

**Violent Young Offenders: An Examination of how Psychopathy and Instrumentality  
Inform our Understanding of Aggression**

by

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## Abstract

Youth violence and aggression are significant problems facing today's society. While most young offenders commit relatively minor crimes, a small proportion is involved in more serious, violent crimes. Previous explanations of participation in violence indicate that psychopathy is a robust predictor of aggressive behaviours for both adult (e.g., Walsh & Walsh, 2006) and youth offenders (e.g., Flight & Forth, 2007). Woodworth and Porter (2002) proposed a selective impulsivity hypothesis to reconcile the psychopath's impulsive nature and propensity for goal-directed violence. Specifically, they suggested that as the severity of crime increases, psychopaths will actively monitor their impulsive tendencies, employing less reactive violence when the consequences are highest (for example, when committing homicide) (Agar, 2009; Woodworth & Porter, 2002). The current investigation is the first to directly test this hypothesis in violent youth offenders. Using a sample of 100 young offender files from British Columbia, the results supported the selective impulsivity hypothesis in youths. Of particular interest, a relationship between the interpersonal features of psychopathy and instrumental violence was revealed. Interpersonally callous traits were related to an increase in use of instrumental violence. Findings are discussed in light of current theories of aggression, and suggestions for future directions are considered.

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## 1 Introduction

Youth offenders – particularly violent offenders – are of great concern to law enforcement, the courts, and society as a whole. Although the majority of young offenders commit minor, non-violent crimes, a subset of persistent offenders commit serious violent offences (O'Shaunhnessy & Andrade, 2008). In 2006, approximately 25% of all apprehended youths in Canada were accused of violent offences (Statistics Canada, 2008), with 80% of those being accused of assault. Statistics only consider official conviction rates, which arguably portray only a portion of the true amount of violence perpetrated by youths (e.g., Sprott & Doob, 2008). Violent incidents can go undetected by official statistics simply because they are not reported, detected, or there is insufficient evidence or resources to pursue formal charges. This results in a potentially skewed perception of the true prevalence of youth violence.

Recently, some investigators (e.g., Flight & Forth, 2007) have suggested that youth violence can be understood by examining psychopathy and instrumentality of violence. Other researchers (e.g., Agar, 2009) have investigated these relations in youth perpetrated homicides. To date, these important variables have not been considered specifically in light of the severity of the violent offence. The current study provides the first comprehensive empirical examination of the relations between psychopathy, instrumentality of violence, and violence severity in youths.

### 1.1 *Previous Explanations of Violence and Aggression*

Aggression has been investigated in both the sociological (e.g., Baron, 2009) and the psychological literatures (e.g., Munoz, Frick, Kimonis, & Aucoin, 2008). The sociological literature generally focuses on broad conceptualizations of the root causes of

violence. In contrast, the psychological literature generally considers characteristics of the individual perpetrator to be central. Psychological theories of crime consider behavioural and cognitive contributions, including IQ and verbal abilities (e.g., Leech, Day, Richardson, & Goldschmidt, 2003), social environment (e.g., Bandura, 1978; Snethen & Van Puymbroeck, 2008), as well as type (e.g., Fite & Colder, 2007) and instrumentality of aggression (e.g., Woodworth & Porter, 2002).

#### 1.1.1 *General Strain Theory*

One theoretical perspective from the sociological literature is general strain theory (GST; Agnew, 1985). GST describes how negative strains and relations create pressure towards criminal, and aggressive, behaviours. GST defines strain broadly, including the loss of positive stimuli (e.g., the death of a loved one), or the presentation of negative stimuli (e.g., threat of aggression from a peer). Agnew (2001) posited that criminal behaviour is, in fact, an adaptive behaviour which allows individuals to decrease strain. Interestingly, when criminal behaviours are used effectively as a coping mechanism, it may increase the use of similar strategies when faced with subsequent strains, and become a self-perpetuating cycle. Recently, Baron (2009) investigated GST specifically in relation to violent strain (e.g., antisocial peers, exposure to violence) and subsequent violent crime. Baron found that violent forms of strains (i.e., experienced, perceived, and anticipated strain) were related to higher levels of violent crime. Further, this relationship was evident when other variables such as negative emotionality and low constraint were considered in the statistical model. While this theory provides a possible explanation for the root cause of some acts of violence, it fails to consider other potential cognitive or personality factors that may contribute to violent behaviour.

### 1.1.2 *Cognitive Factors*

Verbal ability, in particular impaired verbal ability, also has been identified as a risk factor for serious antisocial and delinquent behaviour. Research shows a positive relationship between low verbal ability and increased risk for violent behaviour and delinquency (Leech, Day, Richardson, & Goldschmidt, 2003). In particular, a discrepancy between performance IQ (PIQ) and verbal IQ (VIQ) has been identified as important; relative deficits in VIQ are associated with violence and with heightened hostile attributions (Wong & Cornell, 1999). Executive function abilities and control also have been implicated as important in understanding aggression. Specifically, Dolan and Anderson (2002) found that impulsivity and aggression correlate negatively with executive function, such that impulsive aggressive offenders have more deficits in executive control than non impulsive aggressive offenders. These perspectives provide one explanation of a more generalized potential correlate of violence, but do not inform our understanding of the instrumentality of violence at the individual level.

### 1.1.3 *Social Learning Theory*

Another compelling explanation of aggression is social learning theory, first developed by Bandura (1977, 1978). Bandura observed that aggression was socially oriented such that individuals use aggression both to attain and maintain social status. Moreover, individuals can learn aggressive responses through exposure to aggressive role models (e.g., violent television programs or aggressive adult models). This exposure can lead individuals to learn to accept aggressive behaviours as an appropriate response to real or perceived provocation. The concept of modeling was first examined empirically by Bandura and colleagues (Bandura, Ross, & Ross, 1961) in the now famous Bobo doll

study. In this study, children observed adults interacting with a large inflatable doll either aggressively or nonaggressively. When the children were later given an opportunity to interact with the doll, those who had observed an adult acting aggressively were more likely to be aggressive than children who had observed an adult acting nonaggressively. When faced with provocation, or a perceived threat to one's social status, individuals who have learned aggressive responses through modeling may choose an aggressive response. Further, Bandura (1977) suggested that the process of observational learning involves four interrelated processes; attention, retention, motor production, and motivation. In order to reproduce an observed behaviour, individuals must attend to the behaviour of a model, retain the behaviour, be able to convert what they have seen into action, and generate an internal motivation to perform the act. More recently, Ireland and Smith (2009) found a significant relationship between exposure to severe parental violence and subsequent adolescent conduct problems and early adulthood violent crime. Social learning theory provides a framework from which to understand the acquisition of aggressive behaviours at the individual level but fails to specifically address the use of instrumental violence.

#### 1.1.4 *Type of Aggression, and Instrumentality of Aggression*

Aggression has been defined as “behaviours that are intended to hurt or harm others” (Crick & Grotpeter, 1995 pp. 710). To describe and understand aggression and violence, it is useful to consider the function (motivation) of the aggression (e.g., Fite & Colder, 2007; Fite, Colder, Lochman, & Wells, 2007). Some (e.g., Dougherty, et al., 2007) have suggested that one of the most useful ways to consider the function that an aggressive act may serve is by classifying the behaviour as either reactive (i.e., impulsive,

anger oriented) or proactive (i.e., instrumental, goal oriented). Reactive aggression is an affect-based response to behaviour that is perceived as threatening (Fite & Colder, 2007); this type of aggression often occurs immediately after provocation. Proactive aggression, in contrast, can be defined as planned, goal oriented, and carried out in pursuit of personal interests and motives (Fontaine, 2008).

The level of instrumentality of violence among youth has been implicated as a predictor of antisocial behaviour. In a longitudinal study, Pulkkinen (1996) followed three groups of adolescents who had been classified as reactively aggressive, proactively aggressive, or non-aggressive. The author compared the aggressive type groups at ages 8, 14, and 27 years old, and found that proactively-aggressive males had higher rates of externalizing problems and criminality in adulthood, than either the reactively aggressive or non-aggressive males. These results suggest that proactive violence is predictive of future antisocial behaviour and violence, and that instrumentality is an important aspect of aggression to consider.

In youths specifically, instrumental aggression has been evaluated in light of certain personality characteristics (e.g., Loper, Hoffschmidt, & Ash, 2001), some of which are related to psychopathy (which will be discussed later). Impulsive (reactive) and premeditated (proactive) aggression types also have been evaluated in youths in light of conduct disorder diagnosis. For example, considering previous findings that time estimation is compromised in some impulsive and aggressive individuals, Dougherty et al. (2007) evaluated whether differences in time estimation existed between primarily impulsive and primarily premeditated groups of youths diagnosed with conduct disorder. Indeed, misperception of time was specific to the primarily impulsive group. This work

stresses the importance of evaluating the differences between types of aggression in heterogeneous groups such as those diagnosed with conduct disorder.

Investigations into the genetic and environmental stability of reactive and proactive aggression in twins (e.g., Tuvblad, Raine, Zheng, & Baker, 2009) have found significant differences in aggression between childhood (age 9-10) and early adolescence (age 11-14). Specifically, Tuvblad and colleagues found that stability in reactive aggression was due to genetic and nonshared environmental influences, whereas proactive aggression was mainly due to genetic influences. This recent study suggests that there are important distinctions between these two types of violent individuals. Further, it highlights the importance of considering the type of violence that is delineating both child and youth aggression even within a developmental and genetic context.

Although violence can be conceptualized as either reactive or proactive, these categories are not always mutually exclusive, and an aggressive act may contain elements of both. Bushman and Anderson (2001) have proposed that clinicians and researchers should consider using a classification system that allows for coding of aggressive acts that contain elements of both reactive and proactive aggression. In light of this suggestion, and the work of Cornell and colleagues (Cornell, et al., 1996), Woodworth and Porter (2002) devised a four category coding scheme for motivation for violence; (a) instrumental, (b) instrumental/reactive, (c) reactive/instrumental, and (d) reactive. These authors successfully used this coding to delineate instrumentality of violence in adult homicide offenses. Although this classification system was created with adult populations, it appears that it is appropriate for youth samples as well. For example, Agar (2009) used this four-category classification, accounting for youth perpetrated homicides

in which both instrumental and reactive violence were used. The current study uses the same methodology to evaluate its usefulness in a sample of violent youth offenses.

## *1.2 Previous Explanations of Youth Violence*

Youth aggression and antisocial behaviour have long been a topic of interest in the psychological literature. Environmental factors (e.g., Baron, 2009), social and biological causes (e.g., Hart & Marmorstein, 2009), social information processing (e.g., Lansford et al., 2006), and the presence of callous/unemotional traits (e.g., Frick & White, 2008) have been identified as possible explanations for antisocial behaviours and their maintenance in youth. These explanations will be elaborated, and their relevance to the current study will be discussed next.

### *1.2.1 Environmental Factors*

Several environmental factors, such as exposure to violence, and early exposure to alcohol and drug use, have been implicated in the onset and maintenance of antisocial behaviour and aggression. Although social learning theory provides a framework for understanding aggression in general, it appears that early exposure to violence is relevant to aggression at the youth level.

The literature suggests that early exposure to various forms of violence is associated with a greater risk of coming into contact with the justice system as an adolescent, among other negative outcomes (Harris, Lieberman, & Marans, 2007; Haynie, Petts, Maimon, & Piquero, 2009). An in-depth review of the extant literature on the nature and extent of exposure to violence conducted by Kracke and Hahn (2008) suggests that children and adolescents are potentially exposed to violence not only as victims, but also as witnesses to intimate partner (domestic) violence, community



violence, and school violence. The authors conclude that a broader conceptual view of childhood exposure to abuse is critical when evaluating the link between exposure to, and participation in, violent behaviours. Youths who observed violence were themselves more violent. Also, a recent 30-year prospective study found that early exposure to drugs and alcohol (i.e., before the age of 15) was significantly related to poor outcomes later in life such as crime, even for those with no history of conduct-problems (Odgers et al., 2008). Although exposure to violence and early exposure to drugs and alcohol can explain a limited amount of the variation in aggressive and antisocial behaviours in youths, there seems to be a general agreement that they must be considered in the context of other related factors, such as the individual psychological differences, and social and cognitive schemas. The current thesis will consider exposure to early childhood abuse, and age at first use of drugs and alcohol.

### *1.2.2 Developmental Model*

One model of the development of aggression posits that biological predispositions are related to conduct problem outcomes, and research in behavioural genetics has supported this contention. Twin studies reveal a strong genetic influence on antisocial and aggressive behaviour (e.g., Baker, Jacobsen, Raine, Lozano, & Bezdjian, 2007; Burt & Mikolajewski, 2008; Tuvblad, Raine, Zheng, & Baker, 2009). The common theme emerging from this line of research is that consistent engagement in antisocial behaviour throughout childhood, adolescence, and the transition into adulthood, has been linked to particular genetic factors. Although environmental factors (such as those mentioned previously) contribute to the occurrence of antisocial behaviours, the maintenance of these behaviours can be attributed, in part, to genetic influences. Vaughn, Beaver, and

DeLisi (2009) proposed and evaluated a biosocial liability model of antisocial behaviour. Specifically, they tested a causal pathway to aggression via associations between genes, environmental factors, and cognitive impairments. Supporting their model, certain genetic predispositions, and exposure to environmental factors, were related to antisocial behaviour outcomes. Specifically, the authors found that certain genetic predispositions were related to a more impaired cognitive functioning (lower verbal ability) which was associated with increased delinquency via Attention Deficit Hyperactivity Disorder (ADHD) and low self-control. This suggests that the link between verbal ability and aggression is, in part, dependent on other factors such as ADHD and low self-control. Further, the neurobiological literature suggests that there are five primary symptom domains of aggressive behaviour that correlate with specific neurodevelopmental underpinnings: (a) impulsivity, (b) affective stability, (c) anxiety/hyperarousal, (d) cognitive disorganization, and (e) predatory/planned aggression (Sugden, Kile, & Hendren, 2006). These authors suggest that interventions aimed at reducing aggressive behaviours should take into consideration the origins of these behaviours to effectively target the specific brain regions and neurotransmitters involved. Although this psychobiological account may inform interventions that address aggression when it is related to biological predispositions, it does not consider how other important psychological variables (e.g., psychopathy, discussed later) also contribute to an individual's motivation. The current study will address how biological predispositions such as impulsivity are related to instrumentality.

Several theoretical models of participation in, or restraint from engaging in, antisocial behaviours emphasize the importance of the transitional period through the

teenage years and into early adulthood. Two distinct patterns of antisocial behaviour and violence in youths have been distinguished; some youths show a stable and persistent pattern of aggression, whereas others show temporary and situational aggression (Cote, Vaillancourt, LeBlanc, Nagin, & Tremblay, 2006; Moffitt, 1993). Temporary, situational aggression is the most common among adolescents, and as youths move into adulthood the amount of aggression they engage in decreases dramatically, following a curvilinear pattern (e.g., Karriker-Jaffe, Foshee, Ennett, & Suchindran, 2008). Moffitt (1993) labels these youths as “adolescent-limited,” and suggests that their time-limited involvement in aggression and antisocial behaviour peaks around age 17. Moffitt (1993) labels the smaller, stable, and persistently aggressive group as “life-course-persistent”; these individuals engage in some form of antisocial behaviour throughout their lives. More recently, Silberg and colleagues (Silberg, Rutter, Tracy, Maes, & Eaves, 2007) concluded a longitudinal study examining heterogeneity in the development of antisocial behaviour. Their results support Moffitt’s (1993) classification, indicating differences in the development of antisocial behaviour in life-course-persistent offenders and adolescent-limited offenders. It has been estimated that life-course-persistent offenders, comprising about 5-6% of the adult male offender population, are responsible for about 50% of known crimes (see Farrington, Ohlin, & Wilson, 1986). Similarly, in male young offenders, this small group comprises approximately 5% of the population, but accounts for over 50% of offences (Snyder & Sickmund, 2006). Although this theory delineates specific subgroups based on patterns of offending, it does not specifically consider the important psychological differences (in particular personality differences) between individuals during adolescence.

Two psychological changes commonly considered during the transition from adolescence to adulthood are the rapid development of impulse inhibition and an increase in the capacity to suppress aggression. Some researchers believe that individuals who are better able to control impulsive behaviours, and are more adept at suppressing aggression, are less likely to engage in antisocial behaviours. Monahan, Steinberg, Cauffman, and Mulvey (2009) found that only a small portion of delinquent youths (fewer than 6%) continued to engage in high levels of aggressive and antisocial behaviour across time, which is consistent with previous findings. Further, there are specific environmental factors that are associated with each trajectory. For example, early onset (life-course-persistent) individuals are more likely than late onset (adolescent-limited) individuals to come from families in which the parents use ineffective discipline practices (Patterson & Yoerger, 2002). This perspective relates directly to the environmental theories mentioned earlier, combining these perspectives may bolster our understanding of the development of youth violence. This line of evidence suggests that gains in psychosocial maturity are linked to abstaining from antisocial behaviour as youths progress into adulthood. Although the above may facilitate a more refined understanding of the trajectory of antisocial behaviour, they still do not, however, account for an offender's use of instrumental violence.

### *1.2.3 Social Information Processing*

Another explanation of youth aggression and antisocial behaviour has its foundation in the social information processing literature (e.g., Dodge et al., 2003). This line of inquiry expands on social learning theory (discussed previously) and explores how inferences and judgments made about social stimuli affect the development and

maintenance of aggressive behaviours. Social knowledge structures, or schemas, provide a basis from which to interpret social situations based on past interactions. These schemas are integral in the context of ongoing social situations, and they provide an individual with a comparison point when evaluating how to react and respond to social situations. The Hostile Attribution Bias (HAB) is a particular schema through which individuals interpret social situations; individuals with a HAB tend to attribute negative intentions to others in ambiguous situations, particularly if there is a negative outcome (Dodge, 1980). Individuals who attribute hostile intentions to others tend to respond more aggressively than other individuals (e.g., Pornari & Wood, 2010) who may interpret other's intentions as neutral or accidental (for a meta-analytic review, see Orobio, Veerman, Koops, Bosch, & Monshouwer, 2002). Several important relationships, such as the mediating effect of social processing patterns on life problems, including physical abuse and chronic conduct problem outcomes (Dodge & Pettit, 2003), have been elucidated by this line of research. More specifically, these authors found that children who had predispositions to aggressive behaviour, and had learned negative cognitive schemas, were more aggressive when faced with problematic social situations. Further, increases in aggression were associated with choosing and positively evaluating the possible outcome of an aggressive reaction. Although informative, this line of research tends to have only moderate accuracy when predicting aggression (Dodge & Pettit, 2003). Therefore, a more thorough consideration of predictive factors beyond social processing clearly is warranted.

#### 1.2.4 *Callous Unemotional Traits*

In youths, callous-unemotional (CU) traits also have been identified as important when explaining aggressive and antisocial behaviour (e.g., Frick & White, 2008). CU

traits have become a focus in the past decade in the youth aggression literature, particularly in delineating diagnostic types of conduct disorder (Enebrink, Andershed, & Langstrom, 2005). Importantly, the predictive value of CU traits in relation to later emotional and conduct problems has been supported in the empirical literature (Moran et al., 2009). CU traits, as defined by Frick and colleagues (e.g., Frick, Bodin, & Barry, 2000), include a lack of guilt, lack of empathy, and callous use of others for one's own gain. A more recent study investigated a two-dimensional model; with CU traits and impulsivity/conduct problems (I/CP) as predictors of emotional distress, behavioural dysregulation, social-cognitive processes, and delinquency severity in a sample of justice involved youths (Pardini, Lockman, & Frick, 2003). These researchers found that the I/CP factor was associated with increased levels of dysregulated behaviour, and the CU dimension was related to deficits in empathy and lower emotional distress. Frick and White (2008) reviewed the extant literature on CU traits in youths and found that CU traits were stable across development, and that the presence of CU traits reliably distinguished a small group of aggressive and antisocial youths. Further, longitudinal studies have shown that the presence of CU traits in childhood and early adolescence predicts psychopathy in adulthood with clinic-referred youths after controlling for other risk factors, such as parental psychopathology, parenting behaviours, and demographic factors (Burke, Loeber, & Lahey, 2007). The literature also suggests that heritability of antisocial behaviour is greater when CU traits are present (Viding, Jones, Frick, Moffitt, & Plomin, 2008).

More recently, a multi risk-factor model predicting aggression in antisocial youths found that CU traits contributed to predicting aggression above and beyond the mediating

effects of social information processing biases, including the hostile attribution bias (Stickle, Kirkpatrick, & Brush, 2009). When also considering the presence of impulsive conduct problems, their model accounted for approximately three times the amount of variance in aggressive behaviour than the model accounting for social information processing biases alone. Specifically, CU traits mediated the relation between aggressive beliefs and aggressive behaviours. High levels of CU traits also were found to have an important effect on antisocial outcomes such as aggression severity; increasing levels of CU traits were related to increased severity of aggression.

CU traits lie at the core of the larger construct of youth psychopathy (e.g., Fite, Stoppelbein, & Greening, 2009; Jones, Laurens, Herba, Barker, & Viding, 2009). Frick and colleagues (Frick, Bodin, & Barry, 2000) described three dimensions of psychopathy in children: CU traits, narcissism, and impulsivity. These three dimensions map on closely to the construct of youth psychopathy, as described in the next section. Frick and colleagues suggest that it is the presence of CU traits in particular, rather than impulsivity and narcissism, that distinguishes individuals with high levels of psychopathic traits. When considering this theoretical model, it is evident that individual differences in affective traits, in particular CU traits as well as impulse control measures, are critical in a complete model predicting youth aggression.

### *1.3 Psychopathy and Aggression*

Psychopathy has been implicated in the literature as one of the most important psychological constructs in understanding, and predicting, violence and aggression in adult males (e.g., Hemphill & Hare, 2004; Porter & Woodworth, 2006; Walsh & Walsh, 2006). Indeed it recently has been argued that “psychopathy is the purest and best

explanation of antisocial behaviour” (DeLisi, 2009). Psychopathy is a construct defined by severe and persistent antisocial behavioural characteristics (e.g., impulsivity, criminal versatility), and an interpersonal style characterized by manipulativeness, grandiosity, and a profound lack of empathy and remorse (Hare, 2003). It is estimated that 1-2% of the general population are psychopaths (Neumann & Hare, 2008), with the prevalence in incarcerated male offenders estimated at 15-25% (Hare, 2003). This small group of psychopathic offenders account for a disproportionately large amount of crime, particularly violent and instrumental crime (e.g., Woodworth & Porter, 2002). Further, psychopathy also has been evaluated in terms of the number of perpetrators (e.g., Juodis, Woodworth, Porter, & ten Brinke, 2009). Juodis and colleagues evaluated differences in single and multiple perpetrator homicide offenses in consideration of psychopathy. These authors found that multiple perpetrator (MP) homicides were more often instrumental than single perpetrator (SP) homicides. Importantly, they also found that psychopaths were more likely to commit instrumental homicides, but only when acting alone.

Psychopathic offenders also recidivate at a higher rate, and consistently commit more violent and non-violent crimes than their nonpsychopathic counterparts (Porter, Birt, & Boer, 2001). Porter and colleagues also found that sexual homicides committed by psychopaths contained more gratuitous and sadistic violence (Porter, Woodworth, Earle, Drugge, & Boer, 2003). They suggested that this increase in gratuitous and sadistic violence may be related to psychopath’s propensity towards thrill-seeking behaviours. Psychopathy also has been linked to the use of indirect aggression in a noncriminal population (Warren & Clarbour, 2009). Interestingly, psychopathy has recently been empirically linked to an ability to manipulate the criminal justice system. Specifically,



Hakkanen-Nyholm and Hare (2009) found that offenders with high psychopathy scores were more likely than other offenders to be convicted of involuntary manslaughter instead of manslaughter or murder, and that they were more likely to receive permission to appeal to lower their sentence.

The first investigation of psychopathy and instrumentality of aggression in a sample of offenders was completed by Williamson, Hare, and Wong, (1987). These authors found that adult psychopaths rarely commit violent crimes while in a state of high emotional arousal (reactive offenses). Relative to their adult nonpsychopathic counterparts, psychopaths were more callous and cold-blooded during their offenses. Further, based on offense types, Williamson et al. suggested that psychopaths may be more willing than nonpsychopaths to engage in situations during which violence might be necessary.

The primary assessment tool used to examine psychopathy in adults is the Psychopathy Checklist-Revised (PCL-R, 2<sup>nd</sup> ed.; Hare, 2003). The PCL-R is a 20-item measure that gives an overall score on psychopathy (0-40), as well as two factor scores; Factor 1: interpersonal/affective, and Factor 2: antisocial behaviour/lifestyle (scores can also be broken down into four facets that comprise the two Factors; interpersonal, affective, antisocial, and behavioural). A large body of literature exists that supports the validity and reliability of the PCL-R as a measure of psychopathy in offender populations (see Hare, 2003).

A recent meta-analysis (Leistico, Salekin, DeCoster, & Rogers, 2008) found that increased antisocial behaviour was moderately correlated with higher PCL total scores. Factor 1, and Factor 2 scores These authors examined 95 nonoverlapping studies and

concluded that, like previous meta-analyses, psychopathy was predictive of antisocial behaviour across ages, study methodologies, length of follow-up, and outcome type. When considering the relation between factor scores and antisocial conduct, the meta-analysis revealed that Factor 2 was more strongly related to antisocial conduct than Factor 1. Further, Factor 2 had better predictive ability as length of the follow-up period increased. Given the wealth of evidence to support the relation between psychopathy and antisocial behaviour in adults, as well the link between CU traits and antisocial behaviour in youth introduced previously, it is important to consider further whether a similar relationship is evident in the adolescent population.

#### *1.4 Youth Psychopathy and Aggression*

The construct of psychopathy in youths has received considerable attention in recent years. Two of the primary concerns have centred on the appropriateness of applying this diagnosis to youth, and what some of the implications might be of applying this label to an adolescent. There are currently compelling arguments both for and against diagnosing psychopathy in youths. However, the recent literature has demonstrated that psychopathy is a stable and informative construct across the lifespan, despite developmental changes (Campbell, Porter, & Santor, 2004; Forsman, Lichtenstein, Andershed, & Larsson, 2008; Forth, Hart, & Hare, 1990; Lynam, 1998; Salekin, Rosenbaum, Lee, & Lester, 2009). Support for the construct has increased in recent years (e.g., Welsh, Schmidt, McKinnon, Chatta, & Meyers, 2008). For example, Forsman and colleagues (Forsman, Lichtenstein, Andershed, & Larsson, 2008) found that psychopathy was a stable, reliable trait from mid to late adolescence. Total psychopathy scores did not

change for the majority of male youths (76.6%-88.8%) and the majority of female youths (86.9%-91.0%) between 16 and 19 years of age.

Other researchers, however, maintain that it is an inappropriate construct to apply to adolescents due to a variety of ethical and developmental reasons (e.g., Edens, Skeem, Cruise, & Cauffman, 2001; Sharp & Kine, 2008). These researchers often mention that the label “psychopath” is detrimental to a youth’s future (e.g., Edens et al., 2001; Seagrave & Grisso, 2002), and may result in negative outcomes, such as harsher sentences, and being recommended for more restrictive custody (i.e., custodial rather than community-based sentences). However, a series of empirical studies investigating judges’, jurors’, and clinicians’ decisions regarding hypothetical juvenile defendants in several vignettes suggests that the label of psychopathy does not negatively impact a defendant in terms of placement or treatment recommendations in comparison with individuals labeled as conduct disorder or those with no diagnosis (Boccaccini, Murrie, Clark, & Cornell, 2008; Murrie, Boccaccini, McCoy, & Cornell, 2007; Rockett, Murrie, & Boccaccini, 2007). Boccaccini and colleagues found that a history of antisocial conduct was a more consistent predictor of ratings of risk and support for harsher punishment than the label of psychopath. Jones and Cauffman (2008) conducted a similar study investigating how the label of psychopathy might influence judges’ perceptions of juvenile defendants, and their decision making about treatment and placement. This investigation used a sample of 100 judges from juvenile and adult Courts who read a hypothetical aggravated assault scenario (with varying types of mental health information regarding psychopathic traits), and answered a series of questions pertaining to a hypothetical defendant. These authors found that only when youths were both labeled and

described as having psychopathic traits, they were perceived as less amenable to treatment, and recommended for more restrictive placements compared to those with no diagnosis. Nevertheless, some have suggested that practitioners use caution when labeling an individual as a psychopath, primarily because the general public's understanding of the construct is somewhat vague and colloquial and they likely perceive it differently from the intended clinical use (Boccaccini et al., 2008).

It is important to acknowledge psychopathy as a distinct construct, separate from the broader pattern of externalizing behaviours in youths. While individuals with psychopathic traits engage in externalizing behaviours, they do so with a deficit, rather than an excess of affective reactivity (Cleckley, 1976). Classic theory suggests that youth with psychopathic traits may respond with rage, as opposed to fear, in frustrating situations because they lack inhibitions against aggression (McCord & McCord, 1964). Further, when considering the construct of psychopathy in youths it is important to do so with consideration for typical and atypical development. Although characteristics such as impulsivity, grandiosity, and antisocial behaviours are seen in youths with psychopathic traits, they also are observed in typically-developing youths, but they are of a more transient nature. The Psychopathy Checklist: Youth Version (PCL:YV; Forth, Kosson, & Hare, 2003), discussed next, has addressed this important issue by including revised items that reflect developmental concerns specific to youths.

Researchers have tried to establish the optimal method for assessing psychopathy in youths. Several researchers (e.g., Dolan & Rennie, 2006; Forth, Kosson, & Hare, 2003; Penny & Moretti, 2007) advocate use of the PCL:YV, a modified version of the PLC-R (Hare, 2003). The PLC:YV, like the PCL-R, provides an overall score for psychopathy,

as well as two Factor (interpersonal/affective, and antisocial/behavioural), and four facet (interpersonal, affective, antisocial, and behavioural) scores. The PCL:YV is similar to the PCL-R in that it assesses psychopathic features such as grandiosity, manipulative tendencies, and antisocial behaviours; however, some items have been modified to reflect that youths have had limited life experiences as compared to adults. For example, item 17 on the PCL-R “many short-term marital relationships,” assessing the number of marriages/common law live-in relationships an individual has had been involved in, has been changed to “unstable interpersonal relationships,” assessing the relative stability of friendships or intimate relationships<sup>1</sup>. Further, the PCL:YV is being used increasingly in the courtroom to assist triers of fact in making decisions, such as the appropriateness of raising a youth to adult court based on the demonstrated continuity of psychopathic traits from adolescence into adulthood, and the ability of these traits to predict future violence (Viljoen, MacDougall, Gagnon, Douglas, & Crosby, 2009).

Other measures of psychopathic traits in adolescence have been developed, including the self-report Youth Psychopathic Traits Inventory (YPI). This measure is based on the three-factor model of psychopathy: (a) grandiose/manipulative, (b) callous/unemotional, and (c) impulsive/irresponsible behaviour (Andershed, Kerr, Stattin, & Levander, 2002). Also, less direct measures of psychopathy based on the five-factor model of personality (FFM; Costa & McCrae, 1980) have been developed. These measures include the Psychopathy Resemblance Index (NEO-PRI; Lynam, & Widiger, 2007), providing an index of how closely an individual resembles a prototypical psychopathy based on their self-identified personality traits. A recent comparison study of the predictive utility of the YPI, NEO PRI, and the PCL:YV (Cauffman, Kimonis,

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<sup>1</sup> For more information on the differences between the PLC:YV and the PCL-R, see methodology.

Dmitrieva, & Monahan, 2009) found that these measures were moderately correlated with one another ( $r$  values ranged from .26 to .36). The authors found that the PCL:YV was able to significantly predict short-term reoffence, but was less accurate at a longer follow-up period (3 years). Despite some criticisms, the PCL:YV is the most widely used measure of psychopathy in youths around the world for both research and practice, and has been found to be reliable in Canadian (e.g., Forth, Kosson, & Hare, 2003), Dutch (e.g., Das, de Ruiter, Doreleijers, & Hillege, 2009), and British (e.g., Dolan & Rennie, 2006) samples.

The construct of psychopathy also has been associated with the maintenance of delinquent behaviours. It has been suggested that the early identification of psychopathy may facilitate more effective prevention and intervention efforts (Vaughn, Howard, & Delisi, 2008). Specifically, Vaughn et al. (2008) suggested that punitive and deterrence-based models are less likely to be effective for youths with high levels of psychopathic traits due to their fearless, impulsive, and self-centred traits. Moreover, an early study investigating adolescent psychopathy found that PCL scores were significantly correlated with violent offending and institutional violence (Forth, Hart, & Hare, 1990). Since then, many others have found similar relations using scores on the PCL:YV as a predictor of future violence and antisocial behaviour. Vaughn et al. (2008) found that higher psychopathy scores were associated with increases in general delinquency, hostile aggression, and various forms of early onset delinquency (e.g., police contacts).

Psychopathy in youths also has been linked to the use of instrumental aggression (e.g., Vitacco, et al., 2006). Although this relation is relatively well documented in the adult literature (e.g., Porter & Woodworth, 2006; Walsh, Swogger, & Kosson, 2009;

Williamson et al., 1987), it is less established among young offenders. Vitacco and colleagues (Vitacco, Neumann, Caldwell, Leistico, & Van Rybroek, 2006) found that a four-factor model of the PCL:YV accounted for 20% of the variance for instrumental violence. When using a four-factor model, the interpersonal facet positively predicted instrumental aggression, and the antisocial facet negatively predicted instrumental aggression, suggesting that psychopathy is, in fact, important in understanding instrumentality of violence in youths. Flight and Forth (2007) also investigated the relationships among psychopathy and instrumentality of violence in young offenders. In their sample of 51 young offenders, they found that both nonpsychopathic and psychopathic youths were using a combination of instrumental and reactive violence. Similar to Williamson and colleagues' paper, and Woodworth and Porter's (2002) study with adult offenders, Flight and Forth (2007) found that youths who were classified as instrumentally violent (based on a dichotomous version of Woodworth and Porter's coding) scored higher on psychopathy than those who were less instrumental. In addition, consistent with the previous adult and youth literature, facet 1 and 2 scores on the PCL:YV were more strongly related to instrumental violence than facet 3 and 4 scores.

Despite some convergence in the youth literature on the relation between interpersonal PCL:YV facet scores and instrumental violence, there are a number of methodological limitations in the previous investigations. For example, the Flight and Forth (2007) sample was relatively small ( $N = 51$ ). Examining a larger sample would facilitate a more refined understanding of the relationship between psychopathy and instrumentality of violence in youths. Further, violent offences were classified as either instrumental or reactive by Flight and Forth (2007), failing to consider that some of these

acts of aggression may contain elements of both types of violence. By including mixed aggression type categories (e.g., Bushman & Anderson, 2001; Woodworth & Porter, 2002), the current study potentially will be permit a more comprehensive view of youth's use of instrumental violence. In addition, the extant literature has neglected to consider the specific type or severity of violence perpetrated by the youths, which may provide clarity to how instrumentality is related to type of violence (e.g., aggravated assault vs. simple assault). Finally, it would appear that Flight and Forth (2007) based their ratings of instrumentality of violence on both official file information and self-reports. However, previous literature has suggested that psychopathic offenders, in particular, may exaggerate the level of reactivity involved in their offences (e.g., Porter & Woodworth, 2007), making it unclear whether Flight and Forth's (2007) results are necessarily the best reflection of the actual instrumentality of the offense. By using only official file information to clarify instrumentality, the current study will attempt to avoid any bias associated with self-report.

### *1.5 Selective Impulsivity and Violence Severity*

Woodworth and Porter's (2002) selective impulsivity hypothesis suggests that although psychopaths can be impulsive, they are able to control their impulsivity in some contexts if the result of doing so is beneficial. Specifically, psychopaths may weigh the pros and cons of acting impulsively as the severity of antisocial behaviour and the consequences of that behaviour become more severe, and purposefully choose to act in a less reckless and reactive manner. These authors have posited that psychopaths will increase their use of premeditated aggression in light of the potential consequences of their behaviour, or potentially because of the enjoyment they procure from planning more



serious or violent types of acts (see also, Juodis, et al., 2009). Their findings with an adult homicide offender sample were recently replicated in a sample of youth homicide offenders (see Agar, 2009); in this sample, psychopaths were significantly more likely to engage in instrumental aggression than nonpsychopaths. However, this sample did not include any less severe violent acts which limited the conclusions that could be drawn. The current study is the first direct test of the selective impulsivity hypothesis in generally violent youth offenders. It will evaluate this hypothesis in a sample that is more heterogeneous in terms of offense severity, and also consider these results in light of Agar's (2009) recent youth homicide investigation.

To directly test the selective impulsivity hypothesis a reliable coding scheme to assess offence severity is crucial. Surprisingly, after a thorough review of the literature, there does not appear to be any agreed upon, or routinely used, standardized approach to reflect an increase in the severity of violence employed during an aggressive act. Kenny and Press (2006) acknowledged this issue by providing evidence that previous methods for coding violence severity were problematic, and offering suggestions for improvement. Offence severity was defined in the current study in a manner that was substantially influenced by the suggestions of the Kenny and Press (2006) paper<sup>2</sup>.

### *1.6 The Current Study*

The current study investigated how psychopathy informs our understanding of instrumentality of violence in a diverse sample of violent youth offenders. Violent offenses ranged broadly and included offenses such as uttering threats, assault, dangerous use of a firearm, sexual assault, and assault causing bodily harm. Information pertaining

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<sup>2</sup> For a detailed description of how a severity measure was derived for the current study see methodology.

to each offender's violent index offense was collected to evaluate instrumentality, and severity of violence.

#### 1.6.1 *Hypotheses*

Based on the limited extant literature, I predicted that individuals scoring high on the PCL:YV (e.g., score of 30 or higher, indicative of the clear presence of psychopathic traits) will have used more instrumental violence overall in the commission of violent offences than individuals scoring lower on the PCL:YV. These results will be especially pronounced in youths who have scored high on the interpersonal and affective facets (facets 1 and 2, which comprise Factor 1) of psychopathy as measured by the PCL:YV. In addition, I predict that as the nature of the offence becomes more serious (e.g., assault with a weapon vs. simple assault), the amount of reactive violence employed by psychopathic offenders will decrease. In contrast, such a pattern between offense motivation and severity is not expected among youths with low levels of psychopathic traits.

## 2 Method

### 2.1 *Sample*

The current sample was from Youth Forensic Psychiatric Services (YFPS), primarily the Kelowna, Burnaby, and Kamloops clinics, in British Columbia. YFPS provides various assessment and treatment services to justice-involved youths, aged 12 to 17 at the time of their offense. Assessments are conducted by a multidisciplinary team, which includes psychologists, psychiatrists, psychometrists, psychiatric social workers, and psychiatric nurses. Under Tri-Council ethical guidelines, as well as Government of British Columbia regulations, permission for file review was granted by the Behavioural Research Ethics Board of the University of British Columbia Okanagan, the Peer Review Ethics Board of YFPS, and by the Deputy Minister of Child and Family Development. As part of the assessment process at YFPS, youths provide consent for use of their file information in future research projects as conducted at the discretion of YFPS and the Deputy Minister. As a result of subsequent approvals, closed files from clients of YFPS's Violent Offender Treatment Program (VOTP) were made available for review.

The YFPS research department identified a large number of files from the VOTP program that could be reviewed. However, after eliminating files that did not meet criteria for the project (i.e., index offense was not violent, or there was very limited information available), as well as those that had already been archived as per YFPS policy, a subset of files were available and appropriate for coding. The final sample consisted of 100 files; 97<sup>3</sup> youth offenders were used for analysis (75 male and 22 female) aged 12 to 17 at the time of the index offense ( $M = 15.5$  years,  $SD = 1.5$  years).

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<sup>3</sup> Three files were not used in the analyses because there was insufficient information for coding the PCL:YV.

Ethnicity of the participants was primarily Caucasian (50.5%), and First Nations (30.9%), with some South Asian (2.1%) and Other/Mixed (4.1%). For 12.4% of the sample, the ethnicity was not specified in the file information. Most files contained very detailed information, and included reports from many sources including police records (previous charges and convictions, police circumstances, witness statements), court records, school records, medical records, psychiatric and psychological assessments, psychological testing (i.e., intelligence and personality test results), social services records, social worker reports, and records from probation officers. The violent index offense was objectively described in police reports, or pre-sentence reports to the Crown.

## *2.2 Measures*

### *2.2.1 Instrumentality*

Instrumentality was coded using Woodworth and Porter's (2002) instrumental-reactive coding scheme. This measure has been used with various adult offender populations (see also Porter & Woodworth, 2007), and more recently with a youth homicide offender population (Agar, 2009). Further, it has been endorsed by other experts in the field as a promising tool for facilitating violent crime investigation (Meloy, 2006). This coding scheme breaks type of violence down into four categories; (a) instrumental, (b) instrumental/reactive, (c) reactive/instrumental, and (d) reactive. To be classified as instrumental aggression, the index offense was required to show evidence of some planning, and a clear goal or gain (e.g., revenge or retribution for past events, or monetary gain). Instrumental aggression implies a clearly identifiable purpose other than spontaneous anger or frustration, or provocation. To be categorized as reactive aggression, the index offense was required to show evidence that the primary motive was

anger or a display of aggression, that there was some evidence of provocation, or the aggression was an immediate response to interpersonal conflict without a cooling off period.

Index offenses classified as instrumental/reactive were primarily instrumental as described above, but did have evidence of reactive behaviour. Index offenses categorized as reactive/instrumental were primarily reactive as previously described, but did have evidence of instrumental behaviour.<sup>4</sup> A dichotomous variable for motivation was also created; (a) primarily instrumental, and (b) primarily reactive in order to evaluate any differences between a categorical and dichotomous method of rating instrumentality. Raters were blind to PCL:YV scores while coding for instrumentality. For examples of the four types of aggression refer to Appendix A

### 2.2.2 *Psychopathy*

The PCL:YV was used to establish the presence of psychopathic traits in the sample. The PCL:YV is a 20-item measure, where each item is rated 0, 1, or 2 (does not apply, applies to some degree, and applies completely). It provides a total score out of 40. Thirty is the suggested cutoff score to indicate the presence of psychopathic traits in youth. The PCL:YV allows clinicians and researchers to evaluate an individual on characteristics such as interpersonal deficits and antisocial behaviours. Although an overall score is used to determine the presence or absence of psychopathic traits, scores on the PCL:YV also are broken down into two Factor scores to allow interpretation of various elements that delineate psychopathy. The two Factors are interpersonal/affective and behavioural/antisocial, which can be broken down further into facets; these facets

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<sup>4</sup> In a few cases ( $N = 6$ ), it was not clear which categorization was most appropriate, and these were classified as unclear.

include (a) interpersonal, (b) affective, (c) behavioural, and (d) antisocial. The PCL:YV was based on the PCL-R (Hare, 2003), and, as outlined more thoroughly in the introduction was changed to reflect the developmental nature of youths. For example, item 18 on the PCL-R “juvenile delinquency,” which is based on known involvement with the criminal justice system as a youth, has been changed to “serious criminal behaviour,” which assesses convicted, charged, and self-reported antisocial behaviour.

The PCL:YV was administered on complete files by the author and by YFPS research assistants, all of whom were trained according to YFPS standards of administration. Raters were blind to the instrumentality coding while administering the PCL:YV. Although the PCL:YV is designed to be administered based on a detailed file review and a semi-structured interview, there is considerable evidence to indicate its validity based on file review alone (Forth, Kosson, & Hare, 2003). Structured interviews were not possible as all of the files used in the current study were closed, and the clients were no longer receiving services from YFPS for the index offense of interest.

### *2.2.3 Violence and Violence Severity*

Type of violence was coded based on the official conviction for the index offense. Index offenses ranged from relatively minor convictions such as uttering threats to relatively more serious convictions such as assault with a weapon/causing bodily harm. Homicide offenses were not included in the present study, in part because the author intended to compare the results of the current study to previously collected data on youth homicide perpetrators by Agar (2009).

Sadistic and gratuitous violence also were considered. Gratuitous violence was defined as violence that was in excess of what would be necessary to commit the offense.

Gratuitous violence was coded on a 4-point scale (0 = *none*, 1 = *minor*, 2 = *medium*, and 3 = *major*). Sadistic violence was defined similar to gratuitous in that it is an excessive use of violence; however, it requires that offenders admit that the excessive violence was perpetrated for their own pleasure (or there was official information to suggest this). Sadistic violence was coded on a 3-point scale (0 = *none*, 1 = *some*, 2 = *concrete*)<sup>5</sup>. Both types of excessive violence were coded for based on official police reports as well as offender statements regarding the index offense.

As mentioned, there is currently no best practice in place for assessing severity of violence in a given offense. Although some researchers use the index offense conviction (e.g., Sorensen & Cunningham, 2010), this method relies on information secondary to the violent act itself; an offender may be charged with one offense, but through the court process plead guilty to an agreed upon lesser charge. Therefore, using the official conviction as a measure of violence severity introduces unknown and unaccounted for variance. Another method for determining violence severity is based on criminal history (e.g., Farrington, 1997). Researchers using this method rely on past officially documented participation in or abstinence from violence. This is problematic, however, as it is necessary for researcher to have access to an accurate history of offending. In British Columbia, where the current sample was collected, the police are unable to press charges against youths. The police must investigate and provide evidence to the Crown prosecutor who then decides whether the youth will be charged. Therefore, despite a youth's engagement in violence being detected, it may not result in an official charge or record. Given this potential lack of information, and the potentially biasing issues mentioned

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<sup>5</sup> Sadistic violence was only coded as concrete if the offender stated specifically that they used excessive violence because they enjoyed it.

above, the current author devised a categorical classification for severity of violence. Kenny and Press (2006) evaluated several practices in place to assess severity of violence. They advocate the need for a consistent system and suggest that the best classification include consideration of the type, frequency, and outcome of the violent behaviour.

Based on the suggestions of Kenny and Press (2006), a categorical variable was created to code for severity of violence in the index offense. In the current sample, the frequency of violent behaviour was not available for the large majority of the sample (73%); therefore, it was not considered. The author created three categories of violence severity: (0) *no physical violence used*, (1) *physical violence used, no weapon use*, and (2) *physical violence with weapon use*, based on the official description of the violent offenses.

#### 2.2.4 Demographics, Offender History, and Offense Characteristics

Basic demographics, offender history, and offence characteristics variables were coded based on information contained in the psychosocial reports contained in the files. Offense characteristics such as weapon use, substance use, and location of the offense also were included, based on information in police reports. For further descriptions of the manner in which variables were coded, see Appendix B.

### 2.3 Procedure

All file information was coded by the researcher at the YFPS clinic in Kelowna, British Columbia, and the YFPS research team in Burnaby, British Columbia, using the coding scheme provided in Appendix B.



Analyses were completed using the Statistical Package for the Social Sciences (SPSS Version 14) using a type I error rate of .05. No corrections were made for familywise Type I error to ensure any new relations would not be disregarded. Other authors have adopted a similar approach (e.g., Juodis et al., 2009; Agar, 2009) in hopes of revealing important new findings. Accordingly, given the potential importance of these relations, the current author followed their precedent.

Reliability coding was completed on 15% of the sample for PCL:YV ratings. Raters of the PLC:YV were trained by YFPS in administration and scoring. Reliability coding also was completed on 15% of the sample for instrumentality ratings. All coders were trained in using the Woodworth and Porter (2002) coding scheme.

### 3 Results

#### 3.1 Coding Reliability

Cohen's Kappa was computed for the absolute agreement with the categorical instrumentality variable,  $k = .69$ ,  $p < .000$ , indicating good rater agreement. Cohen's Kappa also was calculated for the dichotomous instrumentality variable,  $k = 1.0$ ,  $p < .000$  indicating perfect rater agreement.

Absolute internal consistency was calculated for total ( $\alpha = .93$ ), Factor 1 ( $\alpha = .84$ ), and Factor 2 ( $\alpha = .95$ ) scores,  $ps \leq .001$ , on the PCL:YV. Cohen's Kappa was computed to determine consistency among raters' absolute agreement on the classification of offenders as either high (score above 30) or low (score 29 or below) psychopathy. This value indicated good agreement between the raters,  $k = .76$ ,  $p < .01$ .

#### 3.2 Descriptive Statistics

##### 3.2.1 Offender Characteristics

Offender age at time of the index offense ranged from 12 to 17 years ( $M = 15.5$ ,  $SD = 1.5$ ). A small percentage of the sample was aged 12 or 13 at the time of the violent offense (4.1%, and 13.4% respectively), but the majority were aged 14 through 17 years (20.6%, 20.6%, 20.6%, and 20.6%, respectively). Seventy-five offenders were male, and 22 were female. Sixty-five percent of offenders had attended the YFPS VOTP program in the Interior/Thompson Okanagan region, 17.6% in the Lower Mainland, 13.4% on Vancouver Island, 3% in Northern British Columbia, and 1% in the Kootenays. Half of the sample (50.5%) was Caucasian, 30.9% were of First Nations decent, 2.1% were South Asian, 4.1% were identified as Other/Mixed, and ethnicity was not specified for 12.4%.

Sixty-five percent of individuals had been exposed to some form of physical, sexual, or emotional abuse or neglect. Specifically, 52.6% of all offenders were abused physically, 15.5% were abused sexually, 31.3% were abused emotionally, and 36.1% were neglected<sup>6</sup>. A history of physical, sexual, emotional abuse, and neglect was not available for 5.2%, 9.3%, 10.4%, and 9.3% of the sample respectively. Of those that had been physically abused, 3.9% of cases were considered severe, 39.2% moderate, 25.5% mild, and 31.4% were of unknown severity<sup>7</sup>. Sexual abuse was coded for type but not severity; 13.3% of cases reported oral/genital contact, 13.3% genital/genital penetration, 6.7% other, and 66.7% were unknown.

Information regarding alcohol consumption was not available for the entire sample. Based on those for whom it was available, offenders appeared to begin drinking regularly at a variety of ages between 7 and 17 ( $M = 14.4$ ,  $SD = 2.8$ ). Of those who were using alcohol regularly at the time of assessment for the VOTP program, 14.9% used daily, 20.7% used a few times a week, 16.1% used weekly, 20.7% used a few times per month, 11.5% used once a month or less, and 16.1% were unknown. The majority of those who used alcohol were considered to use a severe amount (59.8%); 23% a moderate amount, 3.4% a mild amount, and 13.8% unknown. Offenders who used drugs reported beginning to use drugs regularly between age 7 and 16 ( $M = 11.99$ ,  $SD = 3.0$ ). Of those who were using drugs regularly at the time of assessment, the majority (58%) used daily, 18.2% used a few times per week, 9.1% used weekly, 5.7% used a few times per month, 1% used once a month or less, and 8% were unknown. Most offenders reported using a severe or moderate amount (43.2% and 34.1% respectively), 5.7% a mild amount,

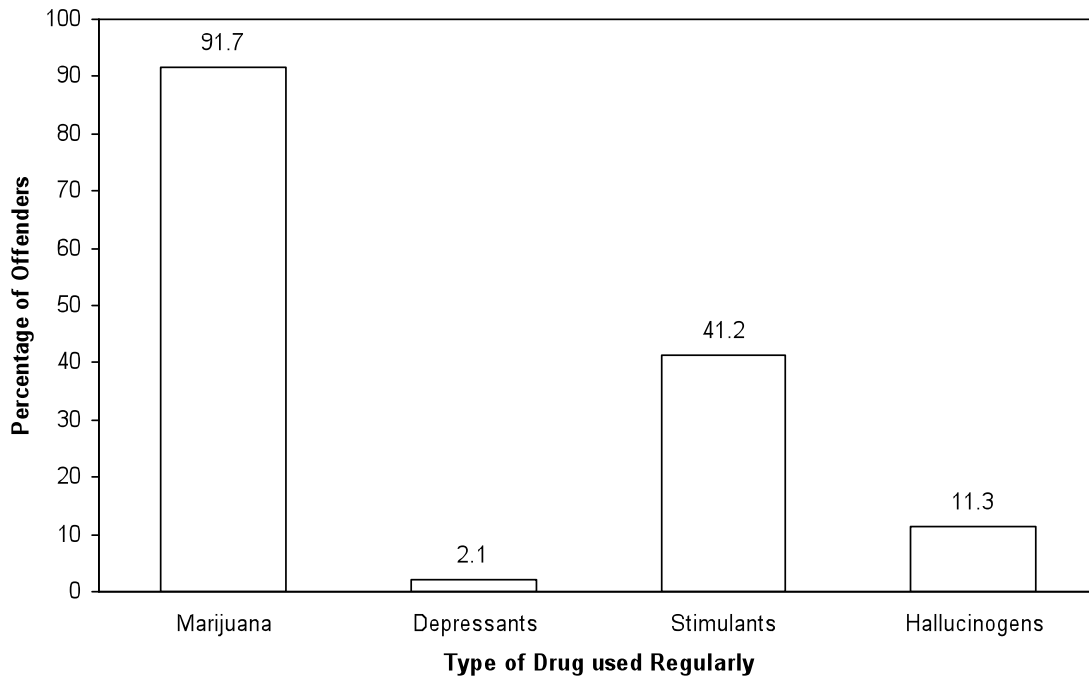
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<sup>6</sup> Percentages do not add to 100 as some offenders were exposed to more than one type of abuse.

<sup>7</sup> For definitions of the severity of abuse see the coding scheme in Appendix B.

and 17% unknown. Marijuana was by far the most popular type of drug used; 91.7% of those who reported using drugs used marijuana, 6.3% did not, and 2.1% were unknown (it was not specified what kind of drugs the offender use). Slightly fewer (41.2%) report using stimulants, 55.7% did not, and 3.1% were unknown. Eleven point three percent report using hallucinogens, 85.6% did not, and 3.1% were unknown. Almost all (94.8%) report not using depressants, 2.1% did, and 3.1% were unknown.

**Figure 1.** *Percentage of offenders who reported using drugs by type of drug used regularly.*



Age at first known offense was available for 86% of the sample, and ranged from 10 to 17 years ( $M = 15$ ,  $SD = 3.3$ ). Age at first police contact was available for 67% of the sample, and ranged from 9 to 17 ( $M = 13.5$ ,  $SD = 2.0$ ). Number of official charges at the time of assessment was available for 95.9% of the sample, and ranged from 1 to 30 ( $M = 5.23$ ,  $SD = 5.0$ ).

### 3.2.2 *Victim Characteristics*

There were 129 victims across the 97 offenses: 18 offenses involved more than one victim, and 2 offenses did not involve a victim<sup>8</sup>. Fifty two point seven percent were male, 34% were female, 11.3% involved both male and female victims, and 2% involved no victim. Of the 96 offenses that involved victims, 79.4% involved only one victim, 12.3% involved two victims, 4.1% involved four victims, and 2.1% involved six victims, and 2.1% involved no victims. Victims were mostly adolescents (55.7%), some adults (26.6%), and a few children (7.3%); 6.2% involved mixed age groups of victims, and victim age was unknown for 4.2%. Regarding relationship to the offender, about half (49.5%) were acquaintances of the offender, 22.4% were strangers, 17.7% family, and 10.4% friends.

### 3.2.3 *Offense Characteristics*

Weapons were used to harm the victim in 37.1% of offenses, used to threaten the victim in 12.4%, and were in the offender's possession but not used in 6.2%. There were no weapons involved in 44.3% of offenses. Knives were the most common weapon when one was involved (44.4%) followed closely by traditional (i.e., bat) and nontraditional (i.e., exercise bike) objects used as weapons (42.6%); guns were used infrequently (7.4%), chemical sprays (i.e., bear mace) were used in 1.9% of offenses, and there was more than one weapon in 3.7% of offenses. Weapons were obtained opportunistically in 47.2% of offenses. Less frequently, weapons were chosen prior to the offense (35.8%), and in 17% of offenses it was unclear how the weapon was obtained. Just over half of offenses (52.6%) occurred in public, 20.6% in the offender's residence, 14.4% at school

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<sup>8</sup> Two weapons related offenses (possession of a prohibited weapon, and carry a concealed weapon) did not directly involve any victims.

or work, 9.3% at another residence, and 3.1% were mixed locations. Information about alcohol use was available for 61.9% of offenses; the majority of these (30.9%) involved no alcohol, 2.1% a moderate amount, 10.3% an extreme amount, and in 18.6% an indeterminate amount of alcohol was involved. Information about drug use at the time of the offense was available for 60.9% of the sample; of these cases, 40.2% involved no drugs, 11.3% involved the use of minor drugs (such as marijuana or hashish), 1% involved use of major drugs (such as cocaine or crystal methamphetamine), 6.2% involved use of both minor and major drugs, and 2.2% involved drugs although the offender was not intoxicated at the time of the offense.

### 3.3 *Primary Analysis*

#### 3.3.1 *Principal Variables of Interest*

3.3.1.1 *Psychopathy*. Psychopathy, as measured by the PCL:YV, was assessed for 97 offenders. Scores ranged from 1 to 37 ( $M = 20.5$ ,  $SD = 8.3$ ). Most offenders (82.5%) scored below 30, 17.5% of offenders scored 30 or higher. When psychopathy was assessed categorically, just under half (49.5%) of offenders scored in the low range (1-19), 33% scored in the moderate range (20-29), and 17.5% scored in the high range (30-40).

3.3.1.2 *Instrumentality*. Instrumentality of violence was coded for all 97 offenses; however, the instrumentality for 6 offenses (6.2% of the sample) was unclear. Of these 91 offenses, 48.4% were purely reactive, 9.9% were reactive/instrumental, 9.9% were instrumental/reactive, and 31.8% were purely instrumental. A second instrumentality variable was created by collapsing the purely reactive and reactive/instrumental categories to create a primarily reactive category and collapsing the purely instrumental

and instrumental/reactive group to form a primarily instrumental category. A nonparametric chi-square failed to reveal a significant difference in the frequency of primarily instrumental and primarily reactive offenses,  $\chi^2(1, N = 91) = 2.5, p = 0.116$ .

Instrumentally violent offenses also were coded for their primary motivation; 37.5% were revenge or retribution, 34.4% were monetary gain, 7.9% were due to jealousy over a female/male, 2.6% were to obtain non-consensual sex, 7.9% were other, and 9.7% were unclear.

Three concepts that are arguably central to the ratings of instrumentality and reactivity of the offense also were coded: emotional arousal of the offender, impulsivity, and goal directedness. Emotional arousal was high for 8.2% of the sample, moderate for 27.3%, low for 13.4%, and unclear for 51.1%. Half of the offenses (50.5%) were considered highly impulsive, 24.7% somewhat impulsive, 17.5% not impulsive, and 7.3% were unclear. There was evidence of goal directedness in 32% of offences, no evidence in 55.7%, and 12.3% were unclear. Correlations between these three facets did not reveal any significant relations. Subsequent chi-square tests with these facets and the dichotomous instrumentality variable were conducted. Offense impulsivity  $\chi^2(3, N = 96) = 41.6, p < 0.001$ , emotional arousal  $\chi^2(3, N = 96) = 48.4, p < 0.001$ , and goal directedness  $\chi^2(3, N = 96) = 66.2, p < 0.001$  were all related to instrumentality. A simultaneous multiple regression indicated that only goal directedness contributed significantly to the prediction of instrumentality,  $R^2 = .28, R^2_{\text{adj}} = .26, F(3, 87) = 11.3, p < .001$ .

**Table 1.** *Observed and expected frequencies of impulsivity, arousal, and goal directedness based on chi-square analyses*

		Observed <i>N</i>	Expected <i>N</i>
Impulsivity	Unclear	6	
	Not impulsive	17	30
	Somewhat Impulsive	24	30
	Highly Impulsive	49	30
Arousal	Unclear	52	
	Low	13	14.6
	Moderate	23	14.6
	High	8	14.6
Goal Directedness	Unclear	11	
	No Evidence	54	42.5
	Evidence	31	42.5

3.3.1.3 *Severity of violence.* Over half of the offenses (54.9%) involved physical violence with no weapon use against the victim, 39.6% involved physical violence with weapon use against the victim, and 5.5% involved no physical violence and no weapon use.

3.3.1.4 *Number of perpetrators.* The majority of offenses (70.8%) involved a single perpetrator, 13.6% two offenders, 9.4% three offenders, 4.2% four offenders, 1% five offenders, and 1% six offenders. A new variable was created to represent individual perpetrator (IP) and multiple perpetrator (MP; 2 or more perpetrators) offenses. A chi-square analysis revealed that offenders were significantly more likely to commit individual perpetrator offenses than multiple perpetrator offenses,  $\chi^2 (1, N = 97) = 15.7, p < 0.001$ .

3.3.1.5 *Gratuitous and sadistic violence.* Most offenses (82.5%) did not involve the use of gratuitous violence, 8.2% involved a minor amount, 7.2% a medium amount,



and 2.1% a major amount. Some sadistic violence was used in only 2.1% of offenses, 97.9% involved no sadistic violence, and there was concrete evidence of sadistic violence in 0% of offenses. Gratuitous and sadistic violence variables were not used in subsequent analyses due to low rates of occurrence.

### *3.3.2 Multivariate Analyses of Motivation by Psychopathy and Violence Severity*

A multinomial logistic regression analysis was performed to assess the prediction of membership in one of four categories of type of violence (instrumental, instrumental/reactive, reactive/instrumental, and reactive), on the basis of two predictors. The predictors were psychopathy (continuous score, 0-40), and severity (categorical score, 0-2). After exclusion of 6 cases with missing values for instrumentality, data from 91 offenders were available for analysis. This analysis revealed a violation of the assumptions of logistic regression; there were missing values in too many cells to reliably run the procedure.

Subsequent analysis was conducted with psychopathy as a dichotomous (nonpsychopathic and psychopathic), as well as a categorical (low, moderate, high) variable to account for this violation. When the analysis was repeated with psychopathy as a dichotomous variable, the model was improved, but still failed to reach significance,  $\chi^2(9, N = 91) = 8.6, p = .476$ . When psychopathy was entered as a categorical variable (three groups), the model improved further although it still failed to reach significance,  $\chi^2(12, N = 91) = 16.3, p = .179$ . Overall classification with this model (considering psychopathy, instrumentality, and offence severity) was unimpressive. On the basis of psychopathy and severity as categorical variables, correct classification rates were 77%

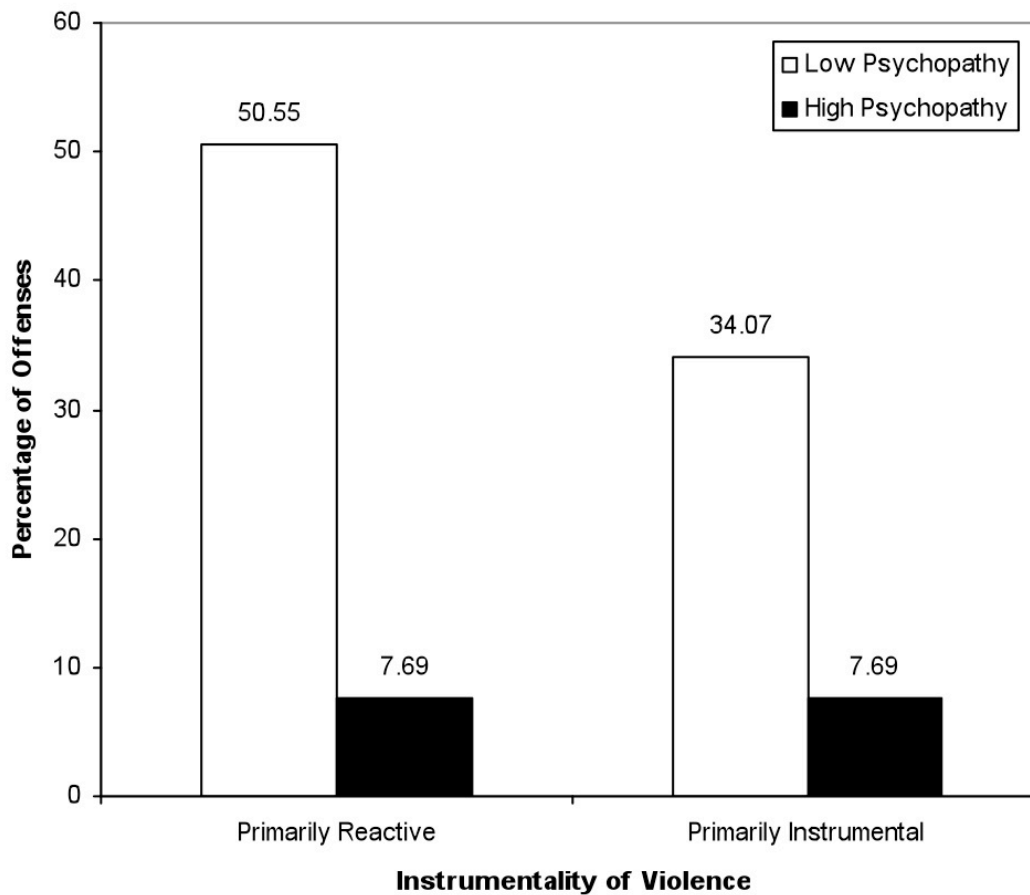
for reactive offences, 0% for reactive/instrumental offenses, 0% for instrumental/reactive offenses, and 48.3% for instrumental offenses.

Based on the previous analysis, a direct logistic regression analysis was performed with dichotomous instrumentality (primarily reactive and primarily instrumental) serving as the outcome variable and two predictors: psychopathy (dichotomous and categorical), and severity of violence (categorical). Analysis was first conducted with psychopathy as a categorical variable, and it failed to reach significance,  $\chi^2(4, N = 91) = 5.0, p = .286$ . When analysis was conducted with psychopathy as a dichotomous variable, it was improved, but also failed to reach significance,  $\chi^2(3, N = 91) = 4.8, p = .190$ . Overall classification was improved with this model (62.6%) over the same model with motivation as a categorical variable; 88.7% primarily reactive were correctly classified, and 26.3% of primarily instrumental were correctly classified.

### 3.3.3 *Psychopathy*

3.3.3.1 *Instrumentality*. The relation between the categorical instrumentality variable and continuous psychopathy scores was not significant,  $r(91) = .05, p = .648$ . The correlation between the categorical instrumentality variable and categorical psychopathy was not significant  $\chi^2(1, N = 91) = .462, p = .497$ . Further, the relation between dichotomous psychopathy and instrumentality was not significant,  $\chi^2(2, N = 91) = .522, p = .770$ .

**Figure 2.** *Percentage of offenses by instrumentality and psychopathy.*



Based on the previous research (i.e., Flight & Forth, 2007), I expected that Factor 1 as well as facets 1 and 2 of the PCL:YV would be strong predictors of instrumentality. A multiple regression analysis was conducted; Factor 1 scores were entered in block one, and Factor 2 scores in block two. The results of this regression were significant for Block 1, indicating that Factor 1 scores did account for a significant proportion of instrumentality of the offense,  $R^2 = .05$ ,  $R^2_{adj} = .04$ ,  $F(1, 89) = 4.9$ ,  $p < .05$ . In step 2, Factor 2 scores did not contribute significantly to the prediction of instrumentality,  $R^2 = .06$ ,  $R^2_{adj} = .04$ ,  $F(2, 88) = 2.7$ ,  $p < .05$ . A subsequent multiple regression analysis was conducted to evaluate facet scores. The results of this regression approached significance for Block 1, indicating that facet 1 scores were related to instrumentality of the offense,

$R^2 = .038$ ,  $R^2_{\text{adj}} = .027$ ,  $F(1, 87) = 3.455$ ,  $p < .05$ . All subsequent Blocks were statistically nonsignificant indicating that facet 2,  $R^2 = .052$ ,  $R^2_{\text{adj}} = .030$ ,  $F(2, 86) = 2.339$ ,  $p = .102$ , facet 3,  $R^2 = .060$ ,  $R^2_{\text{adj}} = .027$ ,  $F(3, 85) = , p = .151$ , and facet 4,  $R^2 = .068$ ,  $R^2_{\text{adj}} = .023$ ,  $F(4, 84) = 1.521$ ,  $p = .203$ , scores were not significantly related to instrumentality of the offense.

Correlation analyses were also completed to determine if PCL:YV facet scores were related to violence severity. Facet 1,  $r(97) = .111$ ,  $p = .277$ , facet 3,  $r(97) = -.027$ ,  $p = .792$ , and facet 4,  $r(97) = -.008$ ,  $p = .940$ , were not significantly correlated. Facet 2 was significantly negatively correlated with violence severity,  $r(97) = -.249$ ,  $p < .05$ .

3.3.3.2 *Number of perpetrators*. I expected that the number of perpetrators may influence the motivation of high and low psychopathic offenders.

A correlation analysis was performed to assess the relation between the number of perpetrators and continuous psychopathy scores. This analysis was not significant,  $r(96) = -.1$ ,  $p = .481$ . Analysis was repeated using the dichotomous number of perpetrators variable and continuous psychopathy scores. This analysis was also not significant,  $r(97) = -.1$ ,  $p = .229$ . Low psychopathy youths were selected and chi-square analysis did not reveal a significant relation between number of perpetrators and dichotomous instrumentality,  $\chi^2(1, N = 80) = 0.9$ ,  $p = .337$ . When only high psychopathy youths were selected, the analysis was also not significant,  $\chi^2(1, N = 17) = 0.4$ ,  $p = .515$ .

### 3.4 *Secondary Analysis*

#### 3.4.1 *Ethnicity*

Given that the large majority of the sample was identified as either Caucasian (50.5%) or First Nations (30.9%), the author evaluated whether there were any meaningful differences in the main variables of interest in consideration of ethnicity.

*Psychopathy.* A point biserial correlation revealed no significant differences between continuous psychopathy scores and ethnicity  $r(79) = -.17, p = .143$ . A chi-square analysis revealed no significant difference between dichotomous psychopathy scores and ethnicity  $\chi^2(1, N = 79) = .17, p = .681$ .

*Instrumentality.* Chi-square analyses revealed no significant differences between categorical,  $\chi^2(3, N = 74) = 4.21, p = .240$ , and dichotomous instrumentality,  $\chi^2(1, N = 74) = 1.67, p = .196$  and ethnicity.

*Severity.* A chi-square analysis revealed no significant differences between severity of violence and ethnicity,  $\chi^2(1, N = 79) = .76, p = .683$ .

#### 4 Discussion

The current study investigated the relationship between psychopathy, instrumentality of violence, and violence severity in a large sample of violent youth offenders in British Columbia. Based on the extant literature (e.g., Flight & Forth, 2007; Woodworth & Porter, 2002), I hypothesized that youths with high levels of psychopathic traits would use more instrumental violence than youths with low levels of psychopathic traits. Youths with high levels of psychopathic traits did not use significantly more instrumental violence overall than youths with low levels of psychopathic traits. Youths with low levels of psychopathic traits used more reactive than instrumental violence, and youths with high levels of psychopathic traits, in fact, used the same amount of instrumental and reactive violence (see Figure 2). Psychopaths use of instrumental violence within the current sample was not significantly different overall compared to nonpsychopaths. The base rate of psychopathy in the current study was consistent with previous investigations with criminal adult populations (e.g., Hare, 2003; Flight & Forth, 2007). Specifically, 17.5% of the current sample scored above 30, indicative of high levels of psychopathic traits.

Interestingly, psychopathic offenders were as likely to have committed primarily reactive and primarily instrumental offenses. Youths high in psychopathic traits used both instrumental and reactive violence (when psychopathy was considered as a dichotomous variable); whereas in previous samples of murders, adults and youths high in psychopathic traits had a strong preference for instrumental violence. Offenders low in psychopathic traits, however, did follow the expected pattern, and used more reactive than instrumental violence. In contrast to the current results, Agar (2009) found that

youths who had specifically committed a homicide and were high in psychopathic traits were more likely to use instrumental violence. Similarly, in Woodworth and Porter's (2002) study, psychopathic adult homicide offenders used significantly more instrumental violence than their nonpsychopathic counterparts. This discrepancy in results might partially be explained by a closer consideration of the specific Factors and facets that comprise psychopathy. In fact, a more refined look at the two Factors that comprise the PCL:YV actually suggests that these results are quite similar to previous research with adults and youths.

Previous work has indicated that PCL:YV Factor 1 scores are more strongly related to instrumental violence than Factor 2 scores. As mentioned earlier, Factor 1 delineates the affective and interpersonal characteristics of psychopathy while Factor 2 accounts for behavioural and antisocial disposition. For example in a previous investigation of instrumentality of violence in young offenders, Flight and Forth (2007) found that Factor 1 scores on the PLC:YV significantly contributed to the prediction of instrumentality, and explained the significant finding between instrumentality and psychopathy. Further, it has been shown that high levels of these interpersonally callous traits contribute to the perpetration of instrumental offenses in adult offenders (e.g., Walsh et al., 2009; Woodworth & Porter, 2002). Walsh and colleagues found that facets 1 (one of the two facets that comprise Factor 1) and 4 (one of the two facets that comprise Factor 2) were positively related to instrumental violence, and that facet 2 was negatively related. Consistent with these studies, the current study also found that Factor 1 scores did account for a significant proportion of the instrumentality in the offense. Further, when Factor 2 scores were subsequently considered, they did not contribute over and

above Factor 1 scores to the prediction of instrumentality. Further analyses also examined how each of the four facet scores contributed to predicting instrumentality. Facet 1 (interpersonal) was a marginally significant predictor of the instrumentality of an offense, whereas facets 2, 3, and 4 were not. This is similar to other findings in the youth literature (e.g., Flight & Forth, 2007), although somewhat dissimilar to the adult literature (e.g., Walsh et al., 2009). Of particular interest, however, Walsh and colleagues' finding that facet 4 predicted instrumentality has not been supported in the youth or adult literature. These authors urged caution when interpreting this particular finding because it was unexpected, and recommended further evaluation of this relationship in future samples.

A consideration of the relationship between the specific facets and instrumentality also suggests that important differences may exist between antisocial adults and youth in what contributes to their tendencies towards using instrumental violence. Interestingly, facet 2 (affective) scores do not appear to contribute to instrumentality in youths, unlike the findings of Walsh et al. (2009). Theoretically, pronounced affective and empathetic deficits would understandably be related to the callous treatment of others. Some of the findings from the current study demonstrated this relationship. For example, facet 2 scores were negatively correlated with violence severity. However, the data did not support this relation between facet 2 and instrumentality. This finding may in fact be related to the nature of the items included in facet 2: lack of remorse, shallow affect, callous/lack of empathy, and failure to accept responsibility for own actions (Forth, Kosson, & Hare, 2003). In order for these characteristics to influence youth's use of instrumental violence, they would have to engage in prospective introspection, and recognize that they would not suffer emotional consequences as a result of their actions.



Alternatively, given that affective deficits and impaired empathetic responses would logically be related to the callous treatment of others, this finding of statistical nonsignificance may be more simply related to reduced power, rather than the absence of a relationship. Indeed, when Flight and Forth (2007) broke down their results to examine the specific facets, they also found that only facet 1 approached significance. Although it appears that the association between psychopathy and instrumental violence in youths is largely due to the interpersonal domain (which certainly also reflects the callous, cold-blooded, and manipulative nature of the types of offences that were committed), it would be useful to examine further facet-level relationships in a larger sample.

As alluded to earlier, psychopathic traits and callous-unemotional (CU) traits are linked. Factor 1 scores (inclusive of both facet 1 and 2) on the PCL:YV closely resemble CU traits as described by Frick and colleagues (Frick, Bodin, & Barry, 2000). A lack of guilt, lack of empathy, and callous use of others for one's own gain, relate directly to the PCL:YV items lack of remorse, lack of empathy, and manipulateness. This particular combination of characteristics, as described by PCL:YV Factor 1 scores or CU traits, is an important predictor of the use of instrumental violence. Moreover, other empirical evidence also has suggested that as levels of CU traits increase, so does violence severity (e.g., Stickle, Kirkpatrick, & Brush, 2009). Notably, the current study found that instrumental violence was related to a callous interpersonal style; however, the next section will consider how these traits and instrumentality are related to violence severity.

Acknowledging the importance of understanding instrumentality of violence, the current study also was the first to directly test the selective impulsivity hypothesis (Woodworth & Porter, 2002) in a sample of generally violent youth offenders. The

current study was one of the first to also include a specific severity measure to consider whether youths (and in particular psychopathic youths) used less reactive violence as the severity of the offence increased. I hypothesized that youths with high levels of psychopathic traits would use less reactive violence as the severity of violence increased. Instrumentality was coded according to Woodworth and Porter's (2002) coding scheme; 45.4% of offenses were purely reactive, and 29.8% were purely instrumental, while the remaining offences were a combination of instrumental and reactive violence. Previous research and theory concerning adult violent offenders has suggested that it is often difficult to categorize type of violence as either purely reactive or purely instrumental, and that it is usually a combination of both (e.g., Bushman & Anderson, 2001; Woodworth & Porter, 2002). However, the current study suggests that for youth violence (excluding homicide) the type of violence typically is clearly instrumental or reactive (approximately 75% of the cases in the current sample). Somewhat surprisingly, only 18.6% of the offences involved the use of both of reactive and instrumental violence, indicating that for youth offences there generally appears to be one clear type of violence used.

Severity was coded based on offense characteristics; 54.9% of offenses involved physical violence with no weapon use, 39.6% involved physical violence with weapon use, and only 5.5% involved no physical violence and no weapon use. When considering psychopathy (both as a dichotomous and a categorical variable) and violence severity as predictors of instrumentality, the relation was not significant within the current sample. In other words, the selective impulsivity hypothesis was not supported within this sample of generally violent offenses. Youth with high levels of psychopathic traits (as well as the

non psychopathic youths) did not use less reactive violence as the severity of the offense increased.

In contrast to these results, in a sample of British Columbia youth homicide offenses, Agar (2009) found that youths with high levels of psychopathic traits did use less reactive violence as the murders became relatively more brutal. This author coded offense severity based on the presence or absence of gratuitous and sadistic violence. Offenses that contained gratuitous and sadistic violence were more likely to involve instrumental than reactive violence. Therefore, when considering psychopathy and violence severity as predictors of instrumentality of generally violent offenses, as opposed to homicide (Agar, 2009), we do see support for the selective impulsivity hypothesis. Given the different relations between psychopathy, instrumentality, and severity between generally violent and homicide offenses, it appears that the relationship is not linear as expected; rather, there seems to be a clear break point. Youths with high levels of psychopathic traits do not become less reactive at a predictable rate as the severity of the offense increases, they do, however, appear to restrict their use of reactive violence for the most severe offense, homicide (and become progressively more instrumental as the homicide offence increases in gratuitous and sadistic characteristics).

Although it appears that psychopaths can control their impulsivity as the severity of crime increases (from a violent offence to a homicide). Less clear is the nature of their motivation for this. Woodworth and Porter (2002) speculated that psychopaths may control their reactivity, and invest more in the planning and implementation of these more serious offences so that they will reduce the probability that they will be apprehended. Psychopaths are unlikely be deterred from violence based on concern for others, but

instead by the legal consequences to themselves, which leads to less use of reactive violence when it could put them at risk. Moreover, a long line of research suggests that psychopaths also appear to enjoy the careful planning, preparation, and carrying out of extremely violent crimes (e.g., Glenn & Raine, 2009). Indeed, for some psychopaths, the premeditation may be more enticing than the act itself. Premeditated and predatory violence may also be facilitated by the typical psychopath's inability to experience empathy or remorse.

Interestingly, 75.2% of offenses were considered either highly or somewhat impulsive. In the literature, impulsivity has been used to support the classification of instrumentality (e.g., Agar, 2009). Offenses classified as instrumentally violent should not contain a significant degree of impulsivity. In the current sample, a small number of offenses that were classified as primarily instrumental (which includes the instrumental/reactive category) did contain elements of impulsivity. The current, as well as previous studies have classified offenses based on the instrumentality of violence overall. However, given youth's propensity towards impulsivity, it may be important to evaluate the impulsive or instrumental nature of each of the main aspects of the offense. In particular, it may be of value to evaluate impulsivity and instrumentality of the offense overall, for victim choice, and for location of the offense.

Research investigating psychopathy has also highlighted the necessity of considering impulsivity in youths (e.g., Frick, Bodin, & Barry, 2000; Pardini, Lockman, & Frick, 2003). Pardini et al. (2003) evaluated the predictive ability of a two-dimensional model considering callous-unemotional (CU) traits and impulsivity/conduct problems (I/CP) by measuring several outcomes including behavioural dysregulation and

delinquency in justice involved youths. The authors found that the I/CP factor was associated with increased behavioural dysregulation. Further, youths with high levels of psychopathic traits may be more generally impulsive than their adult counterparts, explaining why they do not appear to reduce, or control, their impulsivity to the same extent during offenses as some adults. Increased impulsivity in high psychopathy youths may have led to a greater proportion of reactive offenses in the current sample, suggesting that, somewhat paradoxically, impulsivity is a critical consideration when evaluating instrumentality of general violence in youths. Although youth-perpetrated homicides show a high level of premeditation, particularly for those youth high in psychopathy (e.g., Agar, 2009), other types of violent offences committed by youths appear in many cases not to be particularly well thought out.

The number of perpetrators involved in the offense was also evaluated, and the potential influence that multiple perpetrators might have on instrumentality and severity of violence. Previous research has found that in an adult population (Juodis et al., 2009), multiple perpetrator (MP) homicides are more likely to involve instrumental violence, while multiple and individual perpetrated homicides are equally likely to contain gratuitous violence. In a youth population, MP homicides were also more likely to be associated with instrumental violence, and in contrast with adults, were more likely to contain gratuitous violence than IP offenses (Agar, 2009). In the current study, number of perpetrators could not be adequately addressed due to a low prevalence rate of MP offenses. In the current sample, surprisingly over two thirds of the offenses involved only one perpetrator, whereas in the youth homicide literature, only one third of the offenses involved a single perpetrator. Anecdotally, this suggests that the severity of the offense

may also be related to the number of offenders in youth-perpetrated violent offenses. Although there were instances during which other youths encouraged the perpetrator to use violence in the current sample, the majority of offenses in the current sample involved only one perpetrator. This certainly contradicts the stereotype of the majority of youth violence being instigated by negative peer influence and the activity of gangs or other types of deviant groups of adolescents that interact with each other. While it is possible that these deviant groups still influence single perpetrator acts of violence, what is clear from the current study is that the violence is not often committed in a group or with even two perpetrators.

Alcohol and drug use specifically during the offense, as well as general alcohol and drug use by the offenders in the sample, was also considered. It was expected that drug and alcohol use would be common during the perpetration of offenses. Of those who admitted to using drugs regularly, almost all (91.7%) used marijuana, with few using depressants, stimulants, hallucinogens, or a combination of the above (see Figure 1). Despite a large proportion of offenders reporting regular use of substances, only approximately half reported being under the influence of drugs at the time of the offense. Information about the use of alcohol during the index offense was available for two thirds of the sample. Of these cases, half involved no alcohol use. While drug and alcohol use is a common occurrence among generally violent youths, it may not be the main contributor or explanation for as many of the violent offences as is typically conveyed by both the media and anecdotal evidence. Further, based on the moderate prevalence rates of alcohol and drug use at the time of the offense, it would appear that they only had a minor influence on the amount of reactivity involved in a limited number of the violent offences

that were examined. The relationship between alcohol use and reactivity should be evaluated specifically in future studies to determine if the disinhibition often associated with alcohol intoxication is related to an increase in the use of reactive violence.

#### *4.1 Limitations and Future Directions*

It should be noted that there was a somewhat restricted range in the level of violence severity that may have contributed to the statistical nonsignificance of the severity variable within the current sample. Only 5.5% of the offenses in the current sample were classified in the lowest severity category, 54.8% were in the middle severity category, and 39.6% were in the highest severity category. A significant relationship may not have been detected given that all levels of severity were not equally represented. Further, as considered above, although the current sample did include a wide range of types of violent offenses (which were categorized into three levels of violence severity), it did not include homicide offenses-arguably the most serious type of violence. Moreover, the current sample had a limited number of primarily instrumental offenses compared to previous investigations (e.g., Agar, 2009; Flight & Forth, 2007). For example, in Agar's (2009) homicide study, 70.4% of offenses were primarily instrumental, whereas in the current study only 39.2% of the offenses were primarily instrumental.

Notably, inclusion in the current sample and ratings of crime severity were based solely on the index violent offense. These generally violent offenses may be less often detected and reported than homicides, which also typically have higher clearance rates once detected. Therefore, the current sample may not accurately represent the individual offender's typical use of instrumental or reactive violence. Instead it may only represent

the instrumentality of the violent act which resulted in a charge and conviction. This offense may not be representative of the typical degree of instrumentality that the offender generally demonstrates. Although the index offense was well documented, the offender's entire history of violence was not always as thoroughly described. For example, it was noted in one offender's file that he/she had been involved in many physical altercations and had been a person of interest in several police investigations. Unfortunately these incidents were not elaborated on and a comprehensive account of the offender's pattern of violence was indiscernible.

Although the current study did employ a severity measure based on empirically derived suggestions (see Kenny & Press, 2006), a more refined scale for severity may be needed. Ideally, a future study should consider the selective impulsivity hypothesis with a sample of violence offenses that vary in severity and include homicide offences. Using a comprehensive, gradated, measure for severity would be helpful to evaluate the level of violence severity at which youths with high levels of psychopathic traits potentially begin to monitor their reactivity, and engage in more instrumental violence. Further, the current study did not consider the presence or degree of gratuitous violence when assessing severity. In this sample, the objective descriptions of the offenses did not include sufficient information to fully evaluate gratuitous violence. Future studies would benefit from including a measure of gratuitous violence, in addition to consideration for the extent of harm to the victim, and history of violence, in measures of violence severity.

The author suggests evaluating the selective impulsivity hypothesis in youths with high levels of psychopathic traits using a within subjects design. By investigating a sample of only high psychopathic youths, researchers could code instrumentality for each



known violent offense, and evaluate whether differences exist at varying levels of severity on an individual basis. Given a sufficiently detailed history of violence, this design could provide direct evidence that youths with psychopathic traits are indeed monitoring their impulsivity when engaging in increasingly severe offenses. Further comparisons could be made within this group to evaluate if other variables (e.g., gender, number of perpetrators) affect this relationship. An interesting extension of this research would be to compare youth and adult offenders using the proposed within subjects design, given that impulsivity is a characteristic of typically developing youths.

Finally, the selective impulsivity hypothesis should be directly tested in a large sample of adult violent offenders. Preferably, this sample would include both non-homicidal and homicidal violence. Researchers pursuing this line of inquiry could use a mixed design to compare instrumentality of violence between (i.e., psychopaths and nonpsychopaths), and within offenders (i.e., evaluating instrumentality at varying levels of severity in psychopaths). Investigators could then compare these results with those found in the youth literature to evaluate whether developmental differences exist. Alternatively, a cross-sectional design evaluating instrumentality of violence in offenders aged 12 to 30 could determine if a shift in the pattern of instrumentality occurs due to age.

#### 4.2 *Conclusion*

The current study investigated psychopathy and instrumentality of violence in youths who perpetrated generally violent offenses in a Canadian sample. These offenses were largely committed by lone males, aged 14 to 17; the majority were Caucasian. Victims were primarily adolescent (aged 13 to 17) males; many were considered an

acquaintance of the offender. Almost two thirds of offenses were primarily reactive in regards to motivation, whereas about one third were primarily instrumental.

The current study was the first to directly test the selective impulsivity hypothesis in violent youths. The main hypothesis that offenders in the high psychopathy group would use less reactive violence than offenders in the low psychopathy group, particularly as the offenses became more severe, was not supported. Although there was no evidence for selective impulsivity when considering severity within the current sample, there was support for this hypothesis when considered in conjunction with extant literature on instrumentality of youth-perpetrated homicide, as well as the adult literature. Specifically, youths high in psychopathic traits commit less instrumental violence for generally violent offences compared to homicide offences. In fact, they used precisely the same amount of instrumental and reactive violence in generally violent offenses. Nonpsychopaths, on the other hand used little instrumental violence in generally violent offenses and only slightly more during homicide offenses. Results also offered support for the relation between PCL:YV Factor 1 scores, specifically facet 1 scores, and instrumental violence, replicating the findings of Flight and Forth (2007; Campbell et al., 2004). High PCL:YV Factor 1, in particular facet 1 scores, were associated with a higher degree of instrumentality of the offense, demonstrating the importance of considering how the emotional, and even more importantly, the interpersonal characteristics of these youth might impact their offending behaviour.

Considering the above results, the current study also offers some practical implications. Understanding the use of instrumental violence in youths may be important when establishing treatment and intervention plans. Given that individuals who commit

less severe, generally violent crimes, typically use reactive violence, they would likely benefit most from interventions aimed at anger management and emotional regulation. In contrast, individuals who commit homicide offenses typically use instrumental violence, and would likely benefit more from interventions aimed at harm reduction, or identifying other means to achieve their goals. Further, some youths who did commit instrumental violence in the current sample appeared to be suffering from specific affective and interpersonal deficits that could be considered in more detail in treatment and intervention programs aimed at reducing youth violence. For example, it would appear that youths who exhibit specific interpersonal deficits such as a conning and manipulative disposition are more prone to using violence to obtain their goals rather than learning other more appropriate techniques to fulfill their needs. In fact, it would appear that for a small group of youths (e.g., those scoring high on Factor 1 of the PCL:YV), using more instrumental premeditated violence to both resolve conflict and achieve their goals has become somewhat normalized as an effective method. This is something that needs to be addressed in treatment before this instrumental violence arguably becomes more engrained and far less malleable as they enter adulthood. Finally, many of the offenses in the current sample involved only one perpetrator, and several were the result of an interpersonal dispute. Given the relationship between interpersonal disputes and the use of violence, it may be beneficial to include interpersonal problem solving curriculum in treatment plans to address this tendency by some towards violent conflict resolution.

In conclusion, although this study provides an advancement of our current knowledge about psychopathy and instrumentality of youth perpetrated violence, there is much work to be done to fully evaluate the selective impulsivity hypothesis. However,

the current study adds valuable knowledge to our understanding of the characteristics and instrumentality of youth violence while enhancing our knowledge of potential intervention and treatment methods.

## References

- Agar, A. D. (2009). Teenage killers: A comprehensive examination of Canadian youth-perpetrated homicide, psychopathy, motivation, violence, and the number of perpetrators. M.A. thesis, Department of Psychology, University of British Columbia Okanagan, Kelowna, Canada.
- Agnew, R. (1985). A revised strain theory of delinquency. *Social Forces*, 64, 151-167.
- Agnew, R. (2001). Building on the foundation for general strain theory: Specifying the types of strain most likely to lead to crime and delinquency. *Journal of Research in Crime and Delinquency*, 38, 319-361.
- Andershed, H., Kerr, M., Stattin, H., & Levander, S. (2002). Psychopathic traits in non-referred youths: Initial test of a new assessment tool. In E. S. Blaauw & L. Sheridan (Eds.), *Psychopaths: Current international perspectives* (pp. 131-158). The Hague: Elsevier.
- Archer, J., & Coyne, S. M. (2005). An integrated review of indirect, relational, and social aggression. *Personality and Social Psychology Review*, 9, 212-230.
- Baker, L. A., Jacobson, K. C., Raine, A., Isabel Lozano, D., & Bezdjian, S. (2007). Genetic and environmental bases of childhood antisocial behavior: A multi-informant twin study. *Journal of Abnormal Psychology*, 116, 219-235.
- Bandura, A. (1977). *Social learning theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Bandura, A. (1978). Social learning theory of aggression. *Journal of Communication*, 28, 12-29.

- Bandura, A., Ross, D., & Ross, S. A. (1961). Transmission of aggression through imitation of aggressive models. *Journal of Abnormal and Social Psychology*, 63, 575-582.
- Baron, S. W. (2009). Street youths' violent responses to violent personal, vicarious, and anticipated strain. *Journal of Criminal Justice*, 37, 442-451.
- Boccaccini, M. T., Murrie, D. C., L, Cark, J. W., & Cornell, D. G. (2008). Describing, diagnosing, and naming psychopathy: How do youth psychopathy labels influence jurors? *Behavioral Sciences and the Law*, 26, 487-510.
- Burke, J. D., Loeber, R., & Lahey, B. B. (2007). Adolescent conduct disorder and interpersonal callousness as predictors of psychopathy in young adults. *Journal of Clinical Child and Adolescent Psychology*, 36, 334-346.
- Burt, S. A., & Mikolajewski, A. J. (2008). Preliminary evidence that specific candidate genes are associated with adolescent-onset antisocial behavior. *Aggressive Behavior*, 34, 437-445.
- Bushman, B. J., & Anderson, C. A. (2001). Is it time to pull the plug on the hostile versus instrumental aggression dichotomy? *Psychological Review*, 108, 273-279.
- Campbell, M. A., Porter, S., & Santor, D. (2004). Psychopathic traits in adolescent offenders: An evaluation of criminal history, clinical, and psychosocial correlates. *Behavioral Sciences and the Law*, 22, 23-47.
- Cauffman, E., Kimonis, E. R., Dmitrieva, J., & Monahan, K. C. (2009). A multimethod assessment of juvenile psychopathy: Comparing the predictive utility of the PCL:YV, YPI, and NEO PRI. *Psychological Assessment*, 21, 528-542.
- Cleckley, H. (1976). *The mask of sanity* (5<sup>th</sup> ed.). St Louis, MO: Mosby.

- Cornell, D. G., Warren, J., Hawk, G., Stafford, E., Oram, G., & Pine, D. (1996). Psychopathy in instrumental and reactive violent offenders. *Journal of Consulting and Clinical Psychology, 64*, 783-790.
- Costa, P. T. Jr., & McCrae, R. R. (1980). Influence of extraversion and neuroticism on subjective well-being: Happy and unhappy people. *Journal of Personality and Social Psychology, 38*, 668-678.
- Cote, S. M., Vaillancourt, T., LeBlanc, J. C., Nagin, D. S., & Tremblay, R. E. (2006). The development of physical aggression from toddlerhood to pre-adolescence: A nation wide longitudinal study of Canadian children. *Journal of Abnormal Child Psychology, 34*, 71-85.
- Crick, N. R., & Grotpeter, J. K. (1995). Relational aggression, gender, and social-psychological adjustment. *Child Development, 66*, 710-722.
- Das, J., de Ruiter, C., Doreleijers, T., & Hillege, S. (2009). Reliability and construct validity of the Dutch Psychopathy Checklist: Youth Version. Findings from a sample of male adolescents in a juvenile justice treatment institution. *Assessment, 16*, 88-102.
- DeAngelis, T. (2003). Girls use a different type of weapon. *Monitor on Psychology, 34*, 51.
- DeLisi, M. (2009). Psychopathy is the unified theory of crime. *Youth Violence and Juvenile Justice, 7*, 256-273.
- Dodge, K. A. (1980). Social cognition and children's aggressive behavior. *Child Development, 51*, 162-170.

- Dodge, K. A., Lansford, J. E., Salzer Burks, V., Bates, J. E., Pettit, G. S., Fontaine, R., & Price, J. M. (2003). Peer rejection and social information-processing factors in the development of aggressive behavior problems in children. *Child Development, 74*, 374-393.
- Dodge, K. A., & Pettit, G. S. (2003). A biopsychosocial model of the development of chronic conduct problems in adolescence. *Developmental Psychology, 39*, 349-371.
- Dolan, M., & Anderson, I. M. (2002). Executive and memory function and its relationship to trait impulsivity and aggression in personality disordered offenders. *The Journal of Forensic Psychiatry, 13*, 503-526.
- Dolan, M., & Rennie, C. (2006). Psychopathy Checklist: Youth Version and Youth Psychopathic trait Inventory: A comparison study. *Personality and Individual Differences, 41*, 779-789.
- Dougherty, D. M., Dew, R. E., Mathias, C. W., Marsh, D. M., Addicott, M. A., & Barratt, E. S. (2007). Impulsive and premeditated subtypes of aggression in conduct disorder: Differences in time estimation. *Aggressive Behavior, 33*, 574-582.
- Edens, J. F., Skeem, J. L., Cruise, K. R., & Cauffman, E. (2001). Assessment of “juvenile psychopathy” and its association with violence: A critical review. *Behavioral Sciences and the Law, 19*, 53-80.
- Enebrink, P., Andershed, H., & Langstrom, N. (2005). Callous-unemotional traits are associated with clinical severity in referred boys with conduct problems. *Nordic Journal of Psychiatry, 59*, 431-440.



- Farrington, D. P. (1997). Key issues in studying the biosocial bases of violence. In A. Raine, P. A. Brennan, D. P. Farrington, & S. A. Mednick (Eds.), *Biosocial bases of Violence, NATO ASI: Series A: Life Sciences, Vol. 292* (pp. 293-300). New York: Plenum Press.
- Farrington, D. P., Ohlin, L. E., & Wilson, J. Q. (1986). *Understanding and controlling crime: Toward a new research strategy*. New York, NY: Springer-Verlag.
- Farrington, D. P., & Welsh, B. C. (2005). Randomized experiments in criminology: What have we learned in the last two decades? *Journal of Experimental Criminology, 1*, 9-38.
- Fite, P. J., & Colder, C. R. (2007). Proactive and reactive aggression and peer delinquency: Implications for prevention and intervention. *The Journal of Early Adolescence, 27*, 223-240.
- Fite, P. J., Colder, C. R., Lochman, J. E., & Wells, K. C. (2007). Pathways from proactive and reactive aggression to substance use. *Psychology of Addictive Behaviors, 21*, 355-364.
- Fite, P. J., Stoppelbein, L., & Greening, L. (2009). Proactive and reactive aggression in a child psychiatric inpatient population: Relations to psychopathic characteristics. *Criminal Justice and Behavior, 36*, 481-493.
- Flight, J. I., & Forth, A. E. (2007). Instrumentally violent youths the roles of psychopathic traits, empathy, and attachment. *Criminal Justice and Behavior, 34*, 739-751.

- Fontaine, R. G. (2008). Reactive cognition, reactive emotion toward a more psychologically-informed understanding of reactive homicide. *Psychology, Public Policy and Law, 14*, 243-261.
- Forsman, M., Lichtenstein, P., Andershed, H., & Larsson, H. (2008). Genetic effects explain the stability of psychopathic personality from mid- to late adolescence. *Journal of Abnormal Psychology, 117*, 606-617.
- Forth, A. E., Hart, S. D., & Hare, R. D. (1990). Assessment of psychopathy in male young offenders. *Psychological Assessment: A Journal of Consulting and Clinical Psychology, 2*, 342-344.
- Forth, A. E., Kosson, D. S., & Hare, R. D. (2003). *The Hare Psychopathy Checklist: Youth Version*. Toronto, ON: Multi-Health Systems.
- 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.
- Frick, P. J., & White, S. F. (2008). Research review: The importance of callous-unemotional traits for developmental models of aggressive and antisocial behavior. *Journal of Child Psychology and Psychiatry, 49*, 359-375.
- Glenn, A. L., & Raine, A. (2009). Psychopathy and instrumental aggression: Evolutionary, neurobiological and legal perspectives. *International Journal of Law and Psychiatry, 32*, 253-258.
- Hakkanen-Nyholm, H., & Hare, R. D. (2009). Psychopathy, homicide, and the courts working the system. *Criminal Justice and Behavior, 36*, 761-777.

- Hare, R. D. (2003). *Manual for the Hare Psychopathy Checklist- Revised* (2<sup>nd</sup> ed.). Toronto, ON: Multi-Health Systems.
- Hart, D., & Marmorstein, N. R. (2009). Neighborhoods and genes and everything in between: Understanding adolescent aggression in social and biological contexts. *Development and Psychopathology*, 21, 961-973.
- Harris, W. W., Lieberman, A. F., & Marans, S. (2007). In the best interests of society. *Journal of Child Psychology and Psychiatry*, 48, 392-411.
- Haynie, D. L., Petts, R. J., Maimon, D., & Piquero, A. R. (2009). Exposure to violence in adolescence and precocious role exits. *Journal of Youth and Adolescence*, 38, 269-286.
- Hemphill, J. F., & Hare, R. D. (2004). Some misconceptions about the Hare PCL-R and risk assessment: A reply to Gendreau, Goggin, and Smith. *Criminal Justice and Behaviour*, 31, 203-243.
- Ireland, T., O., & Smith, C. A. (2009). Living in partner-violent families: Developmental links to antisocial behavior and relationship violence. *Journal of Youth and Adolescence*, 38, 323-339.
- Jones, S., & Cauffman, E. (2008). Juvenile psychopathy and judicial decision making: An empirical analysis of an ethical dilemma. *Behavioral Sciences and the Law*, 26, 151-165.
- Jones, A. P., Laurens, K. R., Herba, C. M., Barker, G. J., & Viding, E. (2009). Amygdala hypoactivity to fearful faces in boys with conduct problems and callous-unemotional traits. *American Journal of Psychiatry*, 166, 95-102.

- Karriker-Jaffe, K. J., Foshee, V. A., Ennett, S. T., & Suchindran, C. (2008). The development of aggression during adolescence: Sex differences in trajectories of physical and social aggression among youth in rural areas. *Journal of Abnormal Child Psychology*, 36, 1227-1236.
- Kenny, D. T., & Press, A. L. (2006). Violence classifications and their impact on observed relationships with key factors in young offenders. *Psychology, Public Policy, and Law*, 12, 86-105.
- Kracke, K., & Hahn, H. (2008). The nature and extent of childhood exposure to violence: What we know, why we don't know more, and why it matters. *Journal of Emotional Abuse*, 8, 29-49.
- Kreek, M. J., Nielsen, D. A., Butelman, E. R., & LaForge, K. S. (2005). Genetic influences on impulsivity, risk taking, stress responsivity and vulnerability to drug abuse and addiction. *Nature Neuroscience*, 8, 1450-1457.
- Kuppens, S., Grietens, H., Onghena, P., & Michiels, D. (2009). Association between parental control and children's overt and relational aggression. *British Journal of Developmental Psychology*, 27, 607-623.
- Lansford, J. E., Malone, P. S., Dodge, K. A., Crozier, J. C., Pettit, G. S., & Bates, J. E. (2006). A 12-year prospective study of patterns of social information processing problems and externalizing behaviors. *Journal of Abnormal Child Psychology*, 34, 715-724.
- Leech, S. L., Day, N. L., Richardson, G. A., & Goldschmidt, L. (2003). Predictors of self-reported delinquent behavior in a sample of young adolescents. *The Journal of Early Adolescence*, 23, 78-106.

- Leistico, A-M R., Salekin, R. T., DeCoster, J., & Rogers, R. (2008). A large-scale meta-analysis relating the hare measures of psychopathy to antisocial conduct. *Law and Human Behavior*, 32, 28-45.
- Loper, A. B., Hoffschmidt, S. J., & Ash, E. (2001). Personality features and characteristics of violent events committed by juvenile offenders. *Behavioral Sciences and the Law*, 19, 81-96.
- Lynam, D. R. (1998). Early identification of the fledgling psychopath: Locating the psychopathic child in the current nomenclature. *Journal of Abnormal Psychology*, 107, 566-575.
- Lynam, D. R., & Witiger, T. A. (2007). Using a general model of personality to identify the basic elements of psychopathy. *Journal of Personality Disorders*, 21, 160-178.
- McCord, W., & McCord, J. (1964). *The psychopath: An essay on the criminal mind*. Princeton NJ: Van Nostrand.
- Meloy, J. R. (2006). Empirical basis and forensic application of affective and predatory violence. *Australian and New Zealand Journal of Psychiatry*, 40, 539-547.
- Moffitt, T. E. (1993). Adolescence-limited and life-course-persistent antisocial behavior: A developmental taxonomy. *Psychological Review*, 100, 674-701.
- Monahan, K. C., Steinberg, L., Cauffman, E., & Mulvey, E. P. (2009). Trajectories of antisocial behavior and psychosocial maturity from adolescence to young adulthood. *Developmental Psychology*, 45, 1654-1668.
- Moran, P., Rowe, R., Flach, C., Briskman, J., Ford, T., Maughan, B., Scott, S., & Goodman, R. (2009). Predictive value of callous-unemotional traits in a large

- community sample. *Journal of the American Academy of Child and Adolescent Psychiatry*, 48, 1079-1084.
- Munoz, L. C., Frick, P. J., Kimonis, E. R., & Aucoin, K. J. (2008) Types of aggression, responsiveness to provocation, and callous-unemotional traits in detained adolescents. *Journal of Abnormal Child Psychology*, 36, 15-28.
- Murrie, D. C., Boccaccini, M. T., McCoy, W., & Cornell, D. G. (2007). Diagnostic labeling in juvenile courts: How do descriptions of psychopathy and conduct disorder influence judges? *Journal of Clinical Child and Adolescent Psychology*, 36, 228-241.
- Neumann, C. S., & Hare, R. D. (2008). Psychopathic traits in a large community sample: Links to violence, alcohol use, and intelligence. *Journal of Consulting and Clinical Psychology*, 76, 893-899.
- Odgers, C. L., Caspi, A., Nagin, D. S., Piquero, A. R., Slutske, W. S., Milne, B. J., Dickson, N., Poulton, R., & Moffitt, T. E. (2008). Is it important to prevent early exposure to drugs and alcohol among adolescents. *Psychological Science*, 19, 1037-1044.
- Orobio de Castro, B., Veerman, J. W., Koops, W., Bosch, J. D., & Monshouwer, H. J. (2002). Hostile attribution of intent and aggressive behavior: A meta-analysis. *Child Development*, 73, 916-934.
- O'Shaughnessy, R. J., & Andrade, H. T. (2008). Forensic psychiatry and violent adolescents. *Brief Treatment and Crisis Intervention*, 8, 27-42.

- Pardini, D. A., Lockman, J. E., & Frick, P. J. (2003). Callous/unemotional traits and social-cognitive processes in adjudicated youths. *Journal of the American Academy of Child and Adolescent Psychiatry*, 42, 364-371.
- Patterson, G. R., & Yoerger (2002). A developmental model for early- and late-onset delinquency. In J. B. Reid, G. R. Patterson, & J. Snyder (Eds.) *Antisocial behavior in children and adolescents: A developmental analysis and model for intervention* (pp 147-172). Washington, DC: American Psychological Association.
- Penny, S. R., & Moretti, M. M. (2007). The relation of psychopathy to concurrent aggression and antisocial behavior in high-risk adolescent girls and boys. *Behavioral Sciences and the Law*, 25, 21-41.
- Piquero, A. R., Farrington, D. P., Welsh, B. C., Tremblay, R., & Jennings, W. G. (2009). Effects of early family/parent training programs on antisocial behavior and delinquency. *Journal of Experimental Criminology*, 5, 83-120.
- Pornari, C. D., & Wood, J. (2010). Peer and cyber aggression in secondary school students: The role of moral disengagement, hostile attribution bias, and outcome expectancies. *Aggressive Behavior*, 36, 81-94.
- Porter, S., Birt, A. R., Boer, D. P. (2001). Investigation of the criminal and conditional release profiles of Canadian federal offenders as a function of psychopathy and age. *Law and Human Behaviour*, 25, 647-661
- Porter, S., Woodworth, M., Earle, J., Drugge, J., & Boer, D. (2003). Characteristics of sexual homicides committed by psychopathic and nonpsychopathic offenders. *Law and Human Behavior*, 27, 459-470.

- Porter, S., & Woodworth, M. (2007). "I'm sorry I did it...be he started it": A comparison of the official and self-reported homicide descriptions of psychopaths and non-psychopaths. *Law and Human Behavior*, 31, 91-107.
- Porter, S., & Woodworth, M. (2006). Psychopathy and Aggression. In C. J. Patrick (Ed.), *Handbook of Psychopathy* (pp. 481-494). New York, NY: Guilford Press.
- Pulkkinen, L. (1996). Proactive and reactive aggression in early adolescence as precursors to anti- and prosocial behavior in young adults. *Aggressive Behavior*, 22, 241-257.
- Rockett, J. L., Murrie, D. C., & Boccaccini, M. T. (2007). Diagnostic labeling in juvenile justice settings: Do psychopathy and conduct disorder influence clinicians? *Psychological Services*, 4, 107-122.
- Salekin, R. T., Rosenbaum, J., Lee, Z., & Lester, W. S. (2009). Child and adolescent psychopathy: Like a painting by Monet. *Youth Violence and Juvenile Justice*, 7, 239-255.
- Seagrave, D., & Grisso, T. (2002). Adolescent development and the measurement of juvenile psychopathy. *Law and Human Behavior*, 26, 219-239.
- Sharp, C., & Kine, S. (2008). The assessment of juvenile psychopathy: Strengths and weaknesses of currently used questionnaire measures. *Child and Adolescent Mental Health*, 13, 85-95.
- Silberg, J. L., Rutter, M., Tracy, K., Maes, H., H., & Eaves, L. (2007). Etiological heterogeneity in the development of antisocial behavior: the Virginia twin study of adolescent behavioral development and young adult follow-up. *Psychological Medicine*, 37, 1193-1202.



- Snethen, G., & Van Puymbroeck, M. (2008). Girls and physical aggression: Causes trends, and intervention guided by social learning theory. *Aggression and Violent Behavior, 13*, 346-354.
- Sorensen, J., & Cunningham, M. D. (2010). Conviction offense and prison violence: A comparative study of murders and other offenders. *Crime and Delinquency, 56*, 103-125.
- Sprott, J. B., & Doob, A. N. (2008). Youth crime rates and the youth justice system. *Canadian Journal of Criminology and Criminal Justice, 50*, 621-639.
- Statistics Canada. (2008, May 16). *Youth Crime: The Daily*. Retrieved January 28, 2009 from <http://www.statcan.gc.ca/daily-quotidien/080516/dq080516a-eng.htm>
- Stickle, T. R., Kirkpatrick, N. M., & Brush, L. N. (2009). Callous-unemotional traits and social information processing: Multiple risk-factor models for understanding aggressive behavior in antisocial youth. *Law and Human Behavior, 33*, 515-529.
- Sugden, S. G., Kile, S. J., & Hendren, R. L. (2006). Neurodevelopmental pathways to aggression: A model to understand and target treatment in youth. *Journal of Neuropsychiatry and Clinical Neurosciences, 18*, 302-317.
- Tuvbald, C., Raine, A., Zheng, M., & Baker, L. A. (2009). Genetic and environmental stability differs in reactive and proactive aggression. *Aggressive Behavior, 35*, 437-452.
- Vaughn, M. G., Beaver, K. M., & DeLisi, M. (2009). A general biosocial paradigm of antisocial behavior: A preliminary test in a sample of adolescents. *Youth Violence and Juvenile Justice, 7*, 279-298.

- Vaughn, M. G., Howard, M. O., & Delisi, M. (2008). Psychopathic personality traits and delinquent careers: An empirical examination. *International Journal of Law and Psychiatry*, 31, 407-416.
- Viding, E., Jones, A. P., Frick, P. J., Moffitt, T. E., & Plomin, R. (2008). Heritability of antisocial behavior at 9: Do callous-unemotional traits matter? *Developmental Science*, 11, 17-22.
- Viljoen, J. L., MacDougall, E., Gagnon, N., Douglas, K. S., & Crosby A. (2009, March). Psychopathy evidence in juvenile offender cases: A case law survey. Paper presented at the annual conference of the American Psychology-Law Society; San Antonio, TX.
- Vitacco, M. J., Neumann, C. S., Caldwell, M. F., Leistico, A., & Van Rybroke, G. J. (2006). Testing factor models of the psychopathy checklist: youth version and their association with instrumental aggression. *Journal of Personality Assessment*, 87, 74-83.
- Walsh, T., & Walsh, Z. (2006). The evidentiary introduction of Psychopathy Checklist Revised assesses psychopathy in U.S. courts: Extent and appropriateness. *Law and Human Behavior*, 30, 493-507.
- Walsh, Z., Swogger, M. T., & Kosson, D. S. (2009). Psychopathy and instrumental violence: Facet level relationships. *Journal of Personality Disorders*, 23, 416-424.
- Warren, G. C., & Clarbour, J. (2009). Relationship between psychopathy and indirect aggression use in a noncriminal population. *Aggressive Behavior*, 35, 408-421.

- Welsh, J. L., Schmidt, F., McKinnon, L., Chatta, H. K., & Meyers, J. R. (2008). A comparative study of adolescent risk assessment instruments: Predictive and incremental validity. *Assessment, 15*, 104-115.
- Williams, J. R., Fredlan, N., Han, H. R., Campbell, J. C., & Kub, J. E. (2009). Relational aggression and adverse psychosocial and physical health symptoms among urban adolescents. *Public Health Nursing, 26*, 489-499.
- Williamson, S., Hare, R., & Wong, S. (1987). Violence: Criminal psychopaths and their victims. *Canadian Journal of Behavioural Science, 19*, 454-462.
- Wong, W.-K., & Cornell, D. G. (1999). PIQ > VIQ discrepancy as a correlate of social problem solving and aggression in delinquent adolescent males. *Journal of Psychoeducational Assessment, 17*, 104-112.
- Woodworth, M., & Porter, S. (2002). In cold blood: Characteristics of criminal homicides as a function of psychopathy. *Journal of Abnormal Psychology, 111*, 436-445.

## Appendices

### Appendix A: Case Examples for Aggression Types

#### *Instrumental Offense*

The offender had previously been involved in several break and enter offenses. He was running low on cash from his last offense and decided to commit another break and enter to get money. Two other youth approached the offender as they knew he had a reputation for being involved in successful break and enters that had resulted in the perpetrators getting a lot of money. The offender decided to lead these youth in committing a break and enter of a supposed gang safe house, a location which the other youth had heard would contain a large amount of drugs and cash. The offender and the youths went to the location and approached the door with a gun drawn demanding that one of the victims open the door. Once the offender gained access, he became involved in a struggle with a second victim that was in the home. The offender shot the second victim three times then fled.

#### *Instrumental/Reactive Offense*

The offender was with a group of friends when they came across some other youth that they recognized. The offender's friend began to beat up one of the other youths while the offender kept the others from intervening by brandishing a knife, and threatening them. When one of the others attempted to reach for her cell phone to call 911, the offender held the knife to her throat and threatened to kill her if she didn't put the phone down.

#### *Reactive/Instrumental Offense*

The offender was in a liquor store when he decided to try to steal two 26 oz. bottles of liquor. An employee (victim) of the store saw the youth and attempted to stop, and apprehend, him. When the victim tried to grab the youth's arm to stop him from leaving, the youth responded by hitting the victim in the head with the bottles and he ran out of the store with the liquor.

#### *Reactive Offense*

The offender was at home, and decided that he would like to go for a rollerblade. The offender searched the home for his rollerblades, and when he could not find them he proceeded to go outside to look in his mother's car. When the offender returned back inside the home he asked his mother to go and look in the trunk of the car for his rollerblades. His mother went to look for the keys to the car, and after a few minutes was unable to locate them. She then told the youth that he would have to wait until she found the keys. The youth became very angry and proceeded to grab a baseball bat from the home. The youth started swinging the bat towards his mother and hit her in the arm causing severe bruising. The youth then went outside and began smashing his mom's car with the bat.

#### *Unclear*

The victim was walking along a street when he came upon a group of youth (including the offender) who were unknown to him. The group approached him and the offender began punching and kicking him. The victim managed to run into an office building to seek help. There was no evidence of any provocation, or any goal directedness.

## Appendix B: Coding Scheme

<b>Coder:</b>	<b>Date:</b>
VOTP ID:	Gender:
Date of Birth:	Ethnicity:

1) Pre-Assessment Offending History

- a) Age at index offense (in months) \_\_\_\_\_
- b) Index offense type  
1 violent 2 non-violent 3 sexual
- c) Index offense type (match with BCCorr) \_\_\_\_\_
- d) Age at first contact with police (in months) \_\_\_\_\_
- e) Age at first offense (in months) \_\_\_\_\_
- f) Estimated total number of offenses \_\_\_\_\_
- g) Estimated total number of charges \_\_\_\_\_
- h) Total number of sentences \_\_\_\_\_
- i) Total number custodial sentences \_\_\_\_\_
- j) Average length of custodial sentences \_\_\_\_\_
- k) Total number non-custodial sentences \_\_\_\_\_
- l) Average length of non-custodial sentences \_\_\_\_\_
- m) Total number probation \_\_\_\_\_

2) Violent Offending ( index/history)

- a) Victim gender \_\_\_\_/\_\_\_\_  
0 male 1 female 2 both
- b) Victim ethnicity \_\_\_\_/\_\_\_\_
- c) Total number of victims \_\_\_\_/\_\_\_\_
- d) Total number perpetrators \_\_\_\_/\_\_\_\_

- e) Victim offender relationship \_\_\_\_/\_\_\_\_  
1 family 2 friend 3 acquaintance 4 stranger
- f) Victim age(s) in years \_\_\_\_/\_\_\_\_  
0 child (0-12) 1 adolescent (13-17) 2 adult (18+) 3 mixed
- g) Victim selection \_\_\_\_/\_\_\_\_  
0 random 1 specific target 2 group target 3 mixed
- h) Presence of weapons \_\_\_\_/\_\_\_\_  
0 none 1 possession 2 threaten 3 use
- i) Type of weapon \_\_\_\_/\_\_\_\_  
0 none 1 object 2 knife 3 gun
- j) How weapon was obtained \_\_\_\_/\_\_\_\_  
**0 opportunity** – weapon was available immediately at crime scene  
**1 choice** – weapon was chosen beforehand to help achieve a goal  
**2 unclear** – unclear if a rating of 0 or 1 would be more appropriate
- k) Violence occurred with substance use \_\_\_\_/\_\_\_\_  
0 none 1 mild/moderate 2 severe
- l) Severity of violent behaviour \_\_\_\_/\_\_\_\_  
**0 none** – no violence in the offense  
**1 mild** – no visible consequences; no physical injuries  
**2 moderate** – physical injuries but no hospitalization; not life threatening  
**3 severe** – hospitalization needed; potentially life threatening
- m) Location of violent behaviour \_\_\_\_/\_\_\_\_  
1 home 2 other residence 3 school/work 4 public 5 mixed
- n) Use of sadistic violence \_\_\_\_/\_\_\_\_  
This refers to the use of sadistic violence, violence that is gratuitous and excessive committed for the sole purpose of giving pleasure to the offender  
  
**0 none** – although there may be excessive violence, it is unclear what the offender's motivations for this behaviour may have been  
**1 some** – most acts of body mutilation or deviant, violent sexual activity are conducted primarily for the sadistic pleasure of the offender. However, without information that confirms this assumption, we can not be certain  
**2 concrete** - concrete evidence that the offender took pleasure in the excessive suffering of the victim (e.g., explicitly stated by the offender)
- o) Use of gratuitous violence \_\_\_\_/\_\_\_\_

This refers to the use of unnecessary violence, violence that is beyond the degree that would be necessary to commit the act, or that was conducted in such a manner as to increase the pain and suffering of the victim. This type of violence can include; (a) prolonged torture, (b) evidence of mutilation or overkill, (c) posing of the body if crime was homicide, and (d) sadistic sexual behaviour

**0 none** - no evidence of gratuitous, excessive violence

**1 minor** - evidence of a minor amount

**2 medium** - evidence of a medium amount

**3 major** - evidence of a major amount

### 3) Instrumental vs. Reactive Aggression

#### a) instrumental vs. reactive aggression \_\_\_\_/\_\_\_\_

**4 instrumental aggression** - Evidence of planning, or some type of goal. This could include reasons such as: violence was committed for:

- revenge or retribution for past events (such as stealing from the offender)
- monetary gain
- drugs or alcohol
- a female (two individuals competing over the same woman)
- jealousy
- to escape custody/remain at large

~Violence committed for a clearly identifiable purpose other than "hot-blooded" spontaneous anger, frustration, or provocation.

**3 primarily instrumental, some reactive** - When there is clear evidence of both instrumental and reactive behaviour regarding the homicide, yet the primary cause could be attributed to Instrumental violence

**2 primarily reactive, some instrumental** - When there is clear evidence of both reactive and instrumental behaviour regarding the homicide, yet the primary cause could be attributed to Reactive violence.

**1 reactive aggression** - Primary motive appears to be anger or displaying aggression

~Evidence of provocation, without a "cooling off" period between the time of the provocation and the time of the offense.

~Violence crime scene appears careless and spontaneous.

~Violence is in response to some type of dispute or interpersonal conflict, without a "cooling off" period between the time of the dispute or interpersonal conflict and the time the violent act was committed. If there was a "cooling off" period, the files may indicate that the interpersonal conflict or dispute actually led to a violent act which was committed for reasons of revenge or retribution, rather than being a reaction to the immediate dispute.

~Violence appears to be a spontaneous or unplanned consequence of a sexual assault or encounter (violence was not initially used to force or manipulate the victim into sexual acts).

#### b) planning \_\_\_\_/\_\_\_\_

**4 extensive planning** - detailed plan or preparation, rehearsal



- 3 **moderate planning** - contemplation of action for more than 24 hours
- 2 **some planning** - action within 24 hours, some plan or preparation
- 1 **very little or no planning** - acts during argument or fight, no preparation

c) goal directedness \_\_\_\_/\_\_\_\_

**0 No evidence** - that the violent offense was committed for some instrumental gain, resource, or goal

**1 Evidence** - that the violent offense was committed for some instrumental gain, resource, or goal

**2 Unclear** - unclear/uncertain what motivation for the violent offense was

Acceptable Examples of 'instrumental gain, resource, or goal.'

-drugs or alcohol

-money

-revenge or retribution that is committed after a "cooling off" period (e.g. evidence of planning)

d) provocation \_\_\_\_/\_\_\_\_

**6 Exceptionally strong provocation** - repeated assault, severe abuse

**5 Very Strong provocation** - assault

**4 Strong** - break-up of a romantic relationship, threat of major life change

**3 Moderate** provocation - serious argument or dispute, threat of assault

**2 Mild provocation** - insult, minor argument, confrontation with police

**1 No apparent provocation**

e) arousal \_\_\_\_/\_\_\_\_

**1 low** - Low emotional arousal calm, subdued

**2 moderate** - somewhat angry or states got into an argument/was upset but it is unclear if would be high emotional arousal, yet it is obvious there was some emotional arousal

**3 high** - very angry, enraged

**0 Unclear/unable to code** - Completely unclear what affective state was

This item should only be coded from the self-report of the offender, witnesses, or law enforcement officers.

f) severity of violence: consider actual harm to victim, not subject's intention \_\_\_\_/\_\_\_\_

**7 Extreme homicide** - multiple victims or multiple fatalities, mutilation

**6 Homicide**

**5 Severe injury** (e.g., lasting impairment or life-threatening injury, some rapes)

**4 Serious injury**, requiring substantial hospital treatment (e.g, broken limb, rape, gunshot)

**3 Minor injury** (e.g., bruises, minor medical treatment, attempted rape)

**2 Assault without injury**

**1 No assault** (e.g., threatened with weapon)

g) relationship with victim (if 2 or more victims, code highest) \_\_\_\_/\_\_\_\_

**5 Very close relationship** - immediate family member, romantic partner

**4 Close relationship** - friend, relative, dating partner, etc.

**3 Specific relationship** - (teacher, babysitter, etc.) or Between friend and acquaintance

**2 Acquaintance**

**1 Stranger**

h) intoxication (A) \_\_\_\_/\_\_\_\_ ; (D) \_\_\_\_/\_\_\_\_

#### **Alcohol**

A0 - no alcohol

A1 -offender was under the influence of a small amount of alcohol at the time of the offense (1-2 beers or 1-2 hard alcoholic drinks or 1-2 glasses of wine)

A2 -At the time of the offense, offender was under the influence of a moderate amount of alcohol (3-6 beers or 3-4 hard alcoholic drinks or 3-5 glasses of wine)

A3 -At the time of the offense, offender was under the influence of an extreme amount of alcohol (over 6 beers and/or 5-6 hard alcoholic drinks and/or more than 5 glasses of wine). A3 would also be appropriate in cases where prior to the offense the offenders was reported to have been “binge” drinking or “drinking for the entire day and/or night.”

A4 -Alcohol was determined to have played a role in the violent offense though the offender was not intoxicated during the commission of the offense.

A5 = Offender was under the influence of an undetermined amount of alcohol.

#### **Drugs**

D0 = No drug involvement.

D1 = At the time of the offense, offender was under the influence of ‘minor’ drugs such as marijuana, hashish, or prescription drugs such as Tylenol 3.

D2 = At the time of the offense, offender was under the influence of ‘major drugs’ such as mushrooms, LSD, cocaine, heroin or prescription drugs such as Demerol or morphine.

D3 = both minor and major drugs.

D4 = Drugs were determined to have played a role in the offense, even though the offender was not intoxicated during the commission of the offense.

\*An example of (4) would be an offender who was on a cocaine ‘binge’ for a number of days and had become quite delusional and neurotic. Even if he was NOT under the influence of cocaine at the time he committed the homicide, the circumstances may still reveal that the drug was a major contributing factor towards the violent offense. Another example would be if the offender was attempting to get drugs when the violent offense was committed.

i) degree reactive \_\_\_\_/\_\_\_\_

This refers to the relative degree of reactivity in the offence. If more than one violent offence is being coded, separate ratings with a comma.

**0 unable to code** - unclear or not enough information to determine

**1 minor** - some evidence of reactivity, some evidence of provocation

**2 medium** - appears mostly reactive, some evidence of provocation

**3 major** - appears to be reactive, clear evidence of provocation

j) degree instrumental \_\_\_\_/\_\_\_\_

This refers to the relative degree of instrumentality in the offence. If more than one violent offence is being coded, separate ratings with a comma.

**0 unable to code** - unclear or not enough information to determine

**1 minor** - appears to be planned/thought about within a short period of time (e.g. that day)

**2 medium** - appears to have been planned out for a number of days, considerably well thought out

**3 major** - appears to have been well thought out, and planned over a long period of time

k) specific type instrumental \_\_\_\_/\_\_\_\_

This refers to the primary reason for the instrumental violence, given a score of 1-3 on the degree of instrumental item.

**0 unable to code**

**1 monetary gain**

**2 drugs or alcohol**

**3 revenge/retribution**

**4 a female** (jealousy, or upset about ending of relationship)

**5 to obtain non-consensual sex, or intentionally victimize a female or child**

**6 other**

4) Sexual Offending ( index/history)

a) Victim gender \_\_\_\_/\_\_\_\_

0 male 1 female 2 both

b) Victim ethnicity \_\_\_\_/\_\_\_\_

c) Total number of victims \_\_\_\_/\_\_\_\_

d) Total number perpetrators \_\_\_\_/\_\_\_\_

e) Victim offender relationship \_\_\_\_/\_\_\_\_

1 family 2 friend 3 acquaintance 4 stranger

f) Victim age(s) in years \_\_\_\_/\_\_\_\_

0 child (0-12) 1 adolescent (13-17) 2 adult (18+) 3 mixed

g) Victim selection \_\_\_\_/\_\_\_\_

0 random 1 specific target 2 group target 3 mixed

- h) Presence of weapons \_\_\_\_/\_\_\_\_  
0 none 1 possession 2 threaten 3 use
- i) Type of weapon \_\_\_\_/\_\_\_\_  
0 none 1 object 2 knife 3 gun
- j) How weapon was obtained \_\_\_\_/\_\_\_\_  
**0 opportunity** – weapon was available immediately at crime scene  
**1 choice** – weapon was chosen beforehand to help achieve a goal  
**2 unclear** – unclear if a rating of 0 or 1 would be more appropriate
- k) Sexual violence occurred with substance use \_\_\_\_/\_\_\_\_

### **Alcohol**

A0 - no alcohol

A1 -offender was under the influence of a small amount of alcohol at the time of the offense (1-2 beers or 1-2 hard alcoholic drinks or 1-2 glasses of wine)

A2 -At the time of the offense, offender was under the influence of a moderate amount of alcohol (3-6 beers or 3-4 hard alcoholic drinks or 3-5 glasses of wine)

A3 -At the time of the offense, offender was under the influence of an extreme amount of alcohol (over 6 beers and/or 5-6 hard alcoholic drinks and/or more than 5 glasses of wine). A3 would also be appropriate in cases where prior to the offense the offenders was reported to have been “binge” drinking or “drinking for the entire day and/or night.”

A4 -Alcohol was determined to have played a role in the violent offense though the offender was not intoxicated during the commission of the offense.

A5 = Offender was under the influence of an undetermined amount of alcohol.

### **Drugs**

D0 = No drug involvement.

D1 = At the time of the offense, offender was under the influence of ‘minor’ drugs such as marijuana, hashish, or prescription drugs such as Tylenol 3.

D2 = At the time of the offense, offender was under the influence of ‘major drugs’ such as mushrooms, LSD, cocaine, heroin or prescription drugs such as Demerol or morphine.

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\*An example of (4) would be an offender who was on a cocaine ‘binge’ for a number of days and had become quite delusional and neurotic. Even if he was NOT under the influence of cocaine at the time he committed the homicide, the

circumstances may still reveal that the drug was a major contributing factor towards the violent offense. Another example would be if the offender was attempting to get drugs when the violent offense was committed.

l) Severity of sexual violent behaviour \_\_\_\_/\_\_\_\_

**0 none** – no violence in the offense

**1 mild** – no visible consequences; no physical injuries

**2 moderate** – physical injuries but no hospitalization; not life threatening

**3 severe** – hospitalization needed; potentially life threatening

m) Location of violent behaviour \_\_\_\_/\_\_\_\_

1 home 2 other residence 3 school/work 4 public 5 mixed

n) Use of sadistic violence \_\_\_\_/\_\_\_\_

This refers to the use of sadistic violence, violence that is gratuitous and excessive committed for the sole purpose of giving pleasure to the offender

**0 none** – although there may be excessive violence, it is unclear what the offender's motivations for this behaviour may have been

**1 some** – most acts of body mutilation or deviant, violent sexual activity are conducted primarily for the sadistic pleasure of the offender. However, without information that confirms this assumption, we can not be certain

**2 concrete** - concrete evidence that the offender took pleasure in the excessive suffering of the victim (e.g., explicitly stated by the offender)

o) Use of gratuitous violence \_\_\_\_/\_\_\_\_

This refers to the use of unnecessary violence, violence that is beyond the degree that would be necessary to commit the act, or that was conducted in such a manner as to increase the pain and suffering of the victim. This type of violence can include; (a) prolonged torture, (b) evidence of mutilation or overkill, (c) posing of the body if crime was homicide, and (d) sadistic sexual behaviour

**0 none** - no evidence of gratuitous, excessive violence

**1 minor** - evidence of a minor amount

**2 medium** - evidence of a medium amount

**3 major** - evidence of a major amount

## 5) Cognitive abilities/Schooling

a) WISC (version) \_\_\_\_

b) WAIS (version) \_\_\_\_

c) highest grade completed \_\_\_\_

d) school status \_\_\_\_

e) DSM diagnoses (Axis I) \_\_\_\_\_ ( past / current )  
\_\_\_\_\_ ( past / current )

\_\_\_\_\_ ( past / current )  
 (Axis II) \_\_\_\_\_ ( past / current )  
 \_\_\_\_\_ ( past / current )

- f) PCL:YV score \_\_\_\_\_  
 factor 1 \_\_\_\_\_ factor 2 \_\_\_\_\_  
 origin ( institution / researcher )

6) Offender substance use

- a) Alcohol  
 age at first use \_\_\_\_\_

frequency \_\_\_\_\_

Code for the highest level of use, unless that level was only for a single unit of time. Should be regular or semi-regular use at that level (e.g. If a youth used marijuana once a week from ages 13 to 16, but last summer had a couple of weeks where he used it twice, code “weekly”, not “few times a week”).

- 0 tried once or twice**  
**1 once a month or less**  
**2 few times a month**  
**3 weekly**  
**4 few times a week**  
**5 daily**

severity \_\_\_\_\_

When considering severity, take into account both frequency and amount at each usage, as well as impact on the youth’s functioning.

- 0 None** - No use  
**1 Mild** - Light use, either rarely, or regularly but only a little each time (e.g. One drink once a week).  
**2 Moderate** - Between mild and severe  
**3 Severe** - Heavy use, either often or excessively (e.g. Binges on a case of beer once every few months, gets fall-down drunk and has blackouts).

- b) Drugs  
 age at first use \_\_\_\_\_

frequency \_\_\_\_\_

Code for the highest level of use, unless that level was only for a single unit of time. Should be regular or semi-regular use at that level (e.g. If a youth used marijuana once a week from ages 13 to 16, but last summer had a couple of weeks where he used it twice, code “weekly”, not “few times a week”).

- 0 tried once or twice**

**1 once a month or less**

**2 few times a month**

**3 weekly**

**4 few times a week**

**5 daily**

severity \_\_\_\_\_

When considering severity, take into account both frequency and amount at each usage, as well as impact on the youth's functioning.

**0 None** - No use

**1 Mild** - Light use, either rarely, or regularly but only a little each time (e.g. One drink once a week).

**2 Moderate** - Between mild and severe

**3 Severe** - Heavy use, either often or excessively (e.g. Binges on a case of beer once every few months, gets fall-down drunk and has blackouts).

#### 7) Offender abuse history

##### **a) sexual abuse Y / N** \_\_\_\_\_

Sexual abuse involves using a child for sexual purposes. It includes fondling, invitation to touch or be touched, attempted or completed intercourse, incest, sodomy, exhibitionism, and exploitation through prostitution or pornography (Department of Justice Canada/Health Canada).

Use the following descriptions:

**1 oral/genital contact**

**2 digit/genital contact**

**3 genital/genital penetration**

**4 genital/anal penetration**

**5 Other (specify)**

##### **b) emotional abuse Y / N** \_\_\_\_\_

Emotional abuse involves harming a child's sense of self. It includes acts or omissions that result in, or place a child at risk of, serious behavioural, cognitive, emotional or mental health problems. For example, emotional abuse may include verbal threats, social isolation, intimidation, exploitation, or routinely making unreasonable demands. It also includes terrorizing a child or exposing them to family violence (Department of Justice Canada/Health Canada).

The following terminology provides a framework for assessing severity:

**1 mild** - mildly deprecating statements; e.g., "lazy", "bad child". Occasional deprecating statements

**2 moderate** - statements more deprecating; e.g., "stupid", "horrible". More significant use of deprecating statements

**3 severe** - statements to child of a severely harsh nature; e.g., "I hate you". Frequent use of deprecating statements

## c) physical abuse Y / N \_\_\_\_\_

Physical abuse may consist of just one incident or may happen repeatedly. It involves deliberately using force against a child in such a way that the child is either injured or at risk of being injured. Physical abuse includes beating, hitting, shaking, pushing, choking, biting, burning, kicking or assaulting a child with a weapon. It also includes holding a child under water, or any other dangerous or harmful use of force or restraint.

The following would be typical examples of each level of severity:

**1 mild** - spanking or other physical discipline *that seems too harsh*, but no injury, e.g., slapping 13-year old for non-punitive reason one time, etc.

**2 moderate** - causing minor injury such as minor bruising; e.g., frequently slapping 13-year old for non-punitive reason, etc.

**3 severe** - requiring medical attention; e.g., beating a 3-year old with a belt, etc.

## d) neglect Y / N \_\_\_\_\_

Neglect is often chronic, and it usually involves repeated incidents. It involves failing to provide what a child needs for his or her physical, psychological, or emotional development and well being. For example, neglect includes failing to provide a child with food, clothing, shelter, cleanliness, medical care or protection from harm. Emotional neglect includes failing to provide a child with love, safety, and a sense of worth (Department of Justice Canada/Health Canada).

The following terminology provides a framework for assessing severity:

**1 mild** - occasional, milder neglect; e.g., doesn't pay attention to child; child gets own food at a young age, etc.

**2 moderate** - more substantial neglect; e.g. no attention; goes out and leaves child, etc.

**3 severe** - frequent neglect of a severe nature, e.g., no food for child, left alone at very young age, etc.

8) Living situation history

a) lived in foster care: Y / N

b) number of foster homes \_\_\_\_\_

c) number of group homes \_\_\_\_\_

d) majority of childhood spent in \_\_\_\_\_

e) current caregiver at assessment \_\_\_\_\_

9) Adverse / substance use history

a) reference to domestic violence in home: Y / N

b) youth witnessed violence between/involving caregivers: Y / N

c) **0** - no



1 - yes

	<b>Criminal Hx</b>	<b>Violent Criminal Hx</b>	<b>Sexual Criminal Hx</b>	<b>Alcohol Abuse</b>	<b>Substance Abuse (specify)</b>
Bio Mother					
Bio Father					
Other Caregiver Specify: _____ _____					
Other Relative(s) Specify: _____ _____					

10) Offender peer relationships

- a) peer criminality: Y / N
- b) gang involvement: Y / N

## Appendix C: UBCO Ethics Approval

UBC REB approval.html

10-07-03 4:56 PM



The University of British Columbia Okanagan  
Research Services  
**Behavioural Research Ethics Board**  
3333 University Way  
Kelowna, BC V1V 1V7

Phone: 250-807-8832  
Fax: 250-807-8438

**CERTIFICATE OF APPROVAL - FULL BOARD**

<b>PRINCIPAL INVESTIGATOR:</b> Michael W. Woodworth	<b>INSTITUTION / DEPARTMENT:</b> UBC/UBCO IKE Barber School of Arts & Sc/UBCO Admin Unit 4 Arts & Sci	<b>UBC BREB NUMBER:</b> H09-01078
<b>INSTITUTION(S) WHERE RESEARCH WILL BE CARRIED OUT:</b>		
<b>Institution</b> UBC	<b>Site</b> Okanagan	
<b>Other locations where the research will be conducted:</b> Youth Forensic Psychiatric Services 7900 Fraser Park drive Burnaby, BC V5J 5H1 Youth Forensic Psychiatric Services Kelowna Outpatient Clinic 100 – 537 Leon Avenue Kelowna, BC V1Y 6J5		
<b>CO-INVESTIGATOR(S):</b> Tara Carpenter		
<b>SPONSORING AGENCIES:</b> N/A		
<b>PROJECT TITLE:</b> Violent Young Offenders: An examination of how psychopathy and motivation inform our understanding of aggression		
<b>REB MEETING DATE:</b> July 6, 2009	<b>CERTIFICATE EXPIRY DATE:</b> July 6, 2010	
<b>DOCUMENTS INCLUDED IN THIS APPROVAL:</b>		<b>DATE APPROVED:</b> July 20, 2009
<b>Document Name</b>	<b>Version</b>	<b>Date</b>
<b>Protocol:</b> Violence Research Proposal	N/A	May 19, 2009
<b>Other Documents:</b> YFPS PER Approval Letter	N/A	June 11, 2009
The application for ethical review and the document(s) listed above have been reviewed and the procedures were found to be acceptable on ethical grounds for research involving human subjects.		
Approval is issued on behalf of the Behavioural Research Ethics Board Okanagan and signed electronically by:  Dr. Daniel Salhani, Chair		

## Appendix D: YFPS Ethics Approval



June 10, 2009

Dr. Michael Woodworth (Assistant Professor)  
and Ms. Tara Carpenter (Masters Student)  
University of British Columbia Okanagan

Dr. Heather Gretton (Director, Program Evaluation and Research)  
Youth Forensic Psychiatric Services  
Burnaby, British Columbia

Dear Dr. Woodworth, Ms. Carpenter, and Dr. Gretton,

The Program Evaluation and Research (PER) Committee of Youth Forensic Psychiatric Services has had an opportunity to review the research proposal entitled "Violent young offenders: An examination of how psychopathy and motivation inform our understanding of aggression."

We are pleased to inform you that the PER Committee has approved your project in the manner described in your application and related materials. Prior to proceeding with your research activities, you must obtain additional approval from Mr. Alan Markwart, Assistant Deputy Minister. Please coordinate your research activities directly with Ms. Moreen Tremblay, Regional Manager; Dr. Steve Sigmond, your PER representative for the Interior Region; and other relevant personnel from the clinics of Youth Forensic Psychiatric Services where you will be conducting the research.

Proposals submitted to PER should include names of all consultants and collaborators involved in the project. Please add the names and contact information of anyone who is missing (e.g., Dr. Heather Gretton) and resubmit the revised proposal before proceeding with your research activities.

PER requires quarterly updates regarding the status of your project. We will anticipate an update from you in September 2009 at the next quarterly PER meeting. Updates can be submitted through Dr. Sigmond and/or Dr. Woodworth.

When your project is completed you will be asked to provide us with a copy of your findings and make a presentation to the service.

This approval expires on May 25, 2010. You may request an extension at that time if you require additional time to complete this project.

On behalf of the PER Committee, we wish you all the best as you pursue your research activities.

Sincerely,

James Hemphill, Ph.D., R.Psych.  
Program Evaluation and Research  
Youth Forensic Psychiatric Services

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• THE GOVERNMENT OF BRITISH COLUMBIA IS AN "EMPLOYMENT EQUITY EMPLOYER" •

**Ministry for Children  
and Families**

Youth Forensic Psychiatric Services  
100-3705 Willingdon Avenue  
Burnaby, BC V5G 3H3

**Program Evaluation and Research**

Telephone: (604) 775-1480  
Facsimile: (604) 775-2244

## Appendix E: MCFD Ethics Approval



Ref: 184359

June 19, 2009

Dr. Michael Woodworth (Assistant Professor)  
 Ms. Tara Carpenter (Masters Student)  
 University of British Columbia Okanagan  
 3333 University Way  
 Kelowna BC V1V 1V7

Dr. Heather Gretton (Director, Program Evaluation and Research)  
 Youth Forensic Psychiatric Services  
 7900 Fraser Park Drive  
 Burnaby, British Columbia V5J 5H1

Dear Dr. Woodworth, Ms. Carpenter, and Dr. Gretton:

This letter is to confirm that I have reviewed your proposal entitled "Violent young offenders: An examination of how psychopathy and motivation inform our understanding of aggression." The Ministry of Children and Family Development supports the proposed research which can continue until, and could be further reviewed on, May 25, 2010.

That support will include access to youth justice records contained within files held by Youth Forensic Psychiatric Services. Pursuant to Order in Council, as Provincial Director, I hereby authorize you and your research team to access these records until May 25, 2010.

Sincerely,

Alan Markwart  
 Assistant Deputy Minister

Ministry of  
 Children and Family  
 Development

Provincial Services  
 Office of the  
 Assistant Deputy Minister

Mailing Address:  
 PO Box 9719 STN PROV GOVT  
 Victoria British Columbia  
 V8W 9S1

Telephone: 250 387-0978  
 Facsimile: 250 356-2079  
 Web: <http://www.gov.bc.ca/mcf>