

Longitudinal Associations between Psychopathy, Bullying, Homophobic Taunting, and Sexual  
Harassment in Adolescence

Master's Thesis

Abigail Free

Counselling Psychology

Faculty of Education

University of Ottawa

Thesis supervisor: Dr. Tracy Vaillancourt

Thesis committee:

Dr. Anne Thériault

Dr. David Smith

### Acknowledgements

This thesis would not be possible without my supervisor, Dr. Tracy Vaillancourt, and the members of the Brain and Behaviour Laboratory. I would like to thank everyone who has worked tirelessly to make the McMaster Teen Study possible. Thank you to my family and friends who have supported me during my research journey. My appreciation is also given to the Social Sciences and Humanities Research Council of Canada and the Canadian Institutes of Health Research for funding the present study.

## Table of Contents

Abstract.....	v
Introduction.....	1
Bullying.....	1
Homophonic taunting.....	2
Sexual harassment.....	4
Relations between homophobic taunting, sexual harassment and bullying perpetration.....	5
Psychopathy.....	6
The link between psychopathy and bullying perpetration.....	9
Present Study.....	9
Hypotheses.....	11
Methods.....	11
Participants.....	11
Measures.....	12
Psychopathy.....	12
Bullying Perpetration.....	12
Homophobic Taunting.....	13
Sexual Harassment.....	13
Procedure.....	14
Analysis.....	14
Results.....	14
Descriptive Data.....	14
Stability of psychopathy and bullying perpetration.....	15
Interrelatedness of psychopathy and bullying perpetration over time.....	15
Bullying and psychopathy as predictors of sexual harassment and homophobic taunting.....	15
Control variable effects.....	16
Sex Differences.....	16
Discussion.....	16
Limitations.....	20

Implications for Counselling.....	21
Conclusion.....	23
References.....	25
Figures.....	33
Tables.....	35
List of Acronyms.....	39

### Abstract

In order to understand the longitudinal relationships between adolescent psychopathy, bullying perpetration, sexual harassment, and homophobic taunting, data were analyzed from surveys of 544 Canadian teenagers from grades 9 to 12 who took part in the ongoing McMaster Teen Study. The researchers hypothesized a pathway in which psychopathy and bullying were interrelated predictors of sexual harassment and homophobic taunting. Path analysis revealed that the model demonstrated excellent fit and had a significant effect of gender. Psychopathy and bullying perpetration were stable, covarying constructs and psychopathy predicted bullying throughout adolescence. Bullying was more strongly predictive of and concurrently related to homophobic taunting for boys than girls, and homophobic taunting was linked to sexual harassment perpetration for boys, but not girls. Psychopathy predicted homophobic taunting and sexual harassment equally across sexes. Limitations and future directions are discussed and suggestions for counselling adolescents who are high on bullying and psychopathic traits are provided.

## **Longitudinal Associations between Psychopathy, Bullying, Homophobic Taunting, and Sexual Harassment in Adolescence**

The relation between psychopathy and bullying and each of their links to later sexual harassment and homophobic taunting in adolescence are relatively understudied. Adolescent psychopathy is characterized by narcissism, callousness, and lack of empathy (Frick & Hare, 2001). Because psychopathy is associated with higher levels of violence and aggression (Frick, Kimonis, Dandreaux, & Farell, 2003; Murrie & Cornell, 2002), and is fairly stable across adolescence (Lynam, Charnigo, Moffitt, Raine, Loeber, & Stouthamer-Loeber, 2009) and into adulthood (Lynam, Loeber, & Stouthamer-Loeber, 2008), it is important to advance research in this area in order to guide clinicians and reduce violence (Reidy, Kearns, Degue, Lilienfeld, Massetti, & Kiehl, 2015). The three forms of interpersonal violence addressed in this study, homophobic taunting, bullying perpetration, and sexual harassment, are particularly prevalent in middle and high school and are major problems during adolescence (Espelage, Basile, & Hamburger, 2012). With the goal of aiding interventions for violence prevention among adolescents, the current longitudinal study examined psychopathy and bullying perpetration across mid to late adolescence as predictors of sexual harassment and homophobic taunting.

### **Bullying**

Olweus (1993) describes bullying as a systematic, persistent, and intentional abuse of others who cannot defend themselves. Different forms of bullying typically include verbal, physical, relational, and cyber-behaviour (Espelage & Swearer, 2003). Although direct aggression includes physical fighting and verbal threats, indirect aggression may use a third party to bully through the spreading of rumors (Espelage & Swearer, 2003). Relational aggression is directed at damaging a relationship and the relationship itself is used to create harm (Crick & Grotpeter, 1996). Bullying using these different forms often represents an imbalance of strength and power (Olweus, 1994).

Bullying perpetration is prevalent in North America. A study by Vaillancourt and colleagues (2010) asked 16,799 Canadian students (8,195 girls, 8,604 boys) in grades 4 through 12 about their experiences with physical, verbal, social, and cyberbullying and the prevalence rate for bullying others was 31.5%. A meta-analysis of prevalence rates for bullying by Cook and colleagues (2010) showed that boys were 2.5 times more likely to bully than girls and younger students tended to bully others more often than older students. Although some researchers argue

for the stability of bullying perpetration over time and across sex (Kim, Boyce, Koh, & Leventhal, 2009), others have found two bullying trajectories: bullies who are low in perpetration and discontinue this behaviour over time, versus those who are high in perpetration and increase this behaviour over time (Barker, Arseneault, Brendgen, Fontaine, & Maughan, 2008).

Studies have shown that bullying leads to problematic outcomes not only for the victims, but also for the perpetrators. For example, a multinational study by Pickett and colleagues (2002) found that bullies were more commonly injured than adolescents who did not bully others. A study of 16,410 Finnish high school students showed that male bullies thought about suicide more than other boys (Kaltiala-Heino, Rimpela, Marttunen, Rimpela, & Rantanen, 1999). Being a bully in childhood has also predicted criminality in early adulthood (Olweus, 1999). Negative outcomes for bullies, such as increased risk of suicidality, aggression, and criminality warrant further research that could inform interventions of bullying behaviour.

Ttofi and Farrington's (2011) meta-analysis of 44 anti-bullying evaluations showed that bullying programs are effective on average and decrease bullying by 20–23%. This meta-analysis also concluded that intensive programs, such as those which included parent meetings and disciplinary methods were much more effective (Ttofi & Farrington, 2011). Further, Ttofi and Farrington (2011) argued that future anti-bullying initiatives should target wider systemic factors than the school alone, such as the family, and should include cooperative group work among experts. The Olweus Bullying Prevention Program (OBPP) does this by focusing on levels of the individual, family, community, class and school (Olweus, 1993). One of the most well-known anti-bullying programs, The OBPP has been empirically tested internationally with positive results (Ttofi & Farrington, 2011). Pepler, Craig, Ziegler and Charach (1994) tested an intervention based on the OBPP in Canada with 8- to 14-year-olds and after 18 months, fewer students reported an interest in engaging in bullying as a result of the intervention.

### **Homophobic taunting**

Homophobia includes negative beliefs, attitudes, stereotypes, and behaviour toward gays and lesbians (Wright, Adams, & Bernat, 1999) or those assumed to be gay or lesbian (Pharr, 1988). Poteat, DiGiovanni, and Scheer (2013) argue that while there can be overlap in the expression of bullying and bias-based harassment, such as that which targets a person for their gender or sexual orientation, distinctly constitutes civil rights violations that are different from

bullying. Examples of the behavioural component of homophobia include teasing, threats, harassment, and assault and homophobic verbal content may consist of "degrading or stigmatizing words and language in reference to sexual orientation" (Poteat & Espelage, 2005, p. 512). Homophobic banter is prevalent in American middle and high school, with 24% of boys and 16.2% of high school girls reporting they have called a friend names like "gay", "lesbo", or "fag" at least one or two times in a week (Poteat & Espelage, 2005). Even higher numbers (32.2% for boys, 31.3% for girls) reported having called someone they did not like these homophobic names at least one or two times in a week (Poteat & Espelage, 2005).

Perpetrators of homophobic taunting tend to have increased prejudice toward people who are LGBTQ<sup>1</sup>, decreased levels of empathy, and an increased tendency to perpetrate general bullying behaviour (Birkett, Espelage, & Koenig, 2009; Poteat et al., 2013; Poteat & Espelage, 2005; Rivers, 2004). In a study with 581 students in grades 9 to 12, Poteat and colleagues (2013) found that increased empathic concern and perspective taking were associated with decreased homophobic behaviour and less perpetration of homophobic taunting. As well, perpetrators may also place higher importance on sexual orientation as a central part of their identity (Poteat et al., 2013). Poteat and colleagues (2013) suggest that this heightened importance, combined with an awareness of the marginalization of sexual minorities, creates fear of misclassification of their own identity.

Homophobia is not directed toward LGBTQ students exclusively. Anti-gay prejudice, according to Pharr (1988), may be aimed toward anyone who is or who is assumed to be gay or lesbian. This idea is evidenced by a study by Birkett and Espelage (2015) showing that peer group masculinity attitudes, for example traditional masculinity, which values "dominance, assertiveness, and a lack of emotion", were significantly predictive of an individual's homophobic taunting perpetration regardless of the sexual orientation of the victim (p. 186). Similarly, researchers have argued that homophobic taunting may be rooted in dominance and traditionally masculine gender roles over female roles and passivity (Epstein, 2001). Per this theory, homophobic attitudes are thought to be related to increased favourability toward

---

<sup>1</sup> The acronyms LGBTQ and LGBQ are used by Aragon and colleagues (2014) and Birkett and colleagues (2009) respectively.

traditional masculinity (Epstein, 2001; Phoenix, Frosh, & Pattman, 2003) and Kimmel and Mahler (2003) argue that boys' fear of being labeled as gay pushes their behaviour and attitudes toward such hyper-masculinity. It is plausible based on this research that a fear being labeled as gay, coupled with contextual factors which favor traditional masculinity may preclude a rigid self-definition and, therefore, resulting homophobic behaviour.

Homophobic taunting is linked to poor outcomes for both victims and perpetrators. Perpetration correlates with delinquent behaviour (e.g., stealing, setting fires) and bullying and aggression (Poteat & Espelage, 2005). Victims of homophobic taunting are more likely to have poor school outcomes and increased drug use (Poteat & Espelage, 2005). LGBTQ students have increased truancy rates, lower GPA, increased dropout, and decreased college entrance rates and each of these associations may be partially mediated by peer victimization (Aragon, Poteat, Espelage, & Koenig, 2014). As well, homophobic language tolerance in schools has been associated with a hostile environment and increased health problems for LGBTQ students (Birkett et al., 2009). Lastly, perpetrators of homophobic taunting are often victims themselves, but this bully-victim status is more common for boys than girls (Birkett & Espelage, 2015).

### **Sexual Harassment**

The American Association of University Women Educational Foundation (AAUWEF, 2001) defines sexual harassment as "unwanted and unwelcome sexual behaviour that interferes with your life" and includes "behaviours that you don't like or want (for example, unwanted kissing, touching, or flirting)" (p. 2). The AAUWEF looked at experiences of sexual harassment among 2,064 8th-11th grade American students. In this study, examples of survey items about sexual harassment included "Made sexual comments, jokes, gestures, or looks" and "Forced you to kiss him/her" (p. 2). Eom, Restaino, Perkins, Neveln, and Harrington (2015) note that sexual harassment may include both psychological or cyber interactions as well as physical touching.

Both surveys conducted by the AAUWEF (1993; 2001) and Espelage and Low (2014) suggest that sexual harassment is prevalent in middle school and high school and prevalence rates have not decreased in the last 20 years. Fifty-four percent of students reported that they had sexually harassed someone and 81% experienced sexual harassment during their school lives (AAUWEF, 2001). Coker and colleagues (2014) revealed in a cross-sectional survey of 18,090 high school students that perpetration of sexual harassment was most common for male students and for bullies. Pepler and colleagues (2006) found that sexual harassment of peers increased

over the early adolescent years and became stable in later high school. In addition, an online survey of 5,907 13- to 18-year-olds revealed that targets of this sexual harassment are most commonly members of the LGBTQ community and least commonly heterosexual men (Mitchel, Ybarra, & Korchmaros, 2014).

Sexual harassment also has extensive negative impacts for victims, but little information on the outcomes of perpetrators is available. Victims of sexual harassment may react by avoiding the perpetrator, talking less in class, not wanting to go to school, changing their seat to distance themselves from someone, and finding it hard to pay attention in school (AAUWEF, 2001). In an online survey of 210 12- to 18-year-olds, Eom and colleagues (2015) found that sexual harassment had a positive correlation with psychological impairment in adolescents and that this association was stronger for girls.

### **Relations between homophobic taunting, sexual harassment, and bullying perpetration**

Empirical research has provided a good deal of evidence that there is a link between homophobic taunting and sexual harassment perpetration in adolescence. Homophobic taunting and sexual harassment have been shown to be linked through different social behaviour and beliefs, such as anti-feminist attitudes (Stevenson & Medler, 1995), support for traditional gender roles (Theodore & Basow, 2000), and authoritarian belief systems (Basow & Johnson, 2000). However, while these three concepts may overlap conceptually and in behavioural expression, clear distinctions exist with regard to the perpetrator's intention. For example, the direct intention of homophobic teasing to express and promote masculinity distinguishes this behaviour from both bullying and sexual harassment (Espelage & Basile, 2011). Aosved and Long (2006) conducted a study in which 492 men and 506 women ( $M_{age}=20.18$  years) completed a self-report instrument measuring cultural beliefs about rape and attempted rape, as well as The Modern Homophobia Scale (MHS). Specifically, they looked at how students endorse rape myth acceptance by blaming victims of sexual assault (Aosved & Long, 2006, p. 482). The researchers used the terms "sexual assault" and "sexual violence" interchangeably in this study based on a conceptualization by Koss, Wisniewski and Kazdin's (1987) in which these terms refer to "rape" or "attempted rape" (p.165). Aosved and Long (2006) found that men reported higher levels of rape myth acceptance and homophobia and that greater homophobia was associated with greater rape myth acceptance. While this study indicates a clear link between rape myth acceptance and homophobia, it is important to note the differences between extreme forms of sexual violence

and the sexual harassment construct discussed in the present study. Studies by Kassing and colleagues (2005) and Stevenson and Medler (1995) similarly report a link between these two constructs among undergraduate students; however, extant research demonstrating this link in adolescence is lacking.

Researchers have also shown general bullying to act as both a correlate and predictor of sexual harassment and homophobic taunting. In a study of 1391 5th–8th grade students across five American schools, Espelage and colleagues (2012) measured bullying and sexual violence perpetration longitudinally. In this study, sexual violence referred to both “(1) sexual harassment, including unwanted sexual comments, sexual rumor spreading, or groping, and (2) forced sexual contact, including unwanted nonpenetrative or penetrative forced sexual acts” (Espelage et al., 2012, p. 61)<sup>2</sup>. Results showed that perpetration of bullying at time 1 (spring of 2008) was associated with sexual harassment at time 2 (fall of 2008) for both boys and girls. Espelage and colleagues (2012) also found that bullying perpetration and homophobic taunting were significant predictors of sexual harassment. These researchers proposed a Bully–Sexual Violence Pathway model to explain these results. This model suggests that students who perpetrate homophobic taunting and bullying also develop a tendency to perpetrate sexual violence over time as attraction to the opposite gender develops and non-traditional gender expression is continuously limited (Espelage et al., 2012).

A follow-up study by Espelage and colleagues (2015) looked at bullying perpetration and sexual harassment perpetration among adolescents in a 2-year longitudinal study to further test the Bully–Sexual Violence Pathway model. Homophobic taunting was tested as a moderator of the link between bullying and sexual harassment. In this study of 979 American 5th–7th graders, an association was found between bullying in early middle school and sexual harassment in later middle school (Espelage et al., 2015). The study found support for the Bully–Sexual Violence Pathway model and homophobic taunting was found to be a moderator of this relation for boys only (Espelage et al., 2015).

### **Psychopathy**

Cleckley (1988) described psychopathy as having both personality and behavioural characteristics that may include superficial charm, shallow affect, lack of empathy and remorse,

---

<sup>2</sup> Hereafter, “Sexual Violence” will be defined using Espelage and colleagues’ (2012) criteria.

proneness to boredom, failure to inhibit problematic behaviour, and persistent violation of social norms. In addition, callousness is considered a defining feature of psychopathy (Frick & Hare, 2001). Research by Rogers and Cruise (2000) showed that psychopaths may have a below-average degree of insight and minimized the effect of their behaviour on others (Rogers & Cruise, 2000). Multiple studies on influential factors of psychopathy indicate significant heritability of these traits, with Fontaine and colleagues (2010) noting 78% heritability for 7-year-olds who are particularly high on callous-unemotional traits. Results of a multi-assessment twin study on genetic and environmental influences on psychopathic personality traits indicate that genetic influences explain 69% of the variance in these traits for 14- to 15-year-olds (Tuvblad, Bezdjian, Raine, Baker & Reynolds, 2014).

In general, psychopathy has been shown to be fairly stable across adolescence in terms of consistency and level of delinquent behaviour (Lynam et al., 2009). Frick and colleagues (2003) conducted a 4-year longitudinal study in which parents rated psychopathic traits of their children and stability estimates were created across the four assessments. Stability was strong throughout the study, with the most stable traits existing in the children who initially rated lower on psychopathy (Frick et al., 2003).

Psychopathy is associated with higher levels of violence and aggression (Fanti, Frick, & Georgiou, 2009; Frick et al., 2003; Murrie & Cornell, 2002) and antisocial personality features (Pardini & Loeber, 2007). The research suggests that adolescents who are high on psychopathic traits are at much higher risk for violence than are other adolescent offenders (Hare, 1999) and that juvenile psychopathy is a risk factor for future antisocial behaviour (Stafford & Cornell, 2003; Lynam et al., 2003). As well, a study of 220 adolescent boys in an outpatient sex offender treatment program showed that offenders who were high on psychopathic traits were shown to be at high risk for general reoffending (Gretton et al., 2001). Because psychopathy has been established as a risk factor for violence, Reidy and colleagues (2015) argue that further research on psychopathy is necessary for improvements in public health.

While psychopathy is not a formal diagnosis in the DSM-5, its relevance to the present study is found in its symptomatology. Psychopathic tendencies often lead to the diagnosis of Conduct Disorder or Oppositional Defiant Disorder for younger children and then Antisocial Personality Disorder (APD) and Psychopathic Personality in adult years (Tsopeles & Armenaka, 2012). However, psychopathy as a construct includes interpersonal and affective components

that are not found in formal diagnoses, such as APD (Hare, 1996; Strickland, Drislane, Kreuger & Patrick, 2013). While most individuals with psychopathy meet criteria for APD, the converse is not true (Hare, 1996). Further, measures of psychopathy are more strongly predictive of later criminal behaviour than a diagnosis of APD and psychopathy as a has not faced the same diagnostic weaknesses that APD has, such as shifting diagnostic criteria, temporal instability and overlap with other disorders, including substance abuse (Cunningham & Reidy, 1998).

While the treatment of psychopathic traits among adults has historically been regarded as difficult (Caldwell, Skeem, Selakin & Van Rybroek, 2006) a recent and comprehensive review of interventions among children and adolescents by Frick, Ray, Thornton and Kahn (2014) challenges the idea that psychopathy is untreatable. In a longitudinal study by Kolko and Pardini (2010), 177 clinic-referred children aged 6-11 received cognitive behavioural treatment, parent management training, school consultation, peer relationship development training, crisis management and medication for ADHD. At the three-year follow up, children with CU traits responded equally to the treatment as children with normative CU trait levels in terms of their emotional and behavioural outcomes. As well, study by Hawes and Dadds (2005) showed that children, regardless of their level of CU traits, responded to an aspect of an intervention which focused on teaching parents positive reinforcement methods to encourage prosocial behaviour. Dadds, Cauchi, Wimalaweera, Hawes & Brennan (2012) longitudinally studied 6-16-year-olds who were randomly assigned to an emotional-recognition training group. They concluded that children high on CU traits who received training in the accurate interpretation of others showed more improvements in affective empathy compared to those in a typical parent training group (Dadds et al., 2012). This review suggests that positive reinforcement, emotional recognition and cognitive behavioural techniques could be effective components in future treatment strategies.

Interestingly, Frick and colleagues (2014) also noted longitudinal studies that attempted to reduce psychopathic traits themselves. Butler, Barcuh, Hickey and Fonagy (2011) used Multisystemic Therapy (MST) in a randomized control trial with 108 families of arrested adolescents and concluded that those assigned to MST showed larger decreases in psychopathic traits after 18 months, compared to the treatment-as-usual group (Butler et al., 2011). Hawes and Dadds (2007) similarly reported that teaching parents positive reinforcement methods was linked to a decline in post-treatment levels of CU traits among young boys. Finally, a study by Somech and Elizur (2012) used 14 2-hour treatment sessions that focused on parent and child self-

regulation for young children and this treatment was related to a significant decline in CU trait levels. While the only study to show decreases in CU traits among teenagers thus far is that of Butler and colleagues (2011), each of these intervention trials importantly highlights the possibility that psychopathic, and specifically CU traits are more treatable than previously understood.

### **The link between psychopathy and bullying perpetration**

Current research has shown that psychopathy may be linked to concurrent bullying and may act a risk factor for later bullying as well. In a correlational study of 657 adults, psychopathy was more strongly related to bullying than narcissism and Machiavellianism (Baughman, Dearing, Giammarco, & Vernon, 2012). As well, in a 1-year longitudinal study of 284 school children in grades 4-7 by Crapanzano and colleagues (2011), bullying was stable and showed correlations with aggression, conduct problems, and callous-unemotional (CU) traits over time (Crapanzano et al., 2011). In another longitudinal study by Fanti and Kimonis (2012), bullying was predicted by callous-unemotional traits in 1,416 Greek-Cypriot adolescents. This link was equally strong for both girls and boys in the sample (Fanti & Kimonis, 2012). Viding, Simmonds, and Frederickson (2009) argue that levels of callous-unemotional traits are associated with higher levels of bullying that are distinct from the association between bullying and conduct problems. In this study of 704 11–13-year-olds, results from peer-report measures of direct and indirect bullying suggested that CU traits and conduct problems, especially the combination of these two, make children susceptible to bullying perpetration (Viding et al., 2009). Although these studies argue that psychopathy is related to concurrent and later levels of bullying, more longitudinal research on this relation is needed in non-clinical and high school aged populations, and gender differences need to be further understood.

### **Present Study**

Our review of the literature indicated that there was a need for longitudinal research about the development of psychopathy in adolescents (Frick, Kimonis, Dandreaux, & Farell, 2003; Stafford & Cornell, 2003) and its link to bullying perpetration over time (Fanti & Kimonis, 2012). As well, there was a need for further research on Espelage and colleagues' (2015) proposed bully-sexual violence pathway, especially among adolescents older than 15. The following study addressed both gaps in the literature, while suggesting a pathway in which

psychopathic traits and bullying perpetration are stable, inter-related, and predictive of later interpersonal violence.

Our theoretical orientation emerged from a review of the literature. Adolescent psychopathy was conceptualized with a developmental psychopathology lens. As per this orientation, understanding pathways in which psychopathological disorders develop is central to directing intervention strategies (Cicchetti, Rogosch, Kendall, Phillip, & Holmbeck, 2002, p. 8). However, the review of the literature on bullying, sexual harassment, and homophobic taunting indicated clear differences in the links based on sex that were explained by societal factors (i.e., promotion of power imbalance and/or masculinity; Espelage et al., 2012; Espelage et al., 2015). In the present study, both societal pressures and psychopathology were considered as possible sources for poor mental health and behavioural outcomes. Therefore, to interpret results of the present study and recommend possible intervention strategies, we used an integrated feminist-developmental psychopathology theoretical orientation.

With this orientation in mind, interventions that both promoted awareness of gender norms and targeted psychopathic traits were considered. For example, Fagan and Catalano (2012) found that high school programs effectively reduced violence when implemented as classroom curricula. For example, the "Safe Dates" program, of which one aim was to reducing gender stereotyping, showed reductions in dating violence for high schoolers and reduced perpetration of physical and sexual violence three years following the intervention (Fagan & Catalano, 2012). They also note the efficacy of cognitive behavioural methods that help students recognize and regulate their emotions and resolve conflicts using non-aggressive behaviour (Fagan & Catalano, 2012). Moreover, interventions that target psychopathic traits and their link to later violence, such as those highlighted by Frick and colleagues (2014), are key to helping this population.

To aid such interventions, and to address extant gaps in research, we aimed to explore a predictive pathway in which psychopathy and bullying at the beginning of high school predicted homophobic taunting and sexual harassment three years later. Family income and ethnicity were controlled for because children from socioeconomically disadvantaged families have been shown to be at a high risk of bullying involvement (Jansen et al., 2012) and research by Walsh and Kosson (2007) showed a moderating effect of socioeconomic status on the relation between psychopathy and violent behaviour for Europeans, but not African Americans. As adolescent

psychopathy and bullying have been shown to be interconnected over time (Baughman et al., 2012; Crapanzano et al., 2011; Fanti & Kimonis, 2012; Viding et al., 2009) and risk factors for future antisocial behaviour (Barry, Frick, Adler & Grafeman, 2007; Espelage et al., 2015; Lynam et al., 2009; Olweus, 1999), we hypothesized the existence of a direct pathway in which early adolescent psychopathic traits and bullying perpetration predicted sexual violence and homophobic taunting in late adolescence. The current study was the first to look at this pathway in a non-clinical sample in a Canadian context for students aged 15-18.

### **Hypotheses**

Specifically, five hypotheses were tested. First, psychopathy and bullying perpetration were hypothesized to be stable over time and across sex as consistent with Fanti and colleagues (2009) and Lynam and colleagues (2009) respectively. Second, based on the findings of Fanti and Kimonis (2012), it was expected that psychopathy and bullying would be correlated throughout adolescence and psychopathy would predict bullying perpetration as well. Third, we hypothesized that a bully-sexual violence pathway would exist in which bullying perpetration would predict sexual harassment across sex, as suggested by Espelage and colleagues (2012), and would also predict homophobic taunting for boys only. Fourth, homophobic taunting would concurrently relate to bullying perpetration for boys and sexual harassment would be linked to bullying perpetration for both boys and girls based on Espelage and colleagues' (2012, 2015) findings. Finally, to address remaining gaps in research, it was hypothesized that early adolescent psychopathy would predict sexual violence and homophobic taunting in late adolescence and that these links would be stronger for boys than for girls.

### **Methods**

#### **Participants**

The ongoing McMaster Teen Study provided data for the current investigation. For a detailed description of the sample, see Haltigan and Vaillancourt (2016). Students were recruited to complete the survey by random sampling in 51 schools in a large Southern Ontario Public School Board. For the present study, we were interested in studying adolescents about 15-18 years old to address gaps in research. Specifically, four time periods, T5 to T8 were analyzed to examine the stability, predictive nature, and relations between bullying perpetration and psychopathy across adolescence, and understand their connections to sexual harassment and homophobic taunting during the transition to adulthood. Longitudinal data were available for 703

participants from T1 to T8 (80% consent rate), of which 544 were available for our time frame of interest (T5 to T8). Of the 703 participants who were available between T1 and T8, 544 ( $M_{age}=14.96$ ,  $SD=0.37$ ) participated in at least one time point from T5 through T8 and were used as the sample for the present study. Participants were mostly white (75.9%) and had a household income of \$80,000-\$90,000 (51.7%) and just above half were girls (55.7%).

## Measures

### *Psychopathy*

The Antisocial Process Screening Device (APSD) is a 20-item self-report measure that is used to screen for adolescent psychopathy. The APSD was developed and validated with adolescents 6-13 (Frick & Hare, 2001) and has been validated in children and adolescents aged 9-19 (Bijttebier & Decoene, 2009). Each item is rated on a 3-point scale (0=not true, 1=sometimes true, 2=definitely true (Frick, Bodin, & Barry, 2000). A three-factor structure has been suggested that includes Narcissism (NAR), Callous/Unemotional (CU), and Impulsivity (IMP) (Frick et al., 2000). This measure has good psychometric properties and Vitacco and colleagues (2003) note the APSD's ease of use. Chronbach's  $\alpha$  for each time point were good, with APSD at T5:  $\alpha=0.76$ , APSD at T6:  $\alpha=0.78$ , APSD at T7:  $\alpha=0.74$ , APSD at T8:  $\alpha=0.77$

### *Bullying Perpetration*

The perpetration subscale of the revised version of the Olweus (1996) Bully/Victim Questionnaire was used to assess involvement in bullying and victimization (Vaillancourt et al., 2010). Students were asked to read a standard definition of bullying and then answer self-report items on a 5-point Likert scale where 0=never, 1=only once or twice, 2= 2 or 3 times a month, 3=once a week, 4=several times a week. An example question is "How often have you bullied other students at school during the past 3 months?"

Students (N=16,799) in grades 4-12 took part in a two-part screening procedure to assess experiences with bullying using two general questions from the Olweus Bully/Victim Questionnaire (1996) ("How often have you bullied other students at school in the past 3 months?" and "How often have you been bullied in the past 3 months?" p. 238). Vaillancourt and colleagues (2010b) suggested that the "general screening questions were good at classifying noninvolved students but performed less well when identifying true cases of bullying" (p. 234). The screening determined most non-cases (91.5% for perpetration) correctly, but the

classification of true cases was poorer (55.7%). Cronbach's  $\alpha$  for the Olweus Bully/Victim Questionnaire were good with T5:  $\alpha=0.78$ , T6:  $\alpha=0.76$ , T7:  $\alpha=0.81$ , and T8:  $\alpha=0.81$

### *Homophobic Taunting*

The Homophobic Content Agent Target (HCAT) Scale (Poteat & Espelage, 2005) looks at the extent to which people have been called homophobic names and call other people homophobic names. Although it was developed and validated with grade 8 students (Poteat & Espelage, 2005), it has been used with adolescents up to 19 years old (Poteat & Rivers, 2010). The measure consists of two subscales, Agent and Target, with five items each. The Agent subscale was used for the current study. The stem for the Agent subscale stated, "Some students call each other names such as gay, lesbo, homo etc. How many times in the last week did you say these words to:" followed by (a) a friend, (b) someone I did not know, (c) someone who did not like me, (d) someone I thought was gay, and (e) someone I did not think was gay. Students answered on a Likert-type scale with the options "Never, 1 or 2 times, 3 or 4 times, 5 or 6 times" and "7 or more times" (Poteat & Espelage, 2005).

Participants did not provide information about their sexual orientation for this study. Inquiring about the sexual orientation of adolescents in research is not only ethically challenging, but also irrelevant for the purposes of the research question and Poteat and Espelage (2005) highlight the fact that "Homophobia, like bullying, is not limited to the gay, lesbian, bisexual, and transgender population" (p. 526). Chronbach's  $\alpha$  for the HCAT Agent subscale was good at T8 ( $\alpha=0.67$ ).

### *Sexual Harassment*

The American Association of University Women (AAUW) Sexual Harassment Survey – Revised (AAUW-R) (Espelage, 2010) is an inventory that measures the frequency with which students perpetrate and are victimized by sexually harassing behaviour. This is a 24-item inventory where half of the items measure perpetration and half measure victimization. The perpetration subscale was used for the present study. Items reflect verbal and physical forms of sexual harassment participants are asked about their participation in behaviour. Instructions read, "In the last year, how often have you done the following things to other students when they did not want you to?" on the perpetration scale. An example item is "Showed, gave, or left sexual pictures, drawings, messages or notes" with Likert-type options ranging from "Never, 1-3 times, 4-9 times and 10 or more times." The measure has been shown to have good internal consistency

and factorial invariance across gender (AAUWEF, 2001; Espelage, 2010). Chronbach's  $\alpha$  at T8 was good with  $\alpha=0.719$ .

### **Procedure**

Consent from parents was requested in order to have their child's participation. Children were also asked to provide written assent at each time point and parents were asked to participate in a telephone interview at each time point as well. Participants were offered the option of completing the paper and pencil or online option of the survey. The McMaster Teen Study has obtained yearly approval from the University of Ottawa research ethics board.

### **Analysis**

Three steps of analysis were used in the current study. First, path analysis was used to examine the stability of psychopathy and bullying perpetration throughout adolescence. A recursive pathway was hypothesized in which psychopathy and bullying at each time point directly impacted psychopathy and bullying at the subsequent time point. Specifically, a path analysis of both bullying perpetration and psychopathic traits for each lapsed year (T5 to T6, T6 to T7, and T7 to T8) tested the hypothesis that bullying and psychopathy, as well as their association with each other, were stable over time. In addition to within-time and stability correlations, cross-lag associations between psychopathy and bullying perpetration between each lapsed year were examined. Path analysis indicated whether levels of psychopathy and bullying predicted T8 sexual violence and homophobic taunting (See Figure 1). Next, controls (income and ethnicity) were included, models were compared, and the model with best fit indices was used for further analysis. Finally, a freely estimated model was compared to a constrained model to test for sex differences.

### **Results**

#### **Descriptive data**

Descriptive data, including the range of values, means, and standard deviations for bullying perpetration, psychopathy, homophobic taunting, and sexual harassment are reported in Table 3. Scores on the Olweus Bully/Victim Questionnaire ranged from 0 to 21 ( $M=1.03$ ,  $SD=1.72$ ;  $M=0.94$ ,  $SD=1.63$ ;  $M=0.89$ ,  $SD=1.68$  and  $M=0.81$ ,  $SD=1.69$  for each time point). Scores on the APSD ranged from 0 to 29 ( $M=9.45$ ,  $SD=4.67$ ;  $M=9.63$ ,  $SD=4.95$ ;  $M=9.57$ ,  $SD=4.60$  and  $M=9.77$ ,  $SD=4.78$ ). HCAT scores at T8 ranged from 0 to 15 ( $M=0.87$ ,  $SD=1.87$ ) and the AAUW-R scores ranged from 0 to 11 ( $M=0.33$ ,  $SD=1.01$ ).

Preliminary analysis revealed the statistical significance of many bivariate correlations overall and when boys and girls were analyzed separately. Most bivariate correlations between variables within and across time points were highly correlated and significant, especially within bullying at all four time points and within psychopathy at all four time points. Bivariate correlations are summarized in Table 1. Models were estimated in Mplus 7.11 (Muthén & Muthén, 2012) using path analysis. FIML was used to account for any missing data and Maximum Likelihood Robust (MLR) estimation was used to account for the non-normality of data, including high levels of skewness and kurtosis ( $>10$ ), specifically on scores for bullying perpetration, homophobic taunting, and sexual harassment. Model fit indices and comparison tests are presented in Table 2. The original model, including stability paths, cross-lagged paths, and covariance paths demonstrated excellent fit with  $\chi^2(14)=9.579$  and  $CFI=1.000$ ,  $TLI=1.017$  and  $RSMEA(90\% CI)=0.000$ . Standardized values that were statistically significant at  $p<0.05$  are reported in the results. The original model is displayed in Figure 1.

### **Stability of psychopathy and bullying perpetration**

Standardized and unstandardized estimates and  $p$ -values are displayed in Table 4. Psychopathy demonstrated stability over time. At each time point, it predicted psychopathy at the following time point ( $\beta=0.67$ ,  $\beta=0.046$ ,  $\beta=0.048$  for T5 to T6, T6 to T7 and T7 to T8, respectively). As well, psychopathy remained stable across each two-time point, and three-time-point interval ( $\beta=0.24$ ,  $\beta=0.23$ ,  $\beta=0.12$  for T5 to T7, T6 to T8 and T5 to T8). Similarly, bullying perpetration demonstrated strong stability over time. As such, T5 bullying perpetration predicted T6, T7, and T8 levels of bullying ( $\beta=0.50$ ,  $\beta=0.24$ ,  $\beta=0.28$ ). As well, T6 bullying perpetration predicted perpetration at T7 ( $\beta=0.39$ ).

### **Interrelatedness of psychopathy and bullying perpetration over time**

Bullying perpetration covaried with psychopathy at each of the four time points ( $\beta=0.43$ ,  $\beta=0.32$ ,  $\beta=0.30$ ,  $\beta=0.32$  for T5 through T8), demonstrating a strong interconnectedness of these two constructs over time. The analysis revealed the significance of cross-lagged paths from psychopathy to bullying perpetration such that the degree of psychopathy at T5 predicted bullying perpetration at T6, and psychopathy at T6 predicted bullying perpetration and T7 ( $\beta=0.18$ ,  $\beta=0.13$ ).

### **Bullying and psychopathy as predictors of sexual harassment and homophobic taunting**

Neither bullying perpetration nor psychopathy at T7 significantly predicted T8 homophobic taunting and sexual harassment when girls and boys were analyzed together, but a significant path from bullying perpetration (T7) to homophobic taunting (T8) ( $\beta=0.30$ ) emerged in the boys-only model. All variables of interest covaried significantly at T8 when girls and boys were analyzed together, showing concurrent relations between bullying perpetration and both homophobic taunting ( $\beta=0.15$ ) and sexual harassment ( $\beta=0.14$ ), as well as psychopathy and both homophobic taunting ( $\beta=0.13$ ) and sexual harassment ( $\beta=0.16$ ). Homophobic taunting and sexual harassment were correlated at T8 as well ( $\beta=0.43$ ).

### **Control Variable Effects**

To control for the effects of household income and ethnicity, these variables were added to the original model. The resulting model had similar fit and parameter estimates to the original  $\chi^2(14)=9.248$  and  $CFI=1.000$ ,  $TLI=1.022$  and  $RSMEA(90\% CI)=0.000$ . As the AIC was higher in the model in which control variables were included ( $AIC=21062.39$ ) than the original ( $AIC=18510.04$ ), the original model had a better fit and was therefore selected to further analyze and discuss.

### **Sex Differences**

Sex differences were tested in a multi-group analysis where an unconstrained model was compared to a model in which paths were constrained by sex. Standardized and unstandardized estimates and  $p$ -values are displayed in Table 4. The unconstrained model had excellent fit  $\chi^2(38)=38.824$  and  $CFI=0.999$ ,  $TLI=0.998$ , and  $RSMEA(90\% CI)=0.000$ . The statistically significant change in model fit,  $\Delta\chi^2(54)=97.076$ ,  $p<0.05$ , indicated an overall effect of sex. Figure 2 shows the freely estimated models for boys and girls separately.

### **Discussion**

In this study, we investigated the associations between bullying perpetration, psychopathy, homophobic taunting, and sexual violence from middle to late adolescence. We tested five hypotheses such that (1) psychopathy and bullying perpetration would be stable over time and across sex, (2) psychopathy and bullying would be correlated throughout adolescence and psychopathy would predict bullying perpetration over time, (3) bullying perpetration would predict sexual harassment across sex and would predict homophobic taunting for boys only, (4) homophobic taunting would concurrently relate to bullying perpetration for boys and sexual harassment would be linked to bullying perpetration for both boys and girls, and (5) early

adolescent psychopathy would predict sexual violence and homophobic taunting and these links would be stronger for boys than for girls.

With regard to the first hypothesis, both psychopathy and bullying perpetration demonstrated strong stability over time as is consistent with Lynam and colleagues (2009) and Frick and colleagues (2003). In the overall model, psychopathy at the first time point predicted psychopathy at three consecutive later time points. The developmental trajectory of psychopathy was not significantly different for boys and girls, confirming research by Frick et al. (2003). Similarly, bullying perpetration demonstrated stability such that students perpetrating bullying at the beginning of adolescence were likely to remain perpetrators throughout the high school years. As predicted, bullying perpetration correlated with psychopathy throughout adolescence overall, and for boys and girls separately. Patterns of bullying perpetration were fairly similar for boys and girls with only one stability path, T7 to T8, being stronger for boys than for girls.

Addressing the second hypothesis, we found that bullying perpetration and psychopathy correlated throughout adolescence for both sexes, demonstrating the strong interconnectedness of these constructs. The results confirm extant research on this relation (Crapanzano et al., 2011; Fanti & Kimonis, 2012; Viding et al., 2009) and add to the literature by demonstrating that the relation continues to exist throughout middle and late adolescence. The results also confirm Fanti and Kimonis' (2012) research on this relation regardless of sex, as bullying and psychopathy covaried as strongly for boys as for girls.

Cross-lagged effects in the overall model suggest that psychopathy predicted bullying perpetration across three time points. These findings echo extant literature suggesting that psychopathy is a risk factor for later aggressive behaviour (Gretton et al., 2001; Lynam et al., 2003; Stafford & Cornell, 2003) and specifically for bullying perpetration (Fanti & Kimonis, 2012; Viding et al., 2009) and suggest that the pattern remains consistent for at least part of the transition into adulthood. Interestingly, the prediction of bullying by earlier psychopathy existed in two time points for boys, but only for one time point for girls, but the cross-lagged associations were not found to be significantly different across sex for the first three time points, a finding consistent with Fanti and Kimonis (2012). However, the relation between psychopathy and later bullying was significantly stronger for boys at the end of high school. This finding suggests that unlike boys, girls may experience a decoupling of this predictive relation overtime.

That is, it is possible that psychopathy is not related to bullying perpetration in later years for girls to the extent that it is for boys.

It is possible that the components of psychopathy (the impulsive, callous-unemotional, and narcissistic traits) may have varying predictive value with respect to bullying perpetration. As research has demonstrated links between each of these three components with bullying perpetration (Fanti & Henrich, 2015; Fanti & Kimonis, 2012; Viding et al., 2009), and because extant research on the developmental research on the trajectory of bullying perpetration in adolescents is mixed, (Barker et al., 2008; Kim et al., 2009) further research delineating this relation might provide answers about the tapering-off of this cross-lagged effect for girls.

With regard to the third and fourth hypotheses, findings partially supported Espelage and colleagues' (2015) proposed bully-sexual violence pathway. Overall, bullying at the beginning of high school predicted later bullying perpetration, which was correlated with concurrent homophobic taunting and sexual harassment. The relations between bullying perpetration and later homophobic taunting were significant for boys, as is consistent with research by Poteat and Espelage (2005) and Espelage and colleagues (2015). Sexual harassment was related to simultaneous bullying perpetration for girls, but, contrary to extant research, was not predicted by earlier bullying perpetration. These findings partially support Miller and colleagues' (2013) research suggesting that early adolescent bullying perpetration may change forms when same-sex peer groups shift gradually to mixed-sex groups, and dating begins. According to this research, early bullying may be later expressed as sexual harassment (Miller et al., 2013) or homophobic taunting (Espelage et al., 2015) as a result of changing social norms which accompany pubertal development. The results of this study partially confirm this idea for boys, but not for girls.

These results suggest fundamentally different risk factors for these forms of interpersonal violence for girls than boys. Although a need to promote hegemonic masculinity (Birkett & Espelage, 2015; Epstein, 2001; Phoenix et al., 2003) and establish a favourable power dynamic (Olweus, 1994) could serve as interconnected means to a similar goal for boys, this may not be the case for girls. Specifically, that which causes male bullies to engage in homophobic taunting and sexual harassment, possibly negative attitudes toward femininity, does not appear to be a driving force for female bullies. In addressing the final hypothesis, we therefore followed a

developmental psychopathology-driven orientation and hypothesized psychopathy to be a risk factor behind sexual harassment and homophobic taunting for both sexes.

We hypothesized that early adolescent psychopathy would predict sexual violence and homophobic taunting and these links would be stronger for boys than girls. In the overall model, psychopathy predicted homophobic taunting and sexual harassment and it was concurrently related to these forms of interpersonal violence in late adolescence. The strength of the cross-lagged paths showing psychopathy to be a predictor of sexual harassment and homophobic taunting did not significantly differ between boys and girls, contrary to extant research. However, inconsistent with Fanti and Kimonis (2012), links between psychopathic traits and interpersonal violence differed by sex. Significant pathways emerged differently for boys and girls, such that psychopathy significantly predicted homophobic taunting and sexual harassment and related to concurrent bullying for boys, but only related to concurrent sexual harassment and bullying perpetration in late adolescence for girls. The authors argued that the current results provided more information about psychopathy as a correlate and risk factor of interpersonal violence for boys than for girls, and therefore, implications for counselling may be most relevant for boys.

One explanation for sex differences that are found in this model may be explained by sex differences found by Espelage and colleagues (2015). Per this research, boys who bullied and were high on homophobic taunting were at an increased risk of later sexual harassment perpetration (Espelage et al., 2015). It is possible that sex differences homophobic taunting in childhood or early high school is responsible for sex differences in the current model. Specifically, it is possible that girls in the present study perpetrated less homophobic taunting than boys prior to T8, and, therefore, demonstrate less of a link between early bullying perpetration and later homophobic taunting and sexual harassment than their male counterparts.

This study is the first of its kind to fully address the links between psychopathy, bullying, sexual harassment, and homophobic taunting in a unified model across four years of adolescence. This study draws a comprehensive and novel picture of the longitudinal relations between these constructs. The findings support a conceptualization of homophobic taunting and sexual harassment in which gender- and sexuality-based violence have roots in past interpersonal violence perpetration and psychopathology. Therefore, to reduce bullying perpetration, homophobic taunting, and sexual harassment, and to prevent negative outcomes for both

perpetrators and victims of violence, Canadian high schools and counselling programs should recognize psychopathic traits and bullying behaviour as precursors to later interpersonal violence perpetration. The present study is also the first to demonstrate a comprehensive model of a psychopathy-interpersonal violence pathway that exists across adolescence.

### **Limitations**

In the present study, limitations can be found within measures used, the diversity of the chosen sample, time frame, and the specificity of the variables. First, it is important to note that the measures were all self-report and are subject to bias. Future studies might use peer-reports of interpersonal violence perpetration (Vaillancourt et al., 2010b). A missing data analysis indicated that participants who were high on psychopathy at the beginning and end of high school were more likely to have missing data on most measures. It is possible, therefore, that levels of both psychopathy and interpersonal violence were not as objectively reported. It could be argued that missing data from adolescents who lack empathy and persistently violate social norms might cause an underestimate of both psychopathic traits and the degree of interpersonal violence perpetration. In addition, it is important to note that the sample was representative to students from a specific region of Ontario, Canada and may not be generalizable to populations across Canada and internationally.

Additional consideration should be paid to the 4-year period chosen, as it did not allow for conclusions to be drawn about precursors and early childhood developmental trajectories. Although the current study fills gaps in literature by addressing the 15 to 18-year-old age range, widening the time frame would provide information on which to base interventions targeting risk factors as they first emerge. Interventions for psychopathy that are both early and intensive are most favorable and children and adolescents who have not yet solidified ingrained behaviour are more likely to be open to change (Caldwell et al., 2006; Salekin, 2002). Research on the precursors to the longitudinal model discussed in the present study would further aid interventions shown to reduce psychopathic traits in children (Somech & Elizur, 2012; Hawes & Dadds, 2007; McDonald, Dodson, Rosenfield, & Jouriles, 2011) and according to Salekin (2002), could be more effective than those targeting adolescents.

Lastly, while the chosen measures represented well the variables statistically, it is important to note the subcomponents of each variable and understand their roles within this longitudinal pathway. For example, understanding how narcissistic, callous-unemotional, and

impulsive traits might individually relate to different forms of bullying (verbal, physical, relational, and cyber-behaviour), may create further understanding about the interconnectedness of these variables over time, their relation to later sexual harassment and homophobic taunting, and sex differences that have been revealed in the present study. Controlling for subcomponents, as well as types of bullying, would enhance interventions targeted at individuals with psychopathic traits who engage in these types of interpersonal violence by allowing clinicians to focus on specific psychopathic traits and bullying behaviour over others.

### **Implications for Counselling**

The results of the present study indicate a problematic behavioural pathway which may be used to inform interventions aimed at preventing bullying, sexual harassment, and homophobic taunting. Counsellors may use the knowledge gained in the present study by addressing bullying and psychopathy, the risk factors for interpersonal violence. As well, counsellors may address sex-differences in the links between homophobic taunting, bullying perpetration, and sexual harassment with feminist therapy interventions.

The extant literature on psychopathy indicates that Multisystemic Therapy (MST) is the only therapeutic intervention shown to reduce both levels of callous-unemotional traits, and later antisocial behaviour among adolescents (Frick et al., 2014). It follows the theoretical orientation that antisocial behaviour has many causes which are each connected to characteristics of the individual and his or her broader family, peer group, school, and community (Multisystemic Therapy Services, 2007). Interestingly, a meta-analysis of the effectiveness of MST concluded that MST may be more effective for older adolescents specifically when there is a high focus on peer relationships and within-school factors (Van Der Stouwe, Asscher, Stams, Deković, & Van Der Laan, 2014).

A successful MST intervention study by Butler and colleagues (2011) involved an extensive treatment with many components. Master's level therapists in counselling and social work received MST training as well as supervision. The site was licensed by MST Services Inc., and therapists participated in MST Services' quality assurance procedures. Training included weekly supervision with an MST supervisor, weekly consultation with an MST expert, on-site training four times per year, and bi-annual implementation reviews. With the goals of decreasing rates of antisocial behaviour and other clinical problems and improving overall functioning, therapists saw a maximum of three families each, who they visited three times per week. Nine

principles of MST were followed, the primary being that therapists identify how problems fit in the adolescent's life context (Multisystemic Therapy Services, 2007). The subsequent principles focused on family strengths, promoting responsible behaviour, being present-focused and action-oriented, targeting sequences of behaviour, using developmentally appropriate interventions, requiring daily or weekly effort by family members, and evaluation of the approach by the MST team members who are accountable (Butler et al., 2011; Multisystemic Therapy Services, 2007). Therapists were available continuously for support by phone and interventions ranged from 11 to 30 weeks. The MST Therapist Adherence Measure (TAM) is a 28-item measure completed by primary care-givers that measured the team's adherence to the nine MST treatment principles. Self- and parent-rated symptoms of antisocial behaviour, delinquency linked cognitions and personality functioning were assessed before and after treatment, as were several measures, including the APSD. Reports of aggressive and delinquent behaviour were greatly reduced in the MST treatment group compared to the control treatment group (Butler et al., 2011). The author recommends that Butler and colleagues' (2011) methods be used with adolescents who are particularly high on psychopathic traits.

Cunningham and Henggeler (2001) created a bullying intervention program based on commonalities between MST and the OBPP (Olweus, 1993), which they argue are theoretically compatible. Both based on counselling adolescents within a broader systemic context, these interventions form part of the Healthy Schools project, which addresses known risk factors for antisocial behaviour (Cunningham & Henggeler, 2001). With the goals of bullying prevention and reduction and improving peer relations, the OBPP has four components including (1) school-level components, such as establishing a Bullying Prevention Coordinating Committee, (2) classroom-level components, such as posting and enforcing school-wide rules against bullying, (3) individual-level components, such as supervising students' activities, and (4) community-level components, such as involving community members on the Bullying Prevention Coordinating Committee (Olweus, 1993). The two-day training program for the OBPP allows educators and counsellors to understand bullying, risk factors, and interventions for both bullies and victims (Olweus, 1993). The OBPP and MST are both empirically valid and effective treatments and their combined implementation will be extremely useful in counselling adolescents who are high on both bullying and psychopathic traits. As well, combining these

interventions will have implications for research on treating adolescent psychopathy as well as breaking the connection between psychopathy and bullying.

Finally, a feminist counselling orientation may allow counsellors to consider and effectively address sex differences found in the present study. We argue that sex differences in links between homophobic taunting and other forms of interpersonal violence result from differing socialization of adolescent boys and girls. As the present study demonstrated that homophobic taunting was uniquely associated with sexual harassment among boys who were high in psychopathy and bullying, it is important to target this population specifically. Feminist therapy is appropriate for such an intervention, as it addresses cultural values that shape socialization of women and men differently (Marecek, 1973).

One of the major principles of feminist therapy is that masculine sex-role requirements give men less flexibility for actions and thoughts than is allowed for women (Marecek, 1973). This principle is consistent with Birkett and Espelage's (2015) study which found that traditional masculinity beliefs were associated with increased homophobic taunting. Birkett and Espelage (2015) suggest interventions in which adults act as role models, particularly for younger boys, and show that "name-calling, bullying, and homophobia are not acceptable ways of showing authority, power, or masculinity" (p. 202). Another principle of feminist therapy is that the therapist highlight how a sexist culture may have influence over the client's feelings and beliefs (Marecek, 1973). Espelage et al. (2015) suggest interventions in which counsellors target adolescents' difficulty with deviation from such restricted gender expression in order to prevent homophobic taunting and sexual harassment. Lastly, according to feminist therapy, counsellors should foster awareness of the socialization and life experiences of women and men (Marecek, 1973). The incorporation of these recommendations and principles could allow counsellors to effectively address any current or potential homophobic taunting among boys. In summary, we suggest that counsellors emphasize the larger systemic context of the client by combining MST, the OBPP and feminist principles to prevent sexual harassment, homophobic taunting, and bullying by adolescents with psychopathic traits.

### **Conclusion**

Our findings point to the importance of looking at bullying perpetration and psychopathic traits as risk factors for both sexual harassment and homophobic taunting in adolescents. Additionally, the present study fills gaps in the literature by providing not only information on

psychopathy and its link to bullying in mid to late adolescence, but also a greater understanding of how these two constructs predict sexual harassment and homophobic taunting during the transition into adulthood and how the patterns differ between boys and girls. This is the first study to address this predictive pathway in adolescents over 15 in a Canadian context and has implications for future research on adolescent psychopathology and bullying. We recommend that the findings of this study be taken into consideration when counselling adolescents and working to prevent interpersonal violence. MST, the OBPP, and a feminist counselling orientation to prevent bullying, sexual harassment, and homophobic taunting are recommended interventions for adolescents high on bullying perpetration and psychopathic traits.

## References

- American Association of University Women Educational Foundation (AAUWEF; 2001). Hostile hallways: Bullying, teasing, and sexual harassment in school. (2001). *Journal of Health Education, 32*(5), 307-309. doi:10.1080/19325037.2001.10603488
- Ang, R. P., Ong, E. L., Lim, J. Y., & Lim, E. W. (2010). From narcissistic exploitativeness to bullying behavior: the mediating role of approval-of aggression beliefs. *Social Development, 19*, 721–735.
- Aosved, A. & Long, P. (2006). Co-occurrence of rape myth acceptance, sexism, racism, homophobia, ageism, classism, and religious intolerance. *Sex Roles; A Journal of Research, 55*(7), 481-492. doi:10.1007/s11199-006-9101-4
- Aragon, S. R., Poteat, V. P., Espelage, D. L., & Koenig, B. W. (2014). The influence of peer victimization on educational outcomes for LGBTQ and non-LGBTQ high school students. *Journal of LGBT Youth, 11*(1), 1-19. doi:10.1080/19361653.2014.840761
- Barker, E. D., Arseneault, L., Brendgen, M., Fontaine, N., & Maughan, B. (2008). Joint development of bullying and victimization in adolescence: Relations to delinquency and self-harm. *Journal of the American Academy of Child and Adolescent Psychiatry, 47*, 1030–1038. doi:10.1097/CHI.ObO13e31817eec98
- Barry, C. T., Frick, P. J., Adler, K. K., & Grafeman, S. J. (2007). The predictive utility of narcissism among children and adolescents: Evidence for a distinction between adaptive and maladaptive narcissism. *Journal of Child and Family Studies, 16*(4), 508-521. doi:10.1007/s10826-006-9102-5
- Baughman, H. M., Dearing, S., Giammarco, E., & Vernon, P. A. (2012). Relationships between bullying behaviours and the dark triad: A study with adults. *Personality and Individual Differences, 52*(5), 571-575. doi:10.1016/j.paid.2011.11.020
- Birkett, M. & Espelage, D. L. (2015). Homophobic name-calling, peer-groups, and masculinity: The socialization of homophobic behaviour in adolescents. *Social Development, 24*(1), 184-205. doi:10.1111/sode.12085
- Birkett, M., Espelage, D., & Koenig, B. (2009). LGB and questioning students in schools: The moderating effects of homophobic taunting and school climate on negative outcomes. *Journal of Youth and Adolescence, 38*(7), 989-1000. doi:10.1007/s10964-008-9389-1

- Bijttebier, P. & Decoene, S. (2009). Assessment of psychopathic traits in children and adolescents: Further validation of the antisocial process screening device and the childhood psychopathy scale. *European Journal of Psychological Assessment, 25*(3), 157-163. doi:10.1027/1015-5759.25.3.157
- Butler, S., Baruch, G., Hickey, N., & Fonagy, P.. (2011). A Randomized Controlled Trial of Multisystemic Therapy and a Statutory Therapeutic Intervention for Young Offenders. *Journal of the American Academy of Child & Adolescent Psychiatry, 50*(12), 1220-1235.
- Caldwell, M., Skeem, J., & Salekin, R. (2006). Treatment response of adolescent offenders with psychopathy features: A 2-Year Follow-Up. *Criminal Justice and Behavior, 33*(5), 571-596.
- Cicchetti, D., Rogosch, F., Kendall, P. C., & Holmbeck, G. N. (2002). A developmental psychopathology perspective on adolescence. *Journal of Consulting and Clinical Psychology, 70*(1), 6-20.
- Cleckley, H. M. (1988). *The mask of sanity* (5th ed.). St. Louis, MO: Mosby.
- Cook-Craig, A., Coker, P., Clear, E., Garcia, L., Bush, H., Brancato, C., . . . Fisher, B. (2014). Challenge and Opportunity in Evaluating a Diffusion-Based Active Bystanding Prevention Program. *Violence Against Women, 20*(10), 1179-1202.
- Crapanzano, A., Frick, P., Childs, K., Terranova, A., Stanford, Matthew S., & Felthous, Alan R. (2011). Gender differences in the assessment, stability, and correlates to bullying roles in middle school children. *Behavioral Sciences & the Law, 29*(5), 677-694.
- Cunningham, P., & Henggeler, S. (2001). Implementation of an Empirically Based Drug and Violence Prevention and Intervention Program in Public School Settings. *Journal of Clinical Child & Adolescent Psychology, 30*(2), 221-232.
- Cunningham, M., & Reidy, T. (1998). Antisocial personality disorder and psychopathy: Diagnostic dilemmas in classifying patterns of antisocial behavior in sentencing evaluations. *Behavioral Sciences & the Law, 16*(3), 333-351.
- Dadds, Cauchi, Wimalaweera, Hawes, & Brennan. (2012). Outcomes, moderators, and mediators of empathic-emotion recognition training for complex conduct problems in childhood. *Psychiatry Research, 199*(3), 201-207.

- Eom, E., Restaino, S., Perkins, A. M., Neveln, N., & Harrington, J. W. (2015). Sexual harassment in middle and high school children and effects on physical and mental health. *Clinical Pediatrics, 54*(5), 430-438. doi:10.1177/0009922814553430
- Epstein, D. (2001). Boyz' own stories: Masculinities and sexualities in schools. In W. Martino & B. Meyenn (Eds.), *What about the boys? Issues of masculinity in schools* (pp. 96–109). Philadelphia: Open University Press.
- Espelage, D. L. (2010). Middle school bullying & sexual violence: Individual & peer influences. Paper presented at the International Society for Research on Aggression, Storrs, Connecticut.
- Espelage, D. L., Basile, K. C., & Hamburger, M. E. (2012). Bullying perpetration and subsequent sexual violence perpetration among middle school students. *Journal of Adolescent Health, 50*(1), 60.
- Espelage, D. L., Basile, K. C., Rue, D. L., & Hamburger, M. E. (2015). Longitudinal associations among bullying, homophobic teasing, and sexual violence perpetration among middle school students. *Journal of Interpersonal Violence, 30*(14), 2541-2561.
- Espelage, D. L. & Swearer, S. M. (2003). Research on school bullying and victimization: What have we learned and where do we go from here? *School Psychology Review, 32*(3), 365-383.
- Fagan, A. A. & Catalano, R. F. (2013). *What works in youth violence prevention* doi:10.1177/1049731512465899
- Fanti, K., Frick, A., & Georgiou, P. (2009). Linking callous-unemotional traits to instrumental and non-instrumental forms of aggression. *Journal of Psychopathology and Assessment, 31*(4), 285-298.
- Fanti, K. A. & Henrich, C. C. (2015). Effects of self-esteem and narcissism on bullying and victimization during early adolescence. *The Journal of Early Adolescence, 35*(1), 5-29.
- Fanti, K. A. & Kimonis, E. R. (2012). Bullying and victimization: The role of conduct problems and psychopathic traits. *Journal of Research on Adolescence, 22*(4), 617-631.
- Fontaine, Nathalie M. G., Rijdsdijk, Fruhling V., McCrory, Eamon J. P., & Viding, Essi. (2010). Etiology of Different Developmental Trajectories of Callous-Unemotional Traits. *Journal of the American Academy of Child & Adolescent Psychiatry, 49*(7), 656-664.

- Frick, P. J., Bodin, S. D., & Barry, C. T. (2000). Psychopathic traits and conduct problems in community and clinic-referred samples of children: Further development of the Psychopathy Screening Device. *Psychological Assessment, 12*, 382–393.  
doi:10.1037/1040-3590.12.4.382
- Frick, P. J. & Hare, R. D. (2001). *The Antisocial Process Screening Device: Technical manual*. Toronto, Ontario, Canada: Multi- Health Systems.
- Frick, P. J., Kimonis, E. R., Dandreaux, D. M., & Farell, J. M. (2003). The 4 year stability of psychopathic traits in non-referred youth. *Behavioural Sciences & the Law, 21*, 713–736.
- Frick, P., Ray, J., Thornton, L., Kahn, R., & Hinshaw, Stephen P. (2014). Can Callous-Unemotional Traits Enhance the Understanding, Diagnosis, and Treatment of Serious Conduct Problems in Children and Adolescents? A Comprehensive Review. *Psychological Bulletin, 140*(1), 1-57.
- Gretton, H. M., McBride, M., Hare, R. D., O'shaughnessy, R., & Kumka, G. (2001). Psychopathy and recidivism in adolescent sex offenders. *Criminal Justice and Behaviour, 28*(4), 427.
- Hare, R. (1999). Psychopathy as a risk factor for violence. *Psychiatric Quarterly, 70*(3), 181-197. doi:10.1023/A:1022094925150
- Haltigan, J. & Vaillancourt, T. (2016). Identifying trajectories of borderline personality features in adolescence. *The Canadian Journal of Psychiatry, 61*(3), 166-175.
- Hare, R. D., Ph.D. (1996, February 1). Psychopathy and Antisocial Personality Disorder: A Case of Diagnostic Confusion. *Psychiatric Times*. Retrieved January 12, 2017, from <http://www.psychiatristimes.com/antisocial-personality-disorder/psychopathy-and-antisocial-personality-disorder-case-diagnostic-confusion>.
- Harrell, F.E., Jr. (2001). "Sections 9.2, 10.5". Regression modeling strategies. New York: Springer-Verlag. ISBN 0387952322.
- Hawes, D., & Dadds, M. (2005). The Treatment of Conduct Problems in Children With Callous–Unemotional Traits. *Journal of Consulting and Clinical Psychology, 73*(4), 737-741.
- Hawes, D., & Dadds, M. (2007). Stability and Malleability of Callous-Unemotional Traits During Treatment for Childhood Conduct Problems. *Journal of Clinical Child & Adolescent Psychology, 36*(3), 347-355.
- Jansen, P. W., Verlinden, M., Dommisse-van Berkel, A., Mieloo, C., van der Ende, J., Veenstra, R., . . . Tiemeier, H. (2012). Prevalence of bullying and victimization among children in

- early elementary school: Do family and school neighbourhood socioeconomic status matter? *BMC Public Health*, 12. doi:10.1186/1471-2458-12-494
- Kim, Y.S., Boyce, W.T., Koh, Y-J., & Leventhal, B.L. (2009). Time trends, trajectories, and demographic predictors of bullying: A prospective study in Korean adolescents. *Journal of Adolescent Health*, 45(4), 360-367.
- Kimmel, M. S., & Mahler, M. (2003). Adolescent masculinity, homophobia, and violence: Random school shootings, 1982–2001. *American Behavioral Scientist*, 46, 1439–1458. doi: 10.1177/0002764203046010010
- Kolko, D., Pardini, D., & Watson, David. (2010). ODD Dimensions, ADHD, and Callous–Unemotional Traits as Predictors of Treatment Response in Children With Disruptive Behavior Disorders. *Journal of Abnormal Psychology*, 119(4), 713-725.
- Koss, M., Gidycz, C., Wisniewski, N., & Kazdin, Alan. (1987). The Scope of Rape: Incidence and Prevalence of Sexual Aggression and Victimization in a National Sample of Higher Education Students. *Journal of Consulting and Clinical Psychology*, 55(2), 162-170.
- Leschied, Alan W., & Cummings, Anne L. (2002). Youth Violence: An Overview of Predictors, Counselling Interventions, and Future Directions. *Canadian Journal of Counselling*, 36(4), 256-64.
- Lynam, D. R., Charnigo, R., Moffitt, T. E., Raine, A., Loeber, R., & Stouthamer-Loeber, M. (2009). The stability of psychopathy across adolescence. *Development and Psychopathology*, 21(4), 1133-1153. doi:10.1017/S0954579409990083
- Lynam, D. R., Loeber, R., & Stouthamer-Loeber, M. (2008). The stability of psychopathy from adolescence into adulthood: The search for moderators.(report). *Criminal Justice and Behavior*, 35(2), 228.
- Lynam, D. R., Miller, D. J., Vachon, D., Loeber, R., & Stouthamer-Loeber, M. (2009). Psychopathy in adolescence predicts official reports of offending in adulthood. *Youth Violence and Juvenile Justice*, 7(3), 189-207. doi:10.1177/1541204009333797
- Marecek, J., "Dimensions of Feminist Therapy," Paper presented in Symposium on Liberating Psychotherapy: Changing Perspectives and Roles among Women, at the meeting of the American Psychological Association, Montreal, September, 1973.

- McDonald, R., Dodson, M. C., Rosenfield, D., & Jouriles, E. N. (2011). Effects of a parenting intervention on features of psychopathy in children. *Journal of Abnormal Child Psychology*, 39, 1013–1023. doi: 10.1007/s10802-011-9512-8
- Miller, S., Williams, J., Cutbush, S., Gibbs, D., Clinton-Sherrod, M., & Jones, S. (2013). Dating Violence, Bullying, and Sexual Harassment: Longitudinal Profiles and Transitions over Time. *Journal of Youth and Adolescence*, 42(4), 607-618.
- Multisystemic Therapy Services. (2007). MST Services. Retrieved March 3, 2017, from <http://mstservices.com/files/msttreatmentmodel.pdf>
- Murrie, D. C. & Cornell, D. G. (2002). Psychopathy screening of incarcerated juveniles: A comparison of measures. *Psychological Assessment*, 14, 390–396. doi:10.1037/1040-3590.14.4.390
- Muthén, K., & Muthén, B. O. (1998 –2012). *Mplus user's guide (7th ed.)*. Los Angeles, CA: Múthen & Múthen.
- Olweus, D. (1993). *Bullying at school: What we know and what we can do*. Cambridge, MA: Blackwell.
- Olweus, D. (1994). Bullying at school: Long-term outcomes for the victims and an effective school based intervention program. In L. R. Huesmann (Ed.), *Aggressive behaviour: Current perspectives* (pp. 97–130). New York: Plenum.
- Olweus, D. (1996). Bulling at school: Knowledge base and an effective intervention program. In C.F. Ferris & T. Grisso (Eds.), *Understanding aggressive behvour in children. Annals of the New York Academy of Sciences* (Vo. 794, pp. 265-276). New York, NY: New York Academy of Science.
- Pardini, D. & Loeber, R. (2007). Interpersonal and affective features of psychopathy in children and adolescents: Advancing a developmental perspective introduction to special section. *Journal of Clinical Child & Adolescent Psychology*, 36(3), 269-275. doi:10.1080/15374410701441575
- Pepler, D., Craig, W., Connolly, J., Yuile, A., McMaster, L., & Jiang, D. (2006). A developmental perspective on bullying. *Aggressive Behavior*, 32(4), 376-384.
- Pepler, D. J., Craig, W. M., Ziegler, S., & Charach, A. (1994). An evaluation of an anti-bullying intervention in Toronto Schools. *Canadian Journal of Community Mental Health*, 13, 95–110.

- Pharr S. Homophobia: A weapon of sexism. Chardon Press; Inverness, CA: 1988.
- Phoenix, A., Frosh, S., & Pattman, R. (2003). Producing contradictory masculine subject positions: Narratives of threat, homophobia, and bullying in 11–14 year old boys. *Journal of Social Issues, 59*, 179–195.
- Poteat, V., DiGiovanni, C., & Scheer, J. (2013). Predicting homophobic behaviour among heterosexual youth: Domain general and sexual orientation-specific factors at the individual and contextual level. *Journal of Youth and Adolescence, 42*(3), 351-362.
- Poteat, V. P. & Espelage, D. L. (2005). Exploring the relation between bullying and homophobic verbal content: The Homophobic Content Agent Target (HCAT) Scale. *Violence and Victims, 20*(5), 513.
- Reidy, D. E., Kearns, M. C., DeGue, S., Lilienfeld, S. O., Masetti, G., & Kiehl, K. A. (2015). Why psychopathy matters: Implications for public health and violence prevention. *Aggression and Violent Behaviour, 24*, 214.
- Rogers, R. & Cruise, K. R. (2000). Malingering and deception among psychopaths. In C. B. Gacono (Ed.), *The clinical and forensic assessment of Psychopathy: A practitioner's guide* (pp. 269-284). New York: LEA.
- Somech, Lior Y., & Elizur, Yoel. (2012). Promoting Self-Regulation and Cooperation in Pre-Kindergarten Children with Conduct Problems: A Randomized Controlled Trial. *Journal of the American Academy of Child & Adolescent Psychiatry, 51*(4), 412-422.
- Stafford, E. & Cornell, D. (2003). Psychopathy scores predict adolescent inpatient aggression. *Assessment, 10*, 102–112.
- Stevenson, M., & Medler, B. (1995). Is Homophobia a Weapon of Sexism? *Journal of Men's Studies, 4*(1), 1.
- Strickland, C., Drislane, L., Lucy, M., Krueger, R., & Patrick, C. (2013). Characterizing Psychopathy Using DSM-5 Personality Traits. *Assessment, 20*(3), 327-338.
- Tsopelas, C., & Armenaka, M. (2012). From conduct disorder in childhood to psychopathy in adult life. *Psychiatriki, 23*(1), 107-116.
- Ttofi, M., & Farrington, M. (2011). Effectiveness of school-based programs to reduce bullying: A systematic and meta-analytic review. *Journal of Experimental Criminology, 7*(1), 27-56.

- Tuvblad, C., Bezdjian, S., Raine, A., Baker, L., & Reynolds, Cecil R. (2014). The Heritability of Psychopathic Personality in 14- to 15-Year-Old Twins: A Multirater, Multimeasure Approach. *Psychological Assessment*, 26(3), 704-716.
- Vaillancourt, T., Brittain, H., Bennett, L., Arnocky, S., McDougall, P., Hymel, S., . . . Cunningham, L. (2010a). Places to avoid: Population-based study of student reports of unsafe and high bullying areas at school. *Canadian Journal of School Psychology*, 25(1), 40-54.
- Vaillancourt, T., Trinh, V., McDougall, P., Duku, E., Cunningham, L., Cunningham, C., . . . Short, K. (2010b). Optimizing population screening of bullying in school-aged children. *Journal of School Violence*, 9(3), 233-250. doi:10.1080/15388220.2010.483182
- Van Der Stouwe, Asscher, Stams, Deković, & Van Der Laan. (2014). The effectiveness of Multisystemic Therapy (MST): A meta-analysis. *Clinical Psychology Review*, 34(6), 468-481.
- Vitacco, M. J., Rogers, R., & Neumann, C. S. (2003). The Antisocial Process Screening Device: An examination of its construct and criterion related validity. *Assessment*, 10, 143-150.
- Walsh, Z. & Kosson, D. (2007). Psychopathy and violent crime: A prospective study of the influence of socioeconomic status and ethnicity. *Law and Human Behavior*, 31(2), 209-229.
- Wright, L. W., Adams, H. E., & Bernat, J. (1999). Development and validation of the homophobia scale. *Journal of Psychopathology and Behavioural Assessment*, 21, 337-347.

Figures

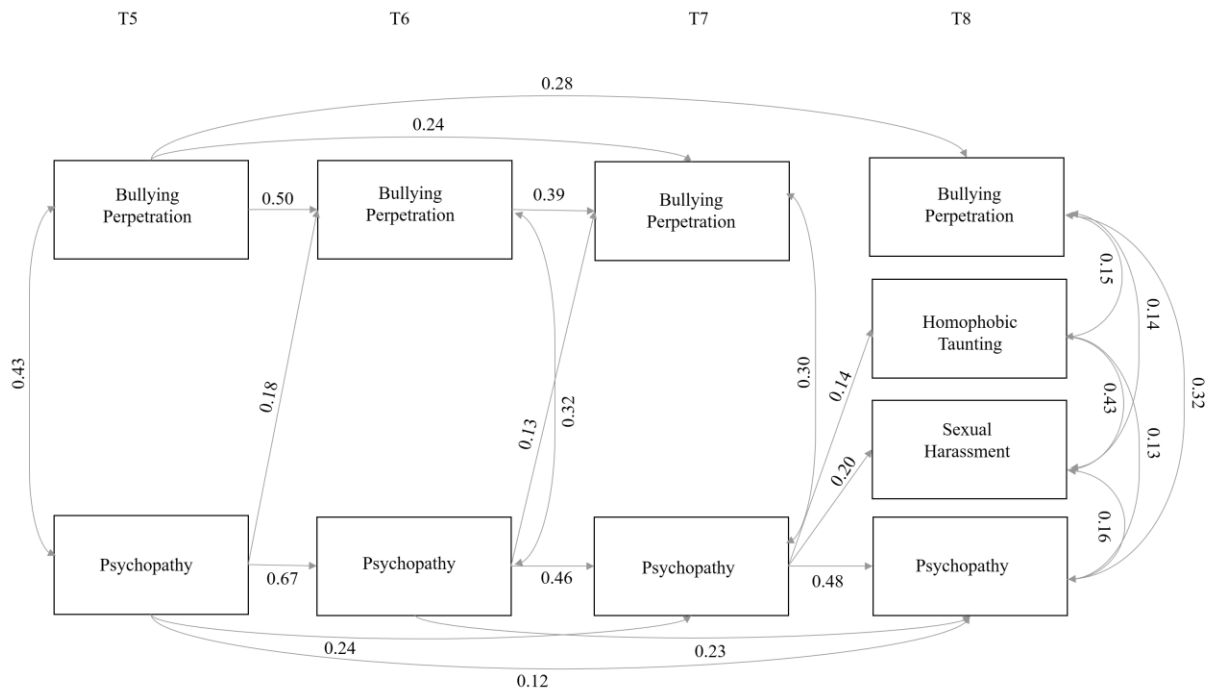


Figure 1. Model displaying all significant pathways ( $p < 0.05$ ) over four time points for the combined boys and girls sample with standardized coefficients.

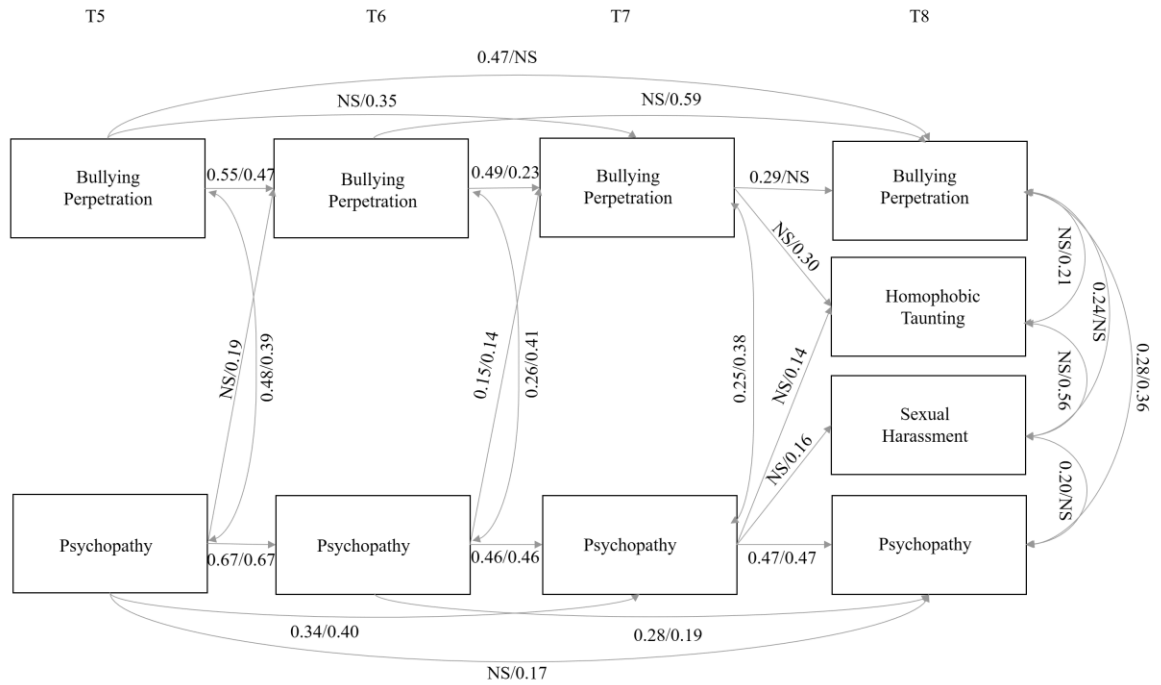


Figure 2. Model displaying all significant pathways ( $p < 0.05$ ) over four time points for girls (standardized coefficients left of the forward-slash) and boys separately.

Tables

Table 1. Bivariate Correlations. Bivariate correlations for the sample and for boys and girls individually are provided.

Bivariate Correlations										
	Bullying Perpetration (T5)	Bullying Perpetration (T6)	Bullying Perpetration (T7)	Bullying Perpetration (T8)	Psychopathy (T5)	Psychopathy (T6)	Psychopathy (T7)	Psychopathy (T8)	Homophobic Taunting (T8)	Sexual Harassment (T8)
Bullying Perpetration (T5)	-									
Bullying Perpetration (T6)	.60*	-								
Bullying Perpetration (T7)	.53*	.60*	-							
Bullying Perpetration (T8)	.51*	.53*	.42*	-						
Psychopathy (T5)	.45*	.40*	.35*	.32*	-					
Psychopathy (T6)	.35*	.47**	.41*	.32*	.69*	-				
Psychopathy (T7)	.38*	.41*	.49*	.26*	.70*	.73*	-			
Psychopathy (T8)	.31*	.30*	.36*	.38*	.60*	.67*	.72*	-		
Homophobic Taunting (T8)	.11*	0.10	.22*	.20*	.14*	.22*	.23*	.24*	-	
Sexual Harassment (T8)	0.10	.12*	.19*	.19*	.15*	.21*	.28*	.28*	.44*	-

Bivariate Correlations (Boys)										
	BP (T5)	BP (T6)	BP (T7)	BP (T8)	Psych. (T5)	Psych. (T6)	Psych. (T7)	Psych. (T8)	HT (T8)	SH (T8)
BP (T5)	-									
BP (T6)	0.55*	-								
BP (T7)	0.51*	0.49*	-							
BP (T8)	0.44*	0.66	0.32	-						
Psych (T5)	0.38*	0.29*	0.15	0.19*	-					
Psych (T6)	0.25*	0.47*	0.25*	0.28*	0.64*	-				
Psych (T7)	0.23*	0.29*	0.37*	0.10	0.67*	0.68*	-			
Psych (T8)	0.23*	0.33*	0.35*	0.32*	0.62*	0.67*	0.75*	-		
HT (T8)	0.14	0.13	0.36*	0.22*	0.11	0.25*	0.30*	0.30*	-	
SH (T8)	0.05	0.08	0.17*	0.12	0.10	0.17*	0.29*	0.26*	0.56*	-

Bivariate Correlations (Girls)										
	BP (T5)	BP (T6)	BP (T7)	BP (T8)	Psych. (T5)	Psych. (T6)	Psych. (T7)	Psych. (T8)	HT (T8)	SH (T8)
BP (T5)	-									
BP (T6)	0.64*	-								
BP (T7)	0.55*	0.67*	-							
BP (T8)	0.62*	0.45*	0.54*	-						
Psych (T5)	0.49*	0.46*	0.48*	0.41*	-					
Psych (T6)	0.43*	0.48*	0.52*	0.36*	0.71*	-				
Psych (T7)	0.51*	0.50*	0.58*	0.45*	0.72*	0.75*	-			
Psych (T8)	0.38*	0.29*	0.36*	0.45*	0.59*	0.66*	0.69*	-		
HT (T8)	0.08	0.08	0.09	0.15*	0.19*	0.14*	0.13*	0.14*	-	
SH (T8)	0.19*	0.21*	0.24*	0.33*	0.25*	0.29*	0.26*	0.32*	0.14*	-

\*. Correlation is significant at the 0.05 level (2-tailed).

Table 2. Model fit indices. Model fit indices for the original model (used in the current analysis), models freely estimating and constraining pathways by sex, and a model accounting for control variables. Degrees of freedom (*df*), weighting constant for comparing difference in chi-square values using MLR (*c*), Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), Standardized Root Mean Square Residual (SRMR) and Akaike Information Criterion (AIC) for each are provided. The weighting constant for comparing difference in chi-square values using MLR (*cd*), change in chi-square ( $\Delta\chi^2$ ), change in degrees of freedom ( $\Delta df$ ) and the corresponding *p*-value is provided as evidence for an overall effect of sex. Chi-Square difference testing was conducting using the Satorra-Bentler scaled chi-square.

<i>Model</i>	<i>df</i>	<i>c</i>	$\chi^2$	CFI	TLI	RMSEA (90% CI)	SRMR	AIC	Model comparison	<i>cd</i>	$\Delta\chi^2$	$\Delta df$	<i>p</i>
1. Original Model	14	1.381	9.579	1.000	1.017	0.000	0.013	18510.036					
2. Paths freely estimated across sex	38	1.189	38.824	0.999	0.998	0.000	0.043	18266.362					
3. Paths constrained across sex	68	1.302	135.900	0.940	0.923	0.046	0.077	18337.155	2 vs 3	1.428	92.920	30	0.00
4. Control Variable Analysis	14	1.383	9.248	1.000	1.022	0.000	0.011	20162.394					

Table 3. Descriptive Statistics

		Bullying Perpetration (T5)	Bullying Perpetration (T6)	Bullying Perpetration (T7)	Bullying Perpetration (T8)	Psychopathy (T5)	Psychopathy (T6)	Psychopathy (T7)	Psychopathy (T8)	Homophobic Taunting (T8)	Sexual Harassment (T8)
<i>N</i>		403	453	435	445	464	441	419	439	446	446
	Boys	179	199	189	194	208	191	186	192	191	192
	Girls	224	254	246	251	256	250	233	247	255	254
<i>Min.</i>		0	0	0	0	0	0	0	0	0	0
	Boys	0	0	0	0	1	2	1	0	0	0
	Girls	0	0	0	0	0	0	0	0	0	0
<i>Max.</i>		13	13	13	21	26	27	29	28	15	11
	Boys	13	10	9	21	26	24	22	26	15	11
	Girls	12	13	13	9	26	27	29	28	9	4
<i>Mean</i>		1.03	0.94	0.89	0.81	9.45	9.63	9.57	9.77	0.87	0.33
	Boys	1.04	0.93	0.88	0.87	9.84	10.3	10.05	10.22	1.31	0.48
	Girls	1.03	0.95	0.9	0.77	9.13	9.12	9.18	9.41	0.53	0.22
<i>SD</i>		1.72	1.63	1.68	1.69	4.67	4.95	4.6	4.78	1.87	1.01
	Boys	1.77	1.46	1.55	1.98	4.6	4.96	4.58	4.76	2.33	1.32
	Girls	1.68	1.76	1.78	1.44	4.71	4.89	4.6	4.76	1.33	0.67
<i>Skew-ness</i>		3.08	2.66	3	4.96	0.63	0.74	0.74	0.68	3.49	5.45
	Boys	3.55	2.09	2.09	6.05	0.62	0.56	0.4	0.68	2.96	4.83
	Girls	2.66	2.88	3.44	2.24	0.66	0.91	1.03	0.7	3.45	3.72
<i>Kur-tosis</i>		14.09	10.67	12.94	46.46	0.18	0.35	0.63	0.46	16.39	41.11
	Boys	18.64	6.98	4.9	55.47	0.28	-0.07	-0.32	0.24	11.49	29.25
	Girls	9.91	11.62	16.3	5.72	0.16	0.88	1.66	0.67	13.58	14.95

Table 4. Standardized and unstandardized estimates and *p*-values.

Path	Standard- ized Estimate	Unstandard- ized Estimate	<i>p</i>
Stability Paths			
Psychopathy (T5) to Psychopathy (T6)	0.67	0.72	0.00
Psychopathy (T6) to Psychopathy (T7)	0.46	0.42	0.00
Psychopathy (T7) to Psychopathy (T8)	0.48	0.50	0.00
Psychopathy (T6) to Psychopathy (T8)	0.23	0.21	0.00
Psychopathy (T5) to Psychopathy (T7)	0.36	0.36	0.00
Psychopathy (T5) to Psychopathy (T8)	0.12	0.13	0.02
Bullying Perpetration (T5) to Bullying Perpetration (T6)	0.50	0.48	0.00
Bullying Perpetration (T6) to Bullying Perpetration (T7)	0.39	0.40	0.00
Bullying Perpetration (T7) to Bullying Perpetration (T8)	0.06	0.06	0.90
Bullying Perpetration (T6) to Bullying Perpetration (T8)	0.34	0.36	0.06
Bullying Perpetration (T5) to Bullying Perpetration (T7)	0.24	0.23	2.58
Bullying Perpetration (T5) to Bullying Perpetration (T8)	0.28	0.83	0.01
Cross-Lagged Paths (T5 to T7)			
Psychopathy (T5) to Bullying Perpetration (T6)	0.18	0.06	0.01
Psychopathy (T6) to Bullying Perpetration (T7)	0.13	0.04	0.01
Bullying Perpetration (T5) to Psychopathy (T6)	0.03	0.08	0.64
Bullying Perpetration (T6) to Psychopathy (T7)	0.04	0.12	0.43
Covariate Paths (T5 to T7)			
Psychopathy (T5) with Bullying Perpetration (T5)	0.43	3.44	0.00
Psychopathy (T6) with Bullying Perpetration (T6)	0.32	1.54	0.00
Psychopathy (T7) with Bullying Perpetration (T7)	0.30	1.13	0.00
Cross-Lagged Paths (T7 to T8)			
Psychopathy (T7) to Bullying Perpetration (T8)	-0.01	-0.01	0.76
Psychopathy (T7) to Sexual Harassment (T8)	0.20	0.04	0.01
Psychopathy (T7) to Homophobic Taunting (T8)	0.14	0.06	0.02
Bullying Perpetration (T7) to Psychopathy (T8)	0.00	0.00	0.97
Bullying Perpetration (T7) to Sexual Harassment (T8)	0.07	0.04	0.43
Bullying Perpetration (T7) to Homophobic Taunting (T8)	0.13	0.73	0.43
Covariate Paths (T8)			
Psychopathy (T8) with Bullying Perpetration (T8)	0.32	1.36	0.00
Psychopathy (T8) with Sexual Harassment (T8)	0.16	0.49	0.01
Psychopathy (T8) with Homophobic Taunting (T8)	0.13	0.04	0.03
Bullying Perpetration (T8) with Sexual Harassment (T8)	0.14	0.19	0.02
Bullying Perpetration (T8) with Homophobic Taunting (T8)	0.15	0.38	0.00
Sexual Harassment (T8) with Homophobic Taunting (T8)	0.43	0.78	0.001

## List of Acronyms

AAUWEF - American Association of University Women Educational Foundation

AIC – Akaike Information Criterion

APSD – The Antisocial Process Screening Device

CFI – Comparative Fit Index

CU – Callous-unemotional

HCAAT Scale - The Homophobic Content Agent Target Scale

LGB – Lesbian, Gay, Bisexual

LGBT – Lesbian, Gay, Bisexual, Transgender

LGBTQ – Lesbian, Gay, Bisexual, Transgender, Questioning

MLR – Maximum Likelihood Robust

MST – Multisystemic Therapy

RMSEA – Root Mean Square Error of Approximation

SRMR – Standardized Root Mean Square Residual

TLI – Tucker-Lewis Index