | The Maria Grzegorzewska Pedagogical University

Previous research showed that in line with social role theory and evolutionary standpoints females preferred aggression which fits their gender role and produces the beneficial cost/risk ratio. Thus, females used primarily relational aggression toward provocateur of the same gender who had low or equal status. This study (n=255) was to further explore the role of the contextual factors activating female aggression. More specifically, we tested whether women were prone to aggress more against the high-status provocateur (HSP) than the low-status provocateur (LSP) when the ratio of potential costs and risks would be favorable. In experimental conditions, participants were provided with a negative feedback about their competence from a female student collecting the data for the classes (LSP) or female assistant professor coordinating international project (HSP). Then, participants reported on their anger feelings and, as the opportunity for retaliation, they were given an evaluation form about the researcher exclusively for the supervisor's information. The results showed that (1) when provoked females expressed more relational aggression than in neutral condition, but especially in LSP condition (2) the provocation-aggression relation was partially mediated by the anger feelings but only in HSP. The results suggested that female retaliation against high or low status provocateur depends strongly on other contextual factors and it is possible to create such condition in which females defend their self-esteem aggressed against high-status provocateur.

#### **55. Self and Other Directed Harm: Masochistic and Antisocial Personality Traits and Behavior.**

Nicola Hutzenthaler | University of Innsbruck

Christina Sagioglou | University of Innsbruck

Tobias Greitemeyer | University of Innsbruck

The present research examined the recently introduced trait of benign masochism in relation to antisocial personality traits (the Dark Tetrad: Machiavellianism, narcissism, psychopathy, sadism), the HEXACO personality model, and various behavioral manifestations. Benign masochism is characterized by the enjoyment of negative emotions (e.g., fear, pain) in the absence of actual danger. In two studies, we examined how such a proneness to seek fictional threat is related to other-directed harmful preferences. We tested the hypothesis that masochistic and antisocial traits and behaviors are positively correlated. In Study 1 (N= 474; MTurk research participants) and 2 (N = 335; university students), we measured benign masochism, the Dark Tetrad, the HEXACO factors, and disgust sensitivity. Study 2 additionally tested masochistic and antisocial behavior. Both studies confirm that benign masochism is positively related to antisocial traits. Disgust sensitivity is a partial mediator of this association. The trait measures are behaviorally validated, but no cross-construct prediction of behavior was observed. In sum, the extent to which a person enjoys threatening stimuli on the self is positively related to how much a person enjoys causing or observing harm in other people.

#### ***Alcohol and Aggression***

#### **56. The Effect of Communication by Staff and Alcohol on Passengers' Anger Expression**

Yasunori Okada | Railway Technical Research Institute

Yumeko Miyachi | Railway Technical Research Institute

Naoki Hatakeyama | Railway Technical Research Institute

Akiko Murakoshi | Railway Technical Research Institute

Kosuke Tsurumi | Kyoto University



Takashi Kusumi | Kyoto University

Alcohol intake is associated with passengers' aggressive behavior in public transportation. In fact, about sixty percent of violence against railway staffs by passengers was committed by drunken ones in Japan in 2016. Thus, this study investigated how verbal and non-verbal communications with passengers by staff affect the passengers' aggressive response under the influence of alcohol. Fifty adult men participated in this study. After alcohol screening tests, 24 men were assigned to the alcohol condition and 26 men were assigned to the non-alcohol condition. After drinking either an alcoholic or a non-alcoholic beverage, they watched an animation that showed a frustrating situation where a passenger missed a train because of an error of an IC ticket card and delayed support of a staff. Following the animation, they watched three types of video depicting response to the passenger by a staff: "apology in a businesslike tone", "apology with bowing in a polite manner" and "non-apology justification". After watching each video, the participants physically expressed their anger by hand grip strength using a hand dynamometer supposing that they were in the video situation. Anger expression toward "non-apology justification" was the strongest among three videos regardless of the alcohol or non-alcohol condition. More importantly, the participants only in the alcohol condition expressed their anger more strongly after watching "apology in a businesslike tone" than "apology with bowing in a polite manner". These results suggest that explicit polite and non-verbal communication with passengers by staff is important to reducing aggressive behavior by drunken passengers.

#### **57. The Association between Alcohol Dependence, Post-traumatic Stress Disorder, and Self-Reported Aggression in a U.S. Sample**

Jared W. Bollinger | Uniformed Services University of the Health Sciences

Andrew J. Waters | Uniformed Services University of the Health Sciences

**Background:** Aggression imparts a tremendous burden on society through violence, abuse, and damage to property and life. Alcohol Dependence (AD) has been shown to be associated with increased aggression in comparison to control subjects, although this has been examined in relatively few studies. Post-traumatic Stress Disorder (PTSD) has also been shown to be associated with increased aggression, and severity of AD may mediate the association between PTSD and aggression in individuals with both disorders. **Methods:** Two groups with AD (inpatient treatment-seeking, n=533, and outpatient non-treatment-seeking participants, n=180) were compared to controls (individuals without AD, n=505), on a measure of self-reported aggression (Buss-Perry Aggression Questionnaire). In addition, within the inpatient treatment-seeking AD sample, a mediation model tested whether the association between PTSD and aggression was mediated by severity of AD. **Results:** Both groups with AD reported higher levels of aggression than those without AD. Moreover, severity of AD (measured via the Alcohol Dependence Scale) was positively associated with self-reported aggression. Within inpatients with AD, severity of AD partially mediated the association between PTSD and aggression. **Conclusion:** In sum, AD was robustly associated with aggression in this U.S. sample, and severity of AD may mediate the association between PTSD and aggression.

#### **58. Problematic Drinking and Biased Attention toward Anger Following Partner Provocation: The Role of Acute Alcohol Intoxication**

Olivia S. Subramani | Georgia State University

Andrea Massa | Georgia State University

Dominic J. Parrott | Georgia State University  
 Christopher I. Eckhardt | Purdue University

Problematic alcohol use, and specifically acute alcohol intoxication, has been established as a contributing cause of IPA perpetration. One potential mechanism for this effect within situations characterized by couples conflict is that problematic drinkers are more susceptible to alcohol myopia, whereby attentional focus is constricted on aggression-promoting cues. The current study utilized a laboratory manipulation of partner provocation to examine the association between problematic drinking and attention bias towards anger-related stimuli in intoxicated and sober individuals. Participants were 249 individuals (148 men) who reported a one-year history of heavy drinking and psychological or physical IPA perpetration against their partner. Participants completed a self-report measure of problematic drinking and were randomly assigned to consume an alcohol or no-alcohol control beverage (M BrAC = 0.09%). Following verbal and physical provocation ostensibly delivered by their partner via a laboratory aggression paradigm, participants completed a modified dot probe task that assessed attention allocation to anger-themed, relative to neutral-themed, words. Results indicated a Problematic Drinking x Beverage interaction ( $b = 18.37$ ,  $p < .01$ ) such that problematic drinking was positively associated with a bias toward anger words in intoxicated ( $\beta = .27$ ,  $p < .05$ ) but not sober participants ( $\beta = -.10$ ,  $p = .26$ ). Results support an attentional mechanism underlying the link between alcohol and intimate partner aggression. Specifically problematic drinkers may be more susceptible to alcohol myopia than non-problematic drinkers. This myopic focus on anger-related cues within a conflict situation likely accounts for problematic drinkers' heightened risk for alcohol-related IPA perpetration.

### ***Cyberbullying***

#### **59. Parenting Style and Parental Discipline as Risk and Protective Factors of the Cyberbullying Involvement in Adolescence: A Study from a Gender Perspective**

Olga Gómez-Ortiz | University of Córdoba  
 Eva M. Romera | University of Córdoba  
 Rosario Ortega-Ruiz | University of Córdoba; University of Greenwich  
 Rocío Luque González | University of Córdoba  
 Rosario del Rey | University of Sevilla

While the research on cyberbullying has increased over the last few years, there is little knowledge about the role that gender plays among the family factors that contribute to this phenomenon. The main purpose of this study has been to examine the relation between the adolescents' perception about parenting educational styles and about their progenitors' discipline, and their involvement in cyberbullying, bearing in mind both girls' and boys' gender and progenitors' gender. The sample comprised 2060 Andalusian Secondary students (47.9% girls; aged from 12 to 19; Mage = 14.34; DT = 1.34). ANOVA and binary logistic regression analyses were carried out. Parental discipline procedures such as physical punishment, psychological aggression, response cost and supervision (this last includes surveillance behaviours or those related to ignoring children's misbehaviour) were positively associated with involvement in cyberbullying. However, affection and communication, promotion of autonomy, and humour were negatively linked to involvement in this violent phenomenon. Particularly, victims felt more supervised by their progenitors and indicated lower level of disclosure

and autonomy from their parents. Furthermore, mothers have a greater influence than fathers, and girls are those to whom family influence affected more. The results support the necessity of including family among the addresses of the intervention programmes against cyberbullying.

#### **60. Examining Bias-Based Forms of Cyber Aggression among Youth: Prevalence, Emotional Impact, and Effectiveness of Coping Strategies**

Samantha Schires | Michigan State University

S. Alexandra Burt | Michigan State University

Despite the high prevalence rate and negative outcomes associated with cyber aggression, it remains understudied in the literature, and this is particularly the case for bias-based cyber aggression (Guan et al., 2016). Bias-based victimization refers to victimization that focuses on a socially stigmatized identity of the victim, and it has been associated with poorer mental health outcomes than non-bias based victimization (Stephen et al., 2012). Critically, however, studies contrasting biased and non-bias based peer victimization have focused exclusively on in-person victimization. No empirical studies to our knowledge have examined the effects of bias-based cyber aggression. The current study examined the prevalence, psychosocial impacts, and coping strategies for race and sex-based cyber aggression in a sample of 358 college students. Results indicated that more than half of women, but only 19% of men, were targeted based on their sex. Additionally, women reported a higher emotional impact of that victimization than did men. For race-based cyber aggression, minorities were targeted for their race at considerably higher rates than Whites (16% for Whites, 70.7% for Blacks, 64.3% for Hispanics, 47.1% for Asians, and 45.5% for other ethnicities), and they experienced a higher emotional impact than did Whites. When responding to the victimization, the use of specific coping strategies, including telling the perpetrator to stop, telling a friend, ignoring it, and making a joke were moderately successful. Overall, the current study will contribute important information about the prevalence, impact, and effectiveness of coping strategies for victims of bias-based cyber aggression.

#### **61. How Much Do Adolescents Cybergossip? Scale Development and Validation in Spain and Colombia**

Eva M. Romera | Universidad de Córdoba

Mauricio Herrera-López | Universidad de Nariño

José A. Casas | Universidad de Córdoba

Rosario Ortega-Ruiz | Universidad de Córdoba

Rosario del Rey | Universidad de Sevilla

Introduction: Cybergossip is the act of two or more people making evaluative comments via digital devices about somebody who is not present. This cyberbehavior affects the social group in which it occurs and can either promote or hinder peer relationships. Scientific studies that assess the nature of this emerging and interactive behavior in the virtual world are limited. This paper adopts and argues for a wider definition of gossip that includes positive comments and motivations. This work also suggests that cybergossip has to be measured independently from traditional gossip due to key differences when it occurs through ICT. Method: This paper presents the Colombian and Spanish validation of the Cybergossip Questionnaire for Adolescents (CGQ-A), involving 3,747 high school students (M = 13.98 years old, SD = 1.69; 48.5% male), 1,931 were Colombian and 1,816 were Spanish. Test models derived from item response theory, confirmatory factor analysis, content validation, and

multi-group analysis were run on the full sample and subsamples for each country. Results: The obtained optimal fit and psychometric properties confirm the robustness and suitability of a one-dimensional structure for the instrument. The multi-group analysis shows that the cybergossip construct is understood similarly in both countries and between girls and boys. The composite reliability ratifies convergent and divergent validity of the scale. Descriptive results show that Colombian gossip less than Spanish. Conclusions: This study confirms the relationship between cybergossip and cyberbullying, and supports a focus on positive cybergossip in psychoeducational interventions to build positive virtual relationships.

### **62. Sexting and Cyberbullying, Two Independent Phenomena?**

Mónica Ojeda | University of Seville

Rosario del Rey | University of Seville

Sexting is a relatively new phenomenon that refers to the sending, receiving and forwarding of sexually explicit or suggestive messages, images or videos through a technological device. It is a phenomenon that is increasingly widespread and normalized among the adolescent population and is notable for the possible negative consequences that may result. Currently there are few studies that analyze its nature and relationship with other risks such as cyberbullying, which are showing such serious consequences. For this reason, the main objective of this study was to determine whether participation in sexting, in any of its modalities (I have sent, received, resent or resent me), is related to the involvement in cyberbullying in any of its roles (cybervictim, cyberbully, cyberbully-victim). The sample consisted of 3771 students (47.8% girls) between 12 and 19 years old ( $M = 13.71$ ,  $SD = 1.3$ ). The results showed that the implication in cyberbullying in any of its forms is significantly higher among those who have participated in sexting, either sending ( $p < 0.001$ ), resending ( $p < 0.001$ ), receiving directly from the protagonist ( $p < 0.001$ ) or receiving from third parties ( $p < 0.001$ ) messages, images or videos of sexual content. Therefore, this work serves as evidence to support that sexting is a risk factor for cyberbullying and, therefore, should be considered in the design of prevention and psychoeducational intervention programs that intend to address it effectively.

### **63. Cyberbullying and Aggression in Relation to Adolescents' Dating and Sexual Behaviour: An Evolutionary Psychological Perspective**

Kiana R. Lapierre | Brock University

Andrew V. Dane | Brock University

Cyberbullying poses a social concern due to psychosocial problems that are experienced by both perpetrators and victims. Despite being associated with these problems, an evolutionary psychological perspective suggests that traditional bullying may be adaptive for some adolescents, engendering greater access to dating and sex by functioning as an intrasexual competition strategy by which to display attractive qualities, such as strength and dominance, or to derogate the mating qualities of others. To extend this previous literature, this study examined cyber aggression and victimization in relation to adolescents' dating and sexual behaviour, with biological sex, age, and power balance as moderators. Results suggest that overall cyber victimization was consistently positively associated with dating and sexual partners in adolescence. In contrast, cyber aggression was only positively associated with adolescents' dating and sexual behaviour under certain conditions, including when used by perpetrators whose power was less than or equal to that of their victims and for those who frequently

experienced cyber victimization. Overall, this study provides preliminary evidence that cyber aggression is linked to dating and sexual behaviour in adolescence, however, there appear to be important differences in the way that cyber and traditional bullying relate to reproductively-relevant outcomes. These results demonstrate the importance of considering not only the frequency of involvement in aggression and victimization, but also the power balance between the perpetrator and the victim, when assessing the effects of cyber aggression.

#### **64. A Longitudinal Investigation of Social Aggression and Sexting in Adolescence**

Allycen R. Kurup | The University of Texas at Dallas

Madeleine J. George | The University of Texas at Dallas

Justin W. Vollet | The University of Texas at Dallas

Marion K. Underwood | The University of Texas at Dallas

This study investigates the concurrent and longitudinal associations between two problem behaviors that arise in adolescence: social aggression—causing harm to social standing and relationships—and sexting—sending text messages with explicitly sexual content. Adolescents who engage in social aggression may be prone to interpersonal drama and to other problem behaviors, which could include sexting. Data were collected during 9th and 10th grade for 186 adolescents (49% female; 54% white) in the southern United States. Two days of text messages were coded for sexting (i.e., sending written text messages about sexual behaviors past or presently occurring) in both 9th and 10th grade. Teachers rated adolescents' in-person social aggression. Three main results emerged. First, sexting and social aggression were positively associated in 9th ( $r=0.28$ ) and 10th ( $r=0.28$ ) grades. Second, a cross-lagged panel model was used to examine the longitudinal associations between social aggression and sexting. Whereas higher social aggression in 9th grade predicted increases in their sexting behaviors in 10th grade ( $B= 0.17$ ,  $p=.02$ ), sexting did not predict later social aggression ( $B= -0.03$ ,  $p= .75$ ), after controlling for prior social aggression, race, and total text messaging. Third, the model results differed by gender, such that more socially aggressive 9th grade boys engaged in more sexting in 10th grade ( $B= 0.22$ ,  $p= .01$ ) but girls did not ( $B= -0.11$ ,  $p=.51$ ). These results suggest that for boys, the problem behavior of social aggression, although gender atypical, might predict increases in sexting.

#### **65. Personality of Digital Aggressors: Assessing Digital Aggression in Real-time**

Mikayla Kim | Michigan State University

S. Alexandra Burt | Michigan State University

Saleem A. Alhabash | Michigan State University

Digital aggression (DA) centers on the use of information communication technologies to inflict harm on others. Although several studies have been conducted, relatively limited research has examined motivations for the perpetration of DA by identifying salient personality traits of the aggressors. Previous studies of associations between DA and the 'Big Five' personality traits have yielded inconsistent results. These mixed findings could likely be attributed to methodological issues, particularly the widespread use of psychometrically unsound measures of DA. We sought to address these limitations between the 'Big Five' and DA by using real-time, in vivo, and validated questionnaire-based measures. Snapshots of DA were specifically assessed via 1) the TAP-Chat, a social gaming version of the well-known Taylor Aggression paradigm, 2) real-world DA, as mined from participants' public Twitter accounts, 3) self-reports of DA assessed using the Cyberbullying Questionnaire (CBQ).

All three measures of DA were assessed in 3 independent undergraduate samples (total N=1,590 across the three samples). Preliminary analyses of these data highlighted relatively consistent associations with low agreeableness ( $r_s \sim -.09$  on TAP-Chat/CBQ) and low conscientiousness ( $r_s \sim -.10-.13$  on Twitter/CBQ). Associations with high intellect/imagination ( $r_s \sim .11$ ) and low emotional stability ( $r_s \sim -.15$ ) also emerged but these were specific to particular assessments of DA (Twitter and the CBQ, respectively) and did not persist across the various measures of DA. Such findings suggest that the personality correlates of DA are more or less predictive across different contexts, highlighting potentially important differences within the broader construct of DA.

#### **66. Cyberbullying and Traditional Bullying: Does Sensation Seeking Make a Difference?**

Daniel Graf | University of Vienna

Takuya Yanagida | University of Vienna

Christiane Spiel | University of Vienna

There is a widespread agreement that cyberbullying and traditional bullying are very similar forms of aggressive behavior. However, there is a growing body of research focusing on differences between them. While it is well-known that sensation seeking is related to aggressive behavior, little is known about the role of sensation seeking in bullying behavior. Thus, the present study examined the differentiate relationship between sensation seeking and both forms of bullying. As in traditional bullying, the involvement in the social context and immediate reactions by others are stronger than in cyberbullying, we hypothesized that the relationship between sensation seeking and traditional bullying is stronger than the relationship between sensation seeking and cyberbullying. Participants of the online survey were recruited at school and were asked to forward the Link to friends. Overall, 402 German-speaking digital natives (68.3% female) completed an anonymous online questionnaire on sensation seeking, cyberbullying and traditional bullying. Structural equation modeling approach was applied to analyze relations between sensation seeking and cyberbullying respective traditional bullying. Results showed that the positive relationship between sensation seeking and traditional bullying was stronger than the positive relationship between sensation seeking and cyberbullying. This pattern remained stable while statistically controlling for gender, age, social media use and gaming attitudes. Our results indicate that sensation seeking has a higher motivational power for bullying behavior in traditional- than in cyber-contexts. This finding provides implications for environment-oriented and differentiated prevention and intervention strategies.

#### **67. Prevention of Cyberbullying among Primary Education Students**

Marta Estévez | University of Seville

Rosario del Rey | University of Seville

Joaquín Mora-Merchán | University of Seville

Paz Elipe | University of Seville

José A. Casas | University of Seville

Cyberbullying is a complex phenomenon of violence, given the characteristics of the context where is developed, mainly social networks. Although not always it appears in the schools, in Spain, prevention actions are being developed in schools. However, there is still few scientist evidences that endorse how prevention should be developed, particularly in primary education. Thereby, it is presented the evaluation of a psychoeducational program, Asegúrate that proposes to work with students about the

apparent normalization of some associated risk factors such as the limited control of personal information and the social networks abusive use. Specifically, it is evaluated the impact of Asegúrate program on cyberbullying prevalence. A quasi-experimental design was used with pretest and posttest measures. 1083 students participated with ages ranging from 9 to 13 years-old ( $M = 10.93$ ;  $SD = 0.73$ ), being 47.6% girls and European Cyberbullying Intervention Project Questionnaire (ECIPQ) was used. The results show that, after the program implementation, cyberbullying prevalence decreases among students who participated in intervention, while increases among student group that did not participate. The percentage change between pretest and posttest of victims in quasiexperimental group was -46,2% and 16,1% in control group; and aggressors -52,2% in quasiexperimental group and 77,7% in control. Thus, Asegúrate has showed to be an anti-cyberbullying effective strategy, raising awareness boys and girls about this phenomenon and associated risks. For that, it could be taken into account for the design of guidelines that educational administrations are designing in this theme.

### ***Crowding***

#### **68. Three's a Crowd: How Group Size and Emotion Influence Personal Space in Virtual Reality**

Sina Radke | RWTH Aachen University

Andrea Bönsch | RWTH Aachen University

Heiko Overath | RWTH Aachen University

Laura M. Asché | RWTH Aachen University

Jonathan Wendt | RWTH Aachen University

Tom Vierjahn | RWTH Aachen University

Ute Habel | RWTH Aachen University

Torsten W. Kuhlen | RWTH Aachen University

Navigating through social environments largely involves nonverbal behaviors such as choosing an appropriate distance to others. Violations of our personal space (PS), i.e., the area maintained around oneself, evoke discomfort and may result in aggressive reactions. The numerous social and personal characteristics that influence PS present a challenge for balancing experimental control with ecological validity when studying such a dynamic concept. Therefore, we used Virtual Reality to investigate PS preferences of 27 healthy young males by means of a Cave Automatic Virtual Environment, i.e., a room-mounted display. Participants were approached by either a single embodied, computer-controlled virtual agent (VA) or by a group of three VAs, who showed either angry or happy facial expressions. Subjective ratings indicated high feelings of presence of both oneself and the VAs in the virtual environment. Regarding PS, larger distances were preferred to groups than to single VAs. Moreover, larger distances were kept when an angry compared to a happy VA was approaching. These findings show that PS perceptions and preferences in Virtual Reality resemble behavior in real-life situations. Building upon the opportunity of Virtual Reality to maximize experimental control in interpersonal interactions, it may be promising to further investigate aggressive behavior that may arise from PS violations.

#### **69. Mediating Factors between Overcrowding and Adolescent Antisocial Behavior and Aggression in Lagos, Nigeria**

Olaniyi Makinde | Åbo Akademi University

Kaj Björkqvist | Åbo Akademi University  
 Karin Österman | Åbo Akademi University

An association between overcrowding and antisocial behavior/aggression among adolescents has been observed in Lagos, Nigeria (Omakinde et al., 2016). Accordingly, there is a need to investigate possible mediators between these two variables. The present study was designed to explore whether overcrowding could lead to aggression and negativity in the home, which in turn could lead to antisocial behavior and aggression outside of the home. A questionnaire was filled in by 238 Nigerian adolescents, mean age = 15.4 (SD = 2.0), from junior and senior secondary schools in Lagos; the sample included 122 females and 116 males. The data were analyzed with the SPSS macro PROCESS (Hayes, 2013), with six scales as variables. Overcrowding served as the independent variable, Anti-social Behavior/Aggression as the dependent variable, and Parental Negativity, Adult Aggression, Sibling Aggression, and Witnessing of Domestic Violence as mediators in a conditional process analysis. The results corroborated the hypothesis that the four mediators had an indirect effect, i.e., mediated the effect of overcrowding in the home on antisocial behavior and aggression outside of the home. The results have implications for housing policies in Nigeria. Moreover, these results may also have implications for research and policy making in other nations and parts of the world.

### ***Sexual Aggression***

#### **70. Psychological Distance and Disparagement Humor Against Women: When Sexist Humor is Conceptualized as Serious Threat**

Monica Romero-Sánchez | University of Granada  
 Mariela Bustos Ortega | University of Granada  
 Jesús López Megías | University of Granada  
 Hugo Carretero-Dios | University of Granada

Psychological distance –has been found to reduce the extent to which potentially aversive stimuli are perceived as threatening. When humor contents are aversive or transgressive, personal positioning related to the humor content is relevant. Specifically, sexist humor against women may be considered as a negative and threatening stimuli, and therefore psychological distance predictions can be applied to analyze humor appreciation. Moreover, humor researchers have emphasized the role that ideological variables play in moderating appreciation of sexist humor. Not surprisingly, people enjoy sexist humor insofar as they have sexist attitudes (SH) toward women. First, a pilot study was conducted to collect a set of sexist jokes that are categorized according to the level of perceived severity, funniness and aversiveness. Then, with 196 participants (main Study) we analyze the role of psychological distance (temporal: now vs. before) on sexist humor appreciation according to participant's HS. The results showed that low HS participants (vs. high HS) perceived sexist humor as less severe when it looked far away than when it looked closed. High HS participants were not influenced by temporal distance. Regarding funniness as dependent variable, only main effects emerged. Participants perceived the sexist humor to be funnier when they showed high HS scores. Moreover, they showed low funniness scores when the sexist humor was perceived as highly severe. No significant main or interaction effects emerged with aversiveness scores as dependent variable.



Finally, results showed that severity mediated in the relationship between temporal psychological distance and funniness scores.

### **71. Stealthing: Factors Associated with Young Men's Nonconsensual Condom Removal**

Kelly Cue Davis | Arizona State University

Cynthia A. Stappenbeck | University of Washington

William H. George | University of Washington

Nonconsensual condom removal has recently received a great deal of media attention. These reports have focused on a behavior termed "stealthing", in which a man agrees to use a condom, but then removes the condom before or during intercourse without his partner's knowledge or consent (considered by some to be a form of sexual assault). Despite this attention, we know very little about this behavior and the men who engage in it. This cross-sectional survey study explored factors associated with stealthing in a sample of young, non-problem drinking men of elevated sexual risk (N = 626). Almost 10% (n = 61) of participants reported having engaged in stealthing at least once since the age of 14. Of the men who had engaged in stealthing, they engaged in this behavior an average of 3.62 times (SD = 3.87), with a range of 1-21 times (maximum possible). Logistic regression analyses indicated that after controlling for condom use self-efficacy, men with greater hostility towards women (OR = 1.36) and more severe sexual aggression history (OR = 1.07) had significantly higher odds of having engaged in stealthing. Moreover, chi-square analyses demonstrated that men who had a history of stealthing, compared to those who did not, were significantly more likely to have been diagnosed with an STI (29.5% v. 15.1%) or have a partner who experienced an unplanned pregnancy (46.7% v. 25.8%). Findings suggest that men who engage in stealthing are higher on both sexual aggression and sexual risk indices.

### **72. Why Do Some Intervene? Effects of Personality and Willingness to Help on Bystander Intervention for Sexual Violence**

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Ruschelle M. Leone | Georgia State University

Dominic J. Parrott | Georgia State University

Robert. D. Latzman | Georgia State University

Courtland S. Hyatt | University of Georgia

Joshua D. Miller | University of Georgia

Amos Zeichner | University of Georgia

Darley and Latane's (1968) study introduced many questions regarding why people fail to intervene during an emergency. Unfortunately, few studies to date have examined individual determinants of bystander intervention. With few exceptions (e.g., Banyard, 2008), far less have examined the personality correlates of bystander intervention for sexual violence (SV intervention). The aim of this study was to examine the association between personality and SV intervention within the Big Five framework and to examine whether one's willingness to intervene mediates these effects. 692 students from two universities in the southeastern United States completed self-report measures of personality, willingness to intervene, and SV intervention (subscales: risky situation, access resources, proactive behavior, and party safety). Significant bivariate correlations between specific personality dimensions and SV intervention were qualified by conditional process modeling, which indicated (1)

an indirect effect of all five personality traits on all four forms of SV intervention through bystander willingness, and (2) a conditional indirect effect of conscientiousness on SV intervention (with the exception of accessing resources) through bystander willingness among individuals low ( $b = .32$ , 95% CI [.12, .64]), but not high ( $b = .05$ , 95% CI [-.10, .24]), in neuroticism. Results highlight the importance of examining the relation between personality and SV intervention and indicate that higher willingness mediates these effects. Results also suggest a more complex mechanism, such that highly conscientious individuals are more willing and thus more likely to intervene across a range of situations, but only if they are calm and emotionally stable (low neuroticism).

### **73. Hostility towards Women Moderates the Relationship between Motivations for Sex and Sexual Assault Perpetration in a Male Collegiate Sample**

Daniel J. Lanni | Oakland University

Daniel J. Gildner | Oakland University

Mitchell Kirwan | Oakland University

Michele R. Parkhill | Oakland University

Scott M. Pickett | Oakland University

Previous research suggests that men who have hostile attitudes toward women (HTW; Loh, Gidycz, & Lobo, 2005) and use sex to cope with negative affect (STC; Jung & Jamieson, 2014) or engage in sex to elevate their self-esteem (SSE) are at a higher risk of sexual assault perpetration (Abbey et al., 2004). Participants were 276 Male college students who completed the Motivations for Sex Scale (Cooper et al., 1998), the Sexual Experiences Survey (Parkhill & Abbey, 2008), and the Hostility towards Women Scale (Lonsway & Fitzgerald, 1995). Results of the hierarchical regression revealed a significant interaction between HTW and STC to predict sexual assault perpetration ( $\beta = .91$ ,  $t=4.16$ ,  $p<.001$ ). Simple slopes analysis revealed that when there was low HTW there was no association between STC and perpetration ( $\beta=.08$ ,  $t=1.00$ ,  $p=.36$ ). However, when there was high HTW there was a significant association between STC and perpetration ( $\beta=.461$ ,  $t =6.67$ ,  $p<.001$ ). A similar set of hierarchical regression analyses revealed a significant interaction between HTW and SSE ( $\beta=1.10$ ,  $t=4.51$ ,  $p<.001$ ), and, that when HTW was low there was no association between SSE and perpetration ( $\beta =.09$ ,  $t=1.16$ ,  $p=.25$ ). However, when HTW was high there was a significant association between SSE and perpetration ( $\beta=.57$ ,  $t=7.33$ ,  $p<.001$ ). Results suggest that men who have HTW and have STC or SSE are more likely to perpetrate sexual assault. Thus, future intervention work should focus on both attitude change and proper emotion regulation.

### **74. Men's Sexual Aggression and Condom Use Resistance: Event-Level Associations with Alcohol Consumption**

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Natasha K. Gulati | University of Washington

Kelly Cue Davis | Arizona State University

Rates of condom use among men are low, and burgeoning research suggests that men engage in a variety of tactics to avoid condom use (condom use resistance; CUR), including coercive (e.g., condom sabotage) and non-coercive (e.g., providing reassurance about one's level of risk) tactics, suggesting that some of these events represent a risk nexus regarding sexual health and sexual aggression (SA). Laboratory-based research found that acute alcohol intoxication is associated with CUR; however, no

study has examined daily associations between alcohol consumption and CUR or the moderating effects of SA history and trait anger. Social drinking young adult men (N=430) at increased sexual risk were recruited to complete a background survey and follow-up assessments regarding their sex events, including alcohol consumption, over a 3-month period. CUR was reported in 113 sex events; 6.2% of which also involved SA and 40.7% involved alcohol consumption. Generalized Estimating Equations were used to examine daily associations and found that men with more severe SA histories were more likely to perpetrate CUR. Men lower in trait anger were more likely to perpetrate CUR the more they increased above their typical level of alcohol consumption; whereas men higher in trait anger were similarly likely to perpetrate CUR regardless of their alcohol consumption. Results suggest that men with greater SA histories and high trait anger are at increased risk of perpetrating CUR, and that risk of CUR increases among other men the more they increase their alcohol consumption beyond their average.

### **75. Brazilian Studies Related to Sexual Aggression Against Boys**

Jean von Hohendorff | IMED Passo Fundo, Brazil

Sexual aggression against children is a public health problem. Social and scientific attention to male victims still need improvement. In Brazil, we have been studying male victims since 2012. Therefore, we aim to introduce these studies. First, we performed a literature review. We found just one case study published nationally. Then, we adapted and evaluated a cognitive-behavioral intervention model with three boys between 8 and 16 years. Results showed that boys may need more sessions to disclose their traumatic memories. Parallel to this study, we analyzed 239 cases report in a public health service. We found a predominance of white boys between seven and 12 years, victims of intrafamilial sexual aggression of two or more episodes perpetrated by males. Then, a single case study on the disclosure of male sexual aggression was conducted. Disclosure resulted from conversations between mother and son. The disclosure's impact on the mother caused guilt feelings and concerns with her son's sexuality. Our last study aimed to know the dynamics of sexual aggression against boys. Interviews were conducted with four male victims between the ages of 6 and 10, as well as four psychologists. Findings underscore the social invisibility of sexual aggression against boys. Taking together, our studies shows that perform researches with boys close in years to the sexual aggression experience is a challenge due to the low number of referrals as well as the disbelief and discrimination.

### **76. Different Forms Of Interpersonal Sexual Objectification And Self-Objectification In Spanish Women And Men**

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Miguel Moya | University of Granada

Jesús L. Megías | University of Granada

Rosa Rodríguez-Bailón | University of Granada

In the field of objectification theory, the evaluation of women's bodies and the unwanted sexual attention from men are some of the most studied forms of sexual objectification. These forms are considered aggressive behaviours towards women that may differ in the degree of hostility. Self-objectification would be a consequence of these pervasive behaviours and occurs when women internalize a third-person perspective of themselves in physical terms. Literature has shown that self-objectification has many negative consequences for women. In Study 1 (N = 201) Spanish female

college students filled in the ISOS, a measure of sexual objectification—which assesses body evaluation and unwanted sexual advances, and three measures of self-objectification (OBC-body surveillance, OBC-body shame and SOQ). In Study 2 (N = 146 women y N = 112 men), Spanish college students answered the same measures about self-objectification than in Study 1, as well as a scale developed for the study which assessed sexual objectification including items regarding body evaluation, unwanted sexual attention and unwanted sexual advances. Results of both studies showed that women’s scores in body evaluation, a less hostile and aggressive form of sexual objectification, correlated more to self-objectification measures than the other more hostile forms of sexual objectification. For male participants, none of the objectifying measures were correlated to the self-objectification ones. Results underlie the negative consequences that body evaluation, a kind of sexual objectifying behavior that may be considered as apparently low in hostility, can have on women.

### **77. The Effect of Objectification on Aggression**

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Zhansheng Chen | The University of Hong Kong

Fei Teng | South China Normal University

Wing-Yan Wong | The Education University of Hong Kong

Objectification refers to being treated as an object that can be instrumentally manipulated. Although the literature has accumulated substantial understanding about the impacts of objectification, our knowledge is still limited because past studies exclusively focused on sexual objectification (i.e., treating women as objects that satisfy men’s sexual desires). Relatively little research has examined how non-sexual forms of objectification influence people’s psychosocial well-being. The current research aimed to examine the relation between non-sexual objectification and aggression and the corresponding psychological mechanism. Adopting a multi-method approach, three studies were conducted to test the prediction that non-sexual objectification promotes aggression through thwarted perceived control. In Study 1, participants completed measures assessing their dispositional feelings of non-sexual objectification, perceived control, and aggression. In Study 2, participants were first either objectified or not during a social interaction and then their perceived control was examined. Finally, participants’ aggression was assessed by the voodoo doll paradigm. In Study 3, participants first recalled either an objectification or control experience. Next, they reported their perceived control and aggressive intention in hypothetical situations. The results of the three studies consistently showed that objectified participants reported lower perceived control and higher aggression level than non-objectified participants. In addition, perceived control mediated the relation between non-sexual objectification and aggression. Taken together, these findings advance our current knowledge by providing the first empirical evidence showing that people become more aggressive following non-sexual objectification and highlighting the critical influence of perceived control in explaining why non-sexual objectification promotes aggression.

### ***Family Violence***

#### **78. Mothers’ and Fathers’ Resources and Vulnerabilities: Predictors of Physical Child Abuse Risk**

Samantha Gonzalez | University of Alabama at Birmingham

Christina M. Rodriguez | University of Alabama at Birmingham

Parenting is one of the most influential determinants of children's long-term outcomes but fathers are particularly under-studied. Because young children are most at risk of experiencing child abuse, parenting during this stage is critical. The present study considered both vulnerabilities and resources parents may access that relate to their physical child abuse risk. Participants in this study were primiparous mothers and their male partners recruited in mothers' third trimester of pregnancy for a prospective longitudinal study. Subsequent data were collected when children were 6mo and 18mo. At each timepoint, parents independently reported on their child abuse risk, personal vulnerabilities (psychopathology, substance use, intimate partner violence), and resources (empathy, emotion regulation, coping skills, social support). Multiple linear regressions models independently predicted mothers' and fathers' physical child abuse risk at 18mo from personal resources and vulnerabilities at both 6mo and 18mo. Mothers' abuse risk was concurrently predicted by psychopathology, social support, empathy, and emotion regulation. Mothers' abuse risk at 18 mo. was also prospectively predicted by psychopathology, substance use, and social support at 6 mo. Fathers' abuse risk at 18mo. was concurrently predicted by psychopathology and social support and prospectively predicted by poorer emotion regulation at 6 mo. Results support the need to study mothers' and fathers' physical abuse risk independently to elucidate which resources may be differentially beneficial and which vulnerabilities may be most detrimental. Further, longitudinal prediction of abuse risk from earlier vulnerabilities and resources allows for the possibility of early detection and prevention work with parents most at risk.

### **79. High Mate Value Men Become More Accepting of Intimate Partner Abuse When Primed with Gender Equality**

Khandis Blake | UNSW Sydney

Robert Brooks | UNSW Sydney

Although attempts to rectify intimate partner violence (IPV) predominantly target gender inequality as its socio-structural source, evolutionary insights cast doubt on the notion that gender equality unambiguously lessens IPV. Here we test whether the effect of gender equality on male-to-female IPV will depend upon men's relative position in the sexual marketplace (i.e., their mate value). We primed 350 subjects (218 men) with one of fifteen different primes: five primes each of high or low gender equality, and five neutral control primes. We measured support for coercive IPV and attitudes to abortion (to see if gender equality cues men's urges to control female reproduction). Mate value moderated the effect of gender equality on men's (but not women's) attitudes towards IPV, and there was no effect for abortion. High-value men were supportive of IPV in conditions of gender equality, yet we found the reverse for low-value men. We interpret our results in light of the fitness costs and benefits IPV poses to perpetrators in high and low gender equality environments. Our findings show that phenotypic plasticity in male-to-female IPV can depend upon both broader socio-structural conditions between men and women and on an individual man's position in the sexual marketplace.

### **80. Family Violence, Childhood Experience and Adult Mental Health**

David Mehlhausen-Hassoan | University of Haifa

Zeev Winstok | University of Haifa

Accumulating empirical evidence indicates that various types and forms of family violence, negatively affect mental health in adulthood. Although the study of the impact of family violence on children has been addressed by research for decades, it provides a somewhat simplistic and incomplete picture of this complex phenomenon. For example: Most studies focus only on one type and one form of family violence and ignore interactional effects; Research has mainly offered predictions (what happens to children in violent families) rather than empirically-based explanations (why this is happening to them) for the negative implications of family violence on the development of children; Questions such as why and how child development suffers from family violence remain unanswered. The research presented here tests within a non-clinical sample (N=618) an explanatory model of the mechanisms which link interparental and parent-to-child physical and verbal violence in childhood to childhood experience (in the past) and adult mental health (at present time). The results show that childhood experience is a full mediator between family violence in childhood and the respondent's mental health in adulthood. Full mediation means in this context, that the impact of family violence in childhood on mental health in adult life is entirely indirect. This innovative approach addresses several limitations of the current knowledge, and allows for an extension, expansion and promotion of knowledge in the field towards a better understanding of and effective intervention in the problem. The introduction of childhood experience in this model opens pathways for further research and focused interventions.

### **81. Intimate Partner Violence and Women's Cancer-Related Quality of Life**

Ann L. Coker | University of Kentucky

Because intimate partner violence (IPV) may disproportionately impact women's quality of life (QOL) when undergoing cancer treatment, women experiencing IPV were hypothesized to have (a) more symptoms of depression or stress and (b) lower QOL as measured with the Functional Assessment of Cancer Therapy (FACT-G) and Functional Assessment of Chronic Illness Therapy—Spiritual Well-being (FACIT-SP) Scales relative to those never experiencing IPV. Women, aged 18–79, who were included in one of two state cancer registries from 2009 to 2015 with a recent incident, primary, invasive biopsy-confirmed cancer diagnosis were recruited and asked to complete a phone interview, within 12 months of diagnosis. This interview measured IPV by timing (current and past) and type (physical, sexual, psychological), socio-demographics, and health status. Cancer registries provided consenting women's cancer stage, site, date of diagnosis, and age.

### **82. The Structure of Aggression in Conflict-Prone Couples: Validation of a Measure of the Forms and Functions of Intimate Partner Aggression (FFIPA)**

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Dominic J. Parrott | Georgia State University

Christopher I. Eckhardt | Purdue University

Christopher C. Henrich | Georgia State University

Intimate partner aggression (IPA) is a complex construct comprised of both the means by which one partner harms another and the motivation for causing harm. Unfortunately, existing measures only assess forms of IPA perpetration (e.g., physical, verbal). This narrow measurement approach is inconsistent with extant literature which emphasizes the importance of both the forms and the motivations for aggression. Stronger measurement of IPA is vital to understanding its etiology and prevention; thus, the present study sought to fill this lacunae by adapting and validating an existing

measure of the forms and functions of adolescent peer aggression to assess IPA perpetration in adults. This new measure – the Forms and Functions of Intimate Partner Aggression (FFIPA) – comprises eight latent factors (i.e., overt aggression, overt-reactive aggression, overt-proactive aggression, relational aggression, relational-reactive aggression, relational-proactive aggression, proactive aggression, and reactive aggression) ( $\alpha = .92$ ). 140 heterosexual couples were recruited into a larger project in which at least one member reported a one-year history of IPA perpetration and completed the FFIPA. A confirmatory factor analysis (using a MLR estimator) accounting for non-independent data found adequate model fit, RMSEA = .072, 90% CI [.062, .082], SRMR = .084, CFI = .87, and a TLI = .85. Findings support the FFIPA's validity as a measure of the forms and functions of IPA perpetration. More importantly, as the only instrument that parses the forms and functions of IPA perpetration, the FFIPA allows researchers to examine the unique motivations of an aggressive partner separately from the form of their behavior.

### **83. Mindfulness May Improve Conflict Communication between Intimate Partners**

Siobhan O'Dean | University of New South Wales

People in violent and distressed intimate relationships tend to have negative and hostile conflict discussions. Mindfulness may be a potential strategy to reduce hostility and increase positive communication in couples. The present study tested whether 7 days of mindfulness meditation practice could help couples have more positive and effective conflict discussions. Couples either underwent one week of mindfulness training or listened to a neutral audio-book. Subsequently, couples attended a laboratory session where they discussed an important source of conflict (e.g., jealousy). Mindfulness reduced negativity and conflict, and increased positive communication during the conflict discussion. Mindfulness did not influence aggressive communication tactics. The present findings indicate that mindfulness may provide a novel strategy for couples dealing with communication deficits during conflict. Significant findings are discussed in terms of two potential mechanisms behind mindfulness: emotion regulation and empathy.

### **84. Longitudinal Effects of Increases and Decreases in Intimate Partner Aggression**

Thomas Bradbury | University of California

Julia Hammett | University of California

Benjamin Karney | University of California

Interventions aimed at reducing interpartner aggression assume that within-couple declines in aggression enhance individual and relational outcomes, yet reductions in aggression may fail to yield these benefits when other risk-generating mechanisms remain intact. The present study evaluates this possibility by investigating whether naturally observed within-couple changes in aggression are associated with improved individual and relational outcomes in the manner assumed by intervention programs. Drawing upon 4 waves of data collected at 9-month intervals from a community sample of 431 newlywed couples (76% Hispanic) living in low-income neighborhoods, Actor-Partner-Interdependence Modeling (APIM) and Structural Equation Modeling (SEM) indicated that levels of aggression at the outset of marriage had limited associations with later outcomes ( $b$ 's ranging from -0.09 to 0.01 for husband and wife satisfaction, all ns). Changes in aggression, however, were associated with subsequent marital outcomes, such that decreases in aggression were beneficial and increases in aggression were costly. Individuals who experienced increases in aggression worsened in their

observed communication over time (e.g.,  $b=0.25$ ,  $p<.01$  for husband aggression on husband negativity) and reported greater increases in stress (e.g.,  $b=0.27$ ,  $p<.01$  for husband aggression on husband stress;  $b=0.24$ ,  $p<.01$  for husband aggression on wife stress). Reports of high stress early in marriage predicted escalations in aggression over time ( $b=0.20$ ,  $p<.01$  for wife stress on husband change in aggression;  $b=0.19$ ,  $p<.01$  for wife stress on wife change in aggression). Thus, helping couples to contain increases in aggression might be particularly consequential for their well-being.

### **85. Trends in Family Violence among Older Adults in Costa Rica**

Derby Munoz-Rojas | University of Costa Rica

Warner Cavero | Costa Rican Ministry of Security

Mary Solano-Rivera | University of Costa Rica

Family violence (FV) is a public health issue that affects people regardless their gender, ethnicity, and religion. Indeed, older adults are disproportionately affected. FV is a complex problem because it is influenced by several sociocultural elements, including culture, policies, and socioeconomic factors, which interact and shape the experiences of violence. However, the exact nature of these interactions varies across countries. In Costa Rica, there is a lack of understanding about the role of the contextual and socioeconomic factors surrounding the experiences of older adults exposed to FV. Therefore, this study extends the understanding of FV by exploring the relationship among these factors. A secondary data analysis was conducted on police reports involving FV cases ( $n=9182$ ), of those 12.6% included older adults experiences of violence ( $n=556$  perpetration,  $n=584$  victimization). Data were entered into SPSS 24.0. Logistic regressions were conducted to assess the predictive ability of socioeconomic and contextual factors on reports of violence. Preliminary results indicated that older adults' age ranged from 65 to 93 years ( $73.8\pm 7.01$ ), most of the victims reported gender as female ( $n=326$ , 68.9%) and being one of the abuser's parent ( $n=252$ , 53.3%). Violent events were more likely to occur on Wednesday (AOR=.378,  $p=.032$ ), March and November ( $p=.005$ ). Psychological abuse was the most reported type of violence (58%) and rates increased with advancing age ( $B=.95$ ,  $p=.008$ ). These findings contribute to enhance our understanding of the association between contextual factors and FV in Costa Rica. Initiatives targeting FV prevention should consider the contextual factors surrounding this problem.

### **86. Psychosocial Adjustment of Maltreating Parents: Impact of Childhood Exposure to Trauma and Violence**

Gwenden Dueker | Grand Valley State University

Mary Bower Russa | Grand Valley State University

Jeff Kieliszewski | Grand Valley State University

Andrea Rotzien | Grand Valley State University

Termination of parental rights due to child maltreatment affects the lives of many tens of thousands of children nationally. Improvement in programming and supports to reduce termination rates requires a better understanding of the parents who perpetrate abuse and the historical factors that have shaped them. Parents at risk for termination ( $N=324$ ) completed a clinical forensic evaluation including assessment of psychosocial history and adult functioning. Seven indicators of adult functioning (violence perpetration, mental illness, substance abuse, criminal behavior, economic instability, educational background, and social support level) were included in a Latent Class Analysis



to identify groups with similar patterns of functioning. Three classes emerged: Violent with High Dysfunction (VHD), Non-violent with High Dysfunction (NVHD), and Moderate Dysfunction (MD). These groups differed in their rates of criminal behavior, substance abuse and mental illness (VHD and NVHD > MD). Parents' childhood history was coded to construct a cumulative trauma/stress index reflecting exposure to eight types of trauma: experience of physical abuse, sexual abuse, witnessing violence against mother, parental separation/divorce, living with an adult with mental illness or substance abuse, having a parent in prison, and death of a parent. Mothers had significantly higher childhood trauma scores than fathers and both High Dysfunction (Violent and Non-Violent) groups had significantly higher childhood trauma scores than the MD group. Experiencing violence in childhood also independently predicted adult groupings, with those who had experienced physical abuse being more likely to be in one of the high dysfunction groups (VHD and NVHD).

### **87. Termination of Parental Rights: Psychosocial Features with Violent and Nonviolent Patterns of Maltreatment**

Mary Bower Russa | Grand Valley State University

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Jeff Kieliszewski | Grand Valley State University

Andrea Rotzien | Grand Valley State University

Department of Health and Human Services data show that as of 2014, 64,000 American children nationally had parents whose parenting rights were terminated, but few attempts have been made to understand the psychosocial characteristics of this parent group. Clinical evaluations (N = 324) of parents under consideration for termination were coded with regard to Child Protective Services (CPS) expressed concerns, as well as parent history and adult psychosocial functioning. Consistent with past research, this high risk parent population reported high rates of exposure to violence during their own childhoods (30% physical abuse and 13% domestic violence), as well as an array of other traumatic childhood events. Additionally, nearly one third of the parents reported a history of suicidality, 70% had a mental health diagnosis, and 70% reported problems with the law. To provide a more person centered understanding of the data, ten categorical indicators of CPS concerns (sexual abuse, physical abuse, physical neglect, domestic violence victim, domestic violence perpetrator, substance abuse, mental illness, economic instability, failure to protect, history of termination), were included in Latent Class Analysis. Six sub-groups of parents were identified. Three of these groups of parents were characterized by intrafamilial violence, and three groups were characterized by nonviolence. These six sub-groups differed significantly with regard to independent indices of adult psychosocial functioning (e.g., substance abuse, criminal behavior, and overall adult violence). While groups did not differ with regard to childhood history of exposure to intrafamilial violence, they did differ in overall rate of childhood trauma exposure.

### **88. Do Different Types of Narcissism Impact the Relation between Parental Psychological Control and Readiness for Aggression among Adolescents?**

Marta Rutkowska | Academy of Special Education Warsaw

This study was to investigate the mediating role of different aspects of narcissism on the relation between parental psychological control and readiness for aggression in a sample of 816 adolescents. Two dimensions of adolescent narcissism was examined: grandiosity and vulnerability as well as two

aspects of parental psychological control: dependency-oriented and achievement-oriented psychological control. To measure the aggressive proneness of participants three patterns of readiness for aggression were taken into account, namely: emotional-impulsive, habitual – cognitive and personality – immanent. The results showed that only dependency – oriented psychological control was related to vulnerable dimension of narcissism which in turn predicted emotional – impulsive and habitual – cognitive readiness for aggression. Further, grandiosity was a predictor of habitual-cognitive and personality - immanent readiness for aggression but no relation was found with parental psychological control of any kinds. Thus, vulnerability but not grandiosity serves as the mediator of the relation between parental psychological control and aggressive proneness which implies the different antecedents of two sorts of narcissism and different function of narcissism in regulating aggressive proneness in adolescents.

**89. Using a Psychopharmacogenetic Approach to Identify the Pathways Through Which and People for Whom Testosterone Promotes Aggression**

Justin M. Carré | Nipissing University

Shawn N. Geniole, Tanya L. Procyshyn, Nicole Marley, Triana L. Ortiz, Brian M. Bird, Ashley L. Marcellus, Keith M. Welker, Pierre L. Bonin, Bernard Goldfarb, Neil V. Watson

Little is known about the neurobiological pathways through which, and people for whom, testosterone promotes aggression. Using a psychopharmacogenetic approach, we show that testosterone increases aggression in men with select personality profiles and that these effects are further enhanced among those with fewer CAG repeats in exon 1 of the androgen receptor (AR) gene, a polymorphism associated with increased AR efficiency. Testosterone's effects were rapid (~30 minutes after administration), and mediated by subjective reward associated with aggression. Therefore, testosterone appears to promote human aggression through an AR-related mechanism, with larger effects in men with the select personality profiles because testosterone more strongly upregulates the subjective pleasure they derive from aggression. Given other evidence that testosterone regulates reward through dopaminergic pathways, and that the sensitivity of such pathways is enhanced among individuals with the personality profiles we identified, our findings also implicate dopaminergic processes in testosterone's heterogeneous effects on aggression.

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