

**Predicting Juvenile Recidivism in Korea: A
Quantitative Assessment of Risk and Personality
in a Comparative Perspective**

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Abstract

Personality traits and environmental contextual factors are key components in explanations of juvenile offending. The current study examined the Personality Assessment Inventory-A (PAI-A) and the Risk Assessment Tool (RAT) across a sample of Korean young offenders. An associated aim was to examine scores of these tools' measures, taking into consideration types of offence and types of stages they were at in the criminal justice system. The PAI-A and RAT scores (N = 207) were collected from the Juvenile Diversion Program (JDP) and Pre-sentence Investigation (PSI) in Seoul and in Gyeonggi Province in Korea. The results revealed that RAT subjects scores of Family structure, School life, Delinquent career, and Personal factors were higher in the violent adolescent group and that Family structure, School life, Run-away, and Delinquent career were higher in violent adolescents in the PSI stage. This finding is significant in predicting recidivism risk and designing effective intervention.

Keywords: Young offenders; Personality assessment; Antisocial behaviours

Dedication

To my Grandmother, Guiran Park.

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1: Introduction

In 2010, six Korean young offenders in Seoul murdered a 14-year-old female victim after 30 hours of severe abuse. Once the victim had died, the young offenders cut up her body to facilitate loading and then abandoning it in a river. The case astounded South Korean society. Over the last quarter century since the Korean War in 1950, Korea has achieved rapid economic development. Along with this intense development have come many and diverse side effects. One of these is an increase in the numbers of serious violent young offenders of the type described above. In terms of brutality, serious violent young offenders in Korea have become similar to serious violent adult offenders. Korea Ministry of Justice (2012) reports that juvenile crimes comprised 8% of the total number of crimes in 2012. Among these juvenile crimes, serious violent offending is the leading cause of incarceration of young offenders. Also, serious violent offenders are responsible for the majority of juvenile crime as Howell, Krisberg, and Jones (1995) found in their work.

Several researchers have identified strong predictors of serious violent offending, including age, gender, race, cognitive functioning, socio-economic status, historical factors of violent offences and substance abuse, early maladjustment, relationship problems, psychiatric disorders and symptoms, availability of supervision and support, and school experience (Farrington, Loeber, Jolliffe, & Pardini, 2008; Loeber & Farrington, 1998; Loeber & Stouthamer-Loeber, 1996; Savage, 2009). Significant numbers of empirical studies provide evidence that delinquency and various kinds of offences are related to personality (Agnew, Brenzia, Wright, & Cullen, 2002; Caspi et al., 1994; Tennenbaum, 1977; Van Voorhis, 1994). Since the early 2000s in response to the growing problem of serious young offenders, there has been growing research interest in the risk factors and predictors of violent behaviours of adolescents in Korea. Most of these studies have examined associations between measures of personal traits and serious violent offending.

Recent North American and European studies on ties between adolescent criminality and personal psychological traits have focused on psychopathic traits such as callous and remorseless traits (Cornell & Frick, 2007; Flexon & Meldrum, 2012; Frick, Lilienfeld, Ellis, Longey, & Silverthorn, 1999; Frick & Morris, 2004; Frick & Viding, 2009). These studies base their origins on a number of reviews documenting a large number of risk factors that have been associated with aggressive and antisocial behaviour (Frick & Viding, 2009). The risk factors include characteristics of adolescents and of diverse social contexts, as mentioned above. Generally, adolescents have high risk conditions including immaturity, low self-control and judgment, and impulsivity to commit a crime (Lee & Lee, 2009; Moffitt, Caspi, Dickson, Silva, Rijo, and Salekin, 2012); Sampson & Laub, 1992). Given this vulnerability to criminal behaviour during adolescence, Lee (2007) notes that an early intervention providing some form of educational program is more effective in deterring crime in juveniles than punishment. Early intervention also has a strong impact on self-control and impulsivity in adolescents (Gottfredson & Hirschi, 1990; Lee, 2007). In order to maximize the effect of early intervention, specific methods for defining important subgroups of antisocial youth have the highest priority.

1.1 Aim of the current study

There is a gap in the research on juvenile offending in Korea. Evidence suggests that a special explanation is needed in order to understand serious violent juvenile offending (Lee, 2007). However Korean models that propose explanations for juvenile offending do not differentiate between the antisocial problem traits of violent offenders (VO) and non-violent offenders (NVO) (see Lee & Lee, 2009; Lee & Yoon, 2003; Park, Hong, Mun, & Kim, 2002).

This study attempts to examine whether there are quantitative differences in the personality traits related to antisocial behaviour of VOs compared to NVOs. The current study draws its data sample from a study, Pre-Review for Advanced Standardization of Special Personality Inventory-R, which was conducted by the Korean Ministry of Justice in 2010. For this study, 207 juvenile offenders were interviewed 101 violent offenders and 106 non-violent offenders.

The current study will review two different Korean young offender groups to explain the personality risk factors of offending and examine the following questions. What scales of the Personality Assessment Inventory-A (PAI-A) (Morey, 2003) are predicting variables for violent young offenders (VOs)? Do the PAI-A scales assess domains of psychopathology and behaviour problems related to the type of offence? Do violent young offenders whom the court has incarcerated during pre-sentencing processes show negative signs on the Risk Assessment Tool (RAT) (Lee & Cho, 2005) as compared to violent young offenders from a group in a police diversion program?

Including this introductory chapter, this thesis has six chapters. Chapter 2 focuses on the risk factors of juvenile delinquency and then examines two types of offender groups termed life course persistent (LCP) and adolescent limited (AL). Chapter 3 discusses the current state of knowledge regarding serious violent juveniles. In this chapter, psychopathic characteristics such as callous and remorseless traits are examined. Chapters 4 through 6 discuss the current study's methodology, results, and implications for future research, respectively.

2: Juvenile Offending Theoretical Perspectives and Predictive Factors

There are a number of theories to explain juvenile offending. A general overview of these theories' main ideas will help in understanding current theoretical perspectives on this topic. The common ground of the theories is that difficulties in defining violence in this context complicate the identification of risk factors for violent behaviour among youth, as well as efforts to prevent youth violence (Farrington, 1994).

2.1 Theoretical perspectives

2.1.1 *Self-control theory and delinquency*

Since the 1990s, Gottfredson and Hirschi's A General Theory of Crime (1990) has been one of the most influential and widely known explanations of crime and delinquency. They proposed self-control theory to explain all individual differences in the propensity to either refrain from or to commit crime, including all acts of crimes and deviance, at all ages, and under all circumstances. Their theory is that low self-control will lead to criminal behaviour when opportunities are available. Low self-control is the result of the following factors (a) the inability of parents to monitor their children's behaviour; (b) the inability of parents to recognize their children's deviant behaviour; and (c) the inability of parents to be consistent in punishing their children's deviant behaviour. Furthermore, parents' disapproval can have a negative effect on children's self-control, undermining the closeness and affection of the child-parent relationship which, itself, motivates children to behave in ways that will bring them parental approval. In addition to parents, school and social institutions contribute to the socialization that influences the development of self-control. According to this theory, once a level of self-control is formed in childhood, it remains throughout life.

In addition to explaining criminal behaviour, self-control theory also purports to explain analogous behaviour. Gottfredson and Hirschi explain that analogous behaviour includes smoking, drinking, drug use, illicit sex, and accidents. They stress that there is great versatility in the types of crimes and analogous behaviours committed by people with low self-control. According to their theory, "self-control accounts for all variations by sex, culture, age, and circumstances and explains all crime, at all times, and for that matter many forms of behaviour that are not sanctioned by the state" (p. 117).

It is problematic that Gottfredson and Hirschi do not define self-control separately from propensity. Their theory only hypothesizes that low self-control is the cause of the propensity toward criminal behaviour. Propensity toward crime and low self-control appear to be one and the same. To avoid this tautological problem, a conceptual definition or operational measures of self-control had to be developed that are separate from measures of criminal behaviour or propensity toward crime (Akers, 1991).

A number of studies have empirically tested self-control theory. Benson and Moore (1992) found that some white collar offenders are similar to common crime offenders, but that they do not have records of committing other offences and do not engage in deviant behaviour to nearly the extent that common crime offenders do. Their finding is contrary to Gottfredson and Hirschi's contention that all criminal offenders commit crimes because of low self-control and have the same propensity to engage in a number of other analogous deviant behaviours. Piquero, Paternoster, Mazerolle, Brame, and Dean (1999) tested the assertion of A General Theory of Crime that offenders are versatile and do not specialize. They found versatility in offending but a tendency for offence specialization to increase with age. Grasmick, Bursik, and Arneklev (1993) found that self-control was strongly related to both utilitarian and non-utilitarian crime. Pratt and Cullen's (2000) study found that when definitions favourable to crime and differential peer association were added into the equation with measures of self-control, the amount of explained variance doubled. Thus, they wrote, "Gottfredson and Hirschi's claim that the variables from social learning theory should not contribute significantly to the amount of explained variation in crime after self-control has been held constant is un-supposed by the data" (p. 951).

With respect to perspectives of the social prevention of juvenile delinquency, control theory is empirically supported. Hawkins and Herrenkohl (2003) revealed that intervention strategies in school increased school achievement and commitment and in turn reduced the initiation of delinquency and violence in the teenage years. The intervention used multiple methods to improve self-controlling abilities including learning and problem solving without resorting to anger and aggression. Unnever, Colvin, and Cullen (2004) found that exposure to coercive environments increased self-reported delinquency and that these effects were mediated by social-psychological deficits. Similarly, based on a sample of 300 homeless street youths in Toronto, Baron (2009) discovered that a multidimensional measure of coercion predicted involvement in violent offences. In line with Hirschi's revised control theory (Hirschi, 2004), the direct effect of coercion on violence was mediated by low self-control, anger, coercive modeling and coercive ideation. Piquero and Bouffard (2007) wrote that social control is a complex phenomenon that may have differential effect depending on its quality, its magnitude, and the context in which it is applied.

2.1.2 Life course persistent (LCP) and adolescent limited (AL) offender groups

Early foundational studies

To explain antisocial behaviour, Moffitt (1993) identified two distinct categories (a) a small group that engages in antisocial behaviour of one sort or another at every life stage, termed life course persistent (LCP), and (b) a larger group that is antisocial only during adolescence, termed adolescent limited (AL). In recent years, LCP perspectives have become prominent in criminology. These perspectives offer explanations about why most adolescents who were delinquent at younger ages discontinue law violations later in life whereas others continue offending. The LCP perspective is rooted most directly in the early 20th century, when sociologists at the University of Chicago began conducting studies on problems confronting American society (Benson, 2013). What the life course perspective takes from the criminal career tradition is "the idea that criminal careers vary among individuals" (p. 13). Early longitudinal studies found evidence that a relatively small cadre of offenders accounted for over half of all the offences committed by an entire group of boys (Wolfgang, Thornberry, & Figlio, 1987). In a later study, Blumstein, Cohen, Roth, and Visher (1986) defined criminal career as the "longitudinal

sequence of crime committed by an individual who commits criminal offenses” (p. 12). The first time a person engages in crime, which is referred to as the age of onset, marks the beginning of a criminal career. For the life course researchers, age of onset is an important feature of criminal careers because it appears to be associated with three other key dimensions of criminal careers frequency, seriousness, and career length (Loeber, Hoffschmidt, & Ash, 2001).

Frequency refers to an individual’s rate of criminal activity. Individual offending frequencies vary among offenders and are associated with demographic characteristics such as age, race, and sex. Individuals who begin their criminal careers at younger ages generally have higher values for the rate of criminal activity than those who begin later in life (Farrington, 2005). Offenders may also vary in the seriousness of the offences they commit. Life course studies examine whether there are distinct types of criminal careers based on distinct patterns in offending seriousness (Nagin & Land, 1993; Sampson & Laub, 1992). Finally, duration of criminal career has been identified as an important dimension of criminal careers. The research on duration consistently finds that criminal careers tend to be short, typically starting in the mid-teenage years and ending in the late teens or early twenties. But some offenders who initiate criminal careers as teenagers continue to commit offences well into their thirties and beyond (Tracy, Wolfgang, & Figlio, 1990).

The life course perspectives assume that events that happen at one time in life affect events at later times. The most important thing about this assumption is that life course research must be carried out using longitudinal research designs. Thus it is important to understand the features and types of longitudinal research design. Several major longitudinal developmental studies are considered as providing important evidence of the validity of the LCP perspective. The longitudinal researchers have attempted to understand the relationship between duration and the other dimensions of criminal careers. They have focused on patterns and variations in people’s experiences. The particular patterns through individuals’ lives demonstrate a sequence of age-graded stages and social roles and a set of interconnected trajectories.

Glueck's Crime Causation Study (UJD) was initiated in 1939 with a sample of 1,000 boys aged 10 to 17 from a disadvantaged neighborhood in Boston (Glueck & Glueck, 1950). Half of those in the sample were defined as delinquent and were selected from two juvenile facilities in Boston. The other half was collected from non-delinquent boys. The information gathered included the juveniles' social, biological, and psychological characteristics, their family environments, school performances, and work experiences (Laub, Nagin, & Sampson, 1988). Glueck and Glueck collected their data on the subjects over the course of several decades, and they serve as theoretical and empirical exemplars for contemporary longitudinal research on careers in crime. Despite its wealth of information, the Gluecks' UJD study had methodological limitations. First, it overemphasized individual-level variables without acknowledging the role of sociological perspectives and related important risk factors such as peer affiliations and socioeconomic status. Second, it failed to distinguish between risk factors that preceded delinquency and risk factors that developed after the onset of delinquent behaviour (Laub & Valliant, 2000).

In another early study, Robins and O'Neal (1958) attempted to describe the natural histories of subjects who displayed antisocial personalities and behaviour. They examined 524 White subjects under the age of 18, selected from the patients of a municipal child-guidance clinic in St. Louis, Missouri. They also collected data on 100 White elementary-school students with the same age and sex distribution as the first cohort and from the same census tract. This study found that people who were regarded as antisocial as adults had always displayed antisocial behaviour as youth, and it did not find any pro-social children who later became anti-social adults. The most important finding was that antisocial behaviour as a youth appeared to be a necessary but not always sufficient condition for antisocial behaviour as an adult.

The Cambridge-Somerville Youth Study (McCord, McCord, & Zola, 1959) involved 650 high-risk and low-risk boys from disadvantaged neighbourhoods in Cambridge, Massachusetts, in 1937. Half of the boys were placed in a treatment group and the other half group was a control group. The treatment group was supposed to receive treatment in the form of a close, intimate friendship with a counsellor. The idea was to determine whether the treated boys fared better than the control group in

avoiding delinquency. Although the evaluation of the study failed to find any evidence that the program was a success, the study was meaningful because of its well-organized study design and data collection plan.

Another related study, the Cambridge study in delinquent development, examined long-term prospective of crime and delinquency among 411 inner-city males who were born around 1953 (Farrington & West, 1990). The most significant aspect of this study is that Farrington and West collected data from multiple sources, including subjects, parents, teachers, peers, and official sources. The use of multiple sources provided more insight into how criminal careers develop, particularly how school performance, parents' attitudes toward their children, parental disciplinary styles, and parental conflict are related to delinquency. For example, boys raised in homes in which there was a noticeable degree of conflict between the parents were more likely to be delinquent than their counterparts (Thornberry, 1987). Also, boys whose parents displayed very strict or erratic discipline were more likely to engage in delinquency than boys whose parents used other disciplinary methods.

Recent theoretical paradigm findings

Since 1990s, the interest in childhood and in the stability of antisocial behaviour across offenders' lives has been growing. Some scholars called for a developmental criminology (Loeber & Stouthamer-Loeber, 1996). The research in this area was seeking the predictors of various aspects of offending and the pathways or sequence of events that directed people into crime. Loeber, Farrington, Stouthamer-Loeber, Moffitt, and Caspi (2001) examined the development of delinquency and described a model of three pathways:

(a) an authority conflict pathway prior to the age of the 12, that starts with stubborn behaviour, and has defiance as a second stage, and authority avoidance as a third stage; (b) a covert pathway that starts with minor covert acts, has property damage as a second stage, and moderate to serious delinquency as a third stage; and (c) an overt pathway that starts with minor aggression, has physical fighting as a second stage, and violence as a third stage (p. 348).

Each of the three pathways represents different developmental tasks. The overt pathway represents “aggression as opposed to positive problem solving; the covert pathway represents lying, vandalism, and theft versus honesty and respect for property; the authority conflict pathway represents conflict with and avoidance of authority figures versus respect for authority figures” (p.348). This conceptualization suggests that a juvenile’s achieving one developmental task does not necessarily mean that he will achieve several of these developmental tasks.

Loeber et al. (2001) found that the pathway model allowed several conceptualizations of an individual’s development of increasing seriousness of antisocial and delinquent behaviour (a) escalation within a pathway; (b) persistence of problem behaviour over time; and (c) a multiplicity of pathways. The results showed that, with age, more boys progressed on two or three pathways, indicating an increasing variety of problem behaviours over time (Farrington, 2005). The pathway model assists in the identification of youth at risk and optimizes early interventions before problem behaviour becomes more stable and worse over time.

2.2 Predictive factors of violent behaviour

In addition to the studies on self-control, physical aggression and violence have been underlying topics in studies attempting to understand serious violent behaviours in adolescents. Experts in various disciplines of social sciences had been seeking to identify factors that could assist in making predictions more reliable and valid. Initially, the research focused on simplistic attempts to identify a single factor that not only explained dangerous behaviour, but also enabled the evaluator to anticipate offences of this nature (Louw, Strydom, & Esterhuysen, 2005). However, various researchers have emphasized different factors or markers, depending on the variables and the nature of the participants. For example, psychologists have attached more value than legal practitioners to age, race, gender, the absence of a criminal record, the absence of remorse, and drug addiction. In contrast, legal practitioners have focused more on causal analysis of actus reus and mens rea upon provisions of the applicable law. Thus, the variations in prediction accuracy that are commonly encountered among practitioners can reflect differences in their training and culture.

Several researchers are of the opinion that the most important risk factors related to violence can be divided into four categories dispositional, historical, clinical, and contextual variables, each of which will be discussed below (Blackburn, 2000b; Douglas & Webster, 1999; Tremblay & Nagin, 2005).

2.2.1 *Dispositional factors*

Dispositional factors refer to demographic factors such as age, gender, race, and socio-economic status (SES), as well as cognitive functioning and neurological status. For example, regarding age, a young age is generally associated with a risk of violence (Swanson, 1994). Various researchers have found that the younger a person is at the time of a violent offence, the greater the likelihood of recidivism (Lattimore, Visher, & Linster, 1995).

It is also generally assumed that men are more often guilty of violent behaviour than women (Maxfield & Widom, 1996). However, researchers have found that gender differences do not play a significant role in violent offences (Steadman et al., 1994). The differences between men and women in respect to the rate of violence were more related to the type of offence and the circumstances under which the violence occurred. In addition, how violence is defined plays a role in determining what the gender differences are. Whereas males are involved in the majority of incidents involving physical aggression, females are increasingly involved in other, particular types of violence. For example, Everett and Price (1995) found that although girls had lower rates of school violence when the violence was defined as overt aggression; girls were more likely to appear in the data when verbal threats and intimidation were included. Furthermore, a more recent study (Cummings & Leschied, 2002) suggests that the presence of indirect forms of female aggression is related to the expression of physical forms of violence as well.

Race is another factor that has been studied. Maxfield and Wisdom (1996) suggested that African-Americans are more violent than their White compatriots. In contrast to this, Steadman et al. (1994) believed that the link between race and violent offences becomes insignificant when the crime rate applicable to offenders' residential area is statistically taken into account. According to the later researchers, where the

person lives rather than the offender's race are more related to violence. Studies have shown that socioeconomic status (SES) is a very common correlate of disordered conduct and aggressive and delinquent behaviour (Farrington, 2005; Farrington et al., 2008; Loper, Hoffschmidt, & Ash (2001); Sampson & Laub, 1992; Savage, 2009). According to these studies, persons from lower socio-economic backgrounds are more inclined to handle conflict in violent ways than persons from more affluent SES backgrounds. The reason is that a poor SES gives rise to much higher levels of stress, and persons in such circumstances also generally do not have any conflict-handling skills, other than violence (Loeber & Stouthamer-Loeber, 1996; Stueve & Link, 1997).

Studies about socioeconomic status (SES) suggested that levels of school attachment, attainment, and achievement are all associated with delinquency. Laub and Sampson (1988) found that more than half of chronic juvenile offenders were in special education programs at school – mostly for emotional problems, remedial education, or learning disabilities. Some persistence may be explained by association with peers as the adolescent makes the transition into adulthood (Savage, 2009). It is possible that association with deviant peers during the transition period will prevent the desistance in offending that is normative in this age group. It is significant that “inner city neighbourhoods tend to have the highest crime rates and they endure the most serious forms of crime to a much greater degree than their suburban and rural counterparts” (p. 15).

Another dispositional factor that has received significant attention is cognitive functioning. Kropp, Hart, Webster, and Eaves (1999) support the hypothesis that inadequate cognitive functioning can be identified as a distinguishing factor between violent and non-violent offenders. Studies of age, gender, race, and SES show that these factors do not have as much predictive value as cognitive variables. Cognitive functioning problems are considered in the research as one of the markers of poor school performance and school-bonding. Problems in cognitive functioning disrupt normal development of language, memory, and self-control and thus increase vulnerability to criminogenic aspects in the child's social environments. Because many of these children are born into disadvantaged environments, the cumulative interaction

between the difficult child and the difficult environment can culminate in highly antisocial individuals (Piquero & Brezina, 2006).

2.2.2 Historical factors

Historical factors refer to histories of violent offences, substance abuse, early maladjustment, relationship problems, and employment instability. A history of repeated violent offences has been regarded as a fairly strong and probably the most important predictor of future violent crime, regardless of the context or environment in which the violence occurs (Monahan, 2001). However, according to Farrington (2001), Monahan's view is too simplistic and, consequently, is not always correct. Farrington suggests that previous convictions for non-violent offences are often better predictors of violence than convictions for violent crimes as offenders display versatility in their actions and do not necessarily follow a fixed pattern.

Substance abuse is also considered an important historical factor. Swanson (1994) suggests that abuse of alcohol or other addictive substances increases the possibility of violent behaviour significantly. In the epidemiological research, he found that the chance of a person's committing a violent crime is 10 times greater in cases where substance abuse is applicable than in the absence thereof. Steadman et al. (1994) support the finding that it is important to take note that an association between substance abuse and the commission of violent offences is not limited to males. However, Harris, Rice, and Quinsey (1993) and McNiel, Binder, and Greenfield (1988) found a weak link between alcohol abuse and violent behaviour. The rationale for these findings was that there were numerous individuals who abused alcohol or other substances but who did not commit violent offences, and there were people who committed violent crimes who had no history of alcohol or other substance abuse.

Maladjusted behaviour during the childhood years is also a factor that correlates to various problems with violence later on in life. In this regard, Harris et al. (1993) point to attention and concentration problems, repeated failure at school, truancy, and suspension or expulsion from school. Farrington (2001) suggests early antisocial behaviour such as chronic alcohol or other substance abuse and aggressiveness, impulsivity, restless and reckless behaviour during adolescence, problems with peer

group relationships, and hostility towards authority as predictive factors. The quality of adjustments at home as well as at school and the occurrence of a psychiatric illness during childhood are also violence risk factors in young persons (Loeber & Stouthamer-Loeber, 1996). Etiological factors that are associated with maladjustment behaviour include being taken away from the parents at an early age (younger than 16); exposure to unapproachable parents and cruel and inconsistent parental discipline; abuse and neglect; alcoholism and the absence of the parent; and physical violence in the family (Farrington, 1994; Loeber & Farrington, 1998).

Relationship problems comprise another category of historical factors. According to Farrington (1994), for example, the inability to enter into lasting relationships and the tendency to become involved in unstable, destructive relationships that are characterized by conflict are important violence-predicting factors. A serious lack of involvement between parents and child and child abuse are contexts of chronic parental conflict

2.2.3 Clinical factors

Clinical factors such as psychiatric disorders and psychiatric symptoms play a central role in the evaluation of the risk of violence and are the primary focus of numerous researchers. Tremblay and Nagin (2005) found that there is a vast amount of literature on the effects of various genetic, neurobiological, and psychophysiological factors on aggression, conduct problems, and criminal behaviour. It is more likely that these factors have important indirect, rather than direct, effects on antisocial behaviour through their impact on the development of self-control, executive functions, and verbal abilities, which may in turn affect opposition, attention, hyperactivity, and aggression. Savage (2009) found that “it is reasonable to assume that any genetic, prenatal, perinatal, or early childhood experience that can change brain function, or bodily form or function in such a way that it results in problems with intellectual abilities, response to discipline, academic achievement, or peer acceptance could potentially influence the development of delinquent behaviour” (p. 9). Studies of empathy also indicate an association between conduct problems and delinquency (Howell, Krisberg, & Jones, 1995). Empathy is thought to require both a cognitive process of understanding the feeling of others and an effective response to those emotions. Early precursors to

problem behaviour, identifiable in the preschool years, may affect later problem behaviour through their effects on empathy development.

It is generally assumed that, in the case of violent behaviour, psychiatric disorders and related problems are significantly greater (Douglas & Webster, 1999). On the other hand, Steadman et al. (1994) found that serious psychiatric disorders do not create an increased risk in themselves. Rather the risk is a result of a combination of a serious psychiatric disorder with substance abuse. Also, persons with psychiatric disorders comprise a very small part of the population, and most psychiatric patients do not commit either violent or criminal acts (Marzuk, 1996). A diagnosis of antisocial personality disorder, however, is regarded as a significant risk factor (Harris et al., 1993). Hemphill, Hare, and Wong (1998) found that persons who meet the criteria for antisocial personality disorder are more inclined to commit offences that are motivated by instrumental objectives than offences motivated by emotionally driven/active objectives. Studies have found that psychopathy, as measured by psychometric instruments such as the PCL-R (Hare, 1991), have strong predictive value for violent as well as non-violent offences (Steadman et al., 1994). Other personality disorders such as paranoid and passive-aggressive disorders are also associated with violent behaviour in the case of male offenders (Blackburn, 2000a). Apart from personality disorders, certain personality traits such as hostile disposition and impulsiveness are also associated with violent behaviour (Douglas & Webster, 1999). A consideration drawn from the review of comorbidity regarding mental health disorders and violence suggests that there is considerable overlap in the conditions under which some offenders who develop a mental health disorder also display some form of violent behaviour (Lienfield & Marino, 1995). However, according to Freedman (2001), the validity and reliability of the instruments assessing disorders have not been definitely established.

It would seem that when certain symptoms such as the manic phase of a bipolar disorder rather than a diagnostic category (e.g. schizophrenia) are used as a criterion, a stronger link with violent behaviour is found. Link and Stueve (1994) found that three symptoms -- the experience of delusions of external control, obsessive thoughts, and paranoid notions -- predominate in this connection. Also, delusions and command hallucinations (Buchanan et al, 1993) correlate with the occurrence of violent behaviour.

2.2.4 Contextual factors

Contextual factors refer chiefly to aspects of the environment or to the person-environment interaction (Douglas & Webster, 1999). These factors include adequate planning on being discharged, the availability of supervision and support, access to weapons, drugs, or victims, and conditions in the residential neighbourhood. According to Monahan (2001), taking these factors into account in the prediction of violence is of such importance that the validity of predictions is significantly reduced in their absence.

Adequate planning upon the discharge of individuals is a significant contextual factor. Purposeful and individualized planning regarding accommodation as well as supervision and control of patients or prisoners who are released into the community is essential for the prevention of recidivism (Buchanan et al., 1993). Precisely because people and their circumstances differ, it is important that such planning take the specific needs of each case into consideration. Good planning must include the availability of supervision and support. Access to appropriate professional help reduces the risk of violent behaviour. Likewise, having family members and friends who are truly supportive is an important factor in the prevention of recidivism (Estroff & Zimmer, 1994).

Regarding the environment into which a person is released, it is evident that if it offers access to weapons, drugs, and/or victims, the risk of violent behaviour is significantly increased. In addition, the risk of dangerous behaviour is much greater if the concerned person has an antisocial circle of friends and has committed previous offences under the influence of a substance and/or with the aid of a firearm. Nonetheless, violent offenders are often released into an environment and circumstances that are similar to those in which previous offences were committed (Douglas & Webster, 1999).

Finally, social stressors, such as the breaking up of relationships, work-related problems, family losses, unemployment, and even dishonesty in the family have been identified as significant violence risk factors (Bonta, Law, & Hanson, 1998). Although the role of social support systems as such has not been the subject of as much investigation as other contextual variables, a substantial risk factor for recidivism could be present in cases where a social support system is lacking, particularly, for example, in the case of

people with psychiatric disorders. Thus, while the security of a family decreases the risk of violence, chronic conflict in a family may increase the risk (Louw et al., 2005). Finally, the ability to handle stress thus plays an important role in dysfunction and potentially in the occurrence of violent behaviour.

2.3 Preventive promotive factors

Recent studies have found several operative components as preventive promotive factors, including low ADHD, high persistence of discipline, low physical punishment, good supervision, involvement in family activities, low parental stress, and living in a good neighbourhood (Farrington, Loeber, Jolliffe, & Pardini, 2008). Psychopathic features, depressed mood, interaction with the interviewer, perceived likelihood of being caught, parental reinforcement, parent antisocial attitude, parent aspirations for the child, parent stress, peer delinquency, relationship with peers, academic achievement, attitude toward school, family SES (social-economic status), and housing quality had mixed promotive and risk effects (Farrington et al., 2008). Farrington et al. (2008) also found that preventive promotive factors, compared to risk factors, had a shorter reach in predicting serious offending, but that mixed factors had a long reach in predicting serious offending.

Loeber et al. (2008) found that the strongest preventive promotive factors for predicting a low probability of violence were high academic achievement (at younger ages), an older mother, and a good relationship with peers (at older ages). The strongest preventive promotive factors predicting a low probability of theft were low psychopathic features (at younger ages), high academic achievement (at younger ages), and high persistence of discipline (at older ages). In contrast, the strongest aggravating risk factors predicting a high probability of violence were prior violence and high peer delinquency, followed by marijuana use and gun carrying, and the strongest aggravating risk factors predicting a high probability of theft were child maltreatment and prior theft, followed by theft victimization, high peer delinquency, and Caucasian ethnicity.

In another study, among the youngest cohort, at the bivariate level, there were more aggravating risk factors pertaining to participant psychopathology associated with the high declining violence trajectory, whereas there were more aggravating risk factors

pertaining to parental characteristic associated with the theft trajectories (Lacourse, Dupere, & Loeber, 2008). High psychopathic features and one or no biological parent at home were unique aggravating risk factors for violence, whereas low academic achievement and repeating a grade were unique aggravating risk factors for theft. Overall, late-onset violence and theft trajectory were poorly predicted by the aggravating risk and preventive promotive factors, and the strongest predictors of the high and moderate declining trajectories were the same as for the late-onset trajectories, but they had weaker effects. Both promotive and risk factors that are more proximal to the outcome might better explain both stability and change for this specific trajectory (Farrington et al., 2008).

Farrington, Loeber, and Jolliffe (2008) found that more remedial promotive factors, measured during middle and late childhood (ages 7-12), predicted early desistance (by early adolescence, ages 13-16) than intermediate desistance (by the late adolescence, ages 17-19), or late desistance (by early adulthood, ages 20-25). Less serious forms of offending tended to occur prior to the onset of more serious forms, which supports the notion of escalation models of development of offending and the notion of developmental pathways. The probability of young men's escalating to more serious forms of offending was highest for the lower compared to the intermediate seriousness levels. About half of young men who had committed minor theft progressed to moderate theft, in contrast to one fifth to one fourth of the men who had committed moderate theft or violence progressing to serious theft or violence. Thus the probability of progression is inversely related to seriousness. One fourth to one third of the young men had been arrested for violence, but only 1 in 7 was convicted for violence. One in 3 had been arrested for serious theft, and 1 in 5 was convicted of serious theft.

2.3.1 Desistance from persistence in offending

Stouthamer-Loeber, Loeber, Stalling, and Lacourse (2008) found that a higher level of persistence of serious offending was found for those with an onset during late childhood, compared to those with an onset during middle childhood or early adolescence. One fourth of the early onset offenders who had committed serious offenses desisted in serious offending later on. Desistance processes operated from at least childhood onward and were documented throughout adolescence and early

childhood. Persistence in serious violence and theft was similar in the youngest cohort, but in the oldest cohort, a higher percentage of serious violent compared to serious theft offenders persisted in their offending.

Stouthamer-Loeber et al. (2008) also found that the desistance rate was highest when offending was present in late childhood and that the highest percentage of desistance took place in late adolescence (48%), was lower in early adolescent (15%), and slightly higher after onset in early adolescence (15%), and slightly higher after onset in early adolescence in the oldest cohort. A low rate of desistance during adolescence for a given cohort may be a forewarning that delinquents in that cohort will experience a longer and heightened delinquency career. High parental stress, living in a small house, high alcohol use, high drug dealing, gang membership, gun carrying, depressed mood, and high peer delinquency hinder desistance. Several forms of social competence (good life skills, high linking of adults, and high job skills) and social cognitions (high self-aspirations, negative attitude toward delinquency, and negative attitude toward substance use) did not predict desistance (Farrington, Loeber, Jolliffe, & Pardini, 2008).

Life course persistent studies conclude that social skills training can be effective in decreasing antisocial behaviour and delinquency. Other variables that were not associated with desistance were ethnicity, fewer than two changes in caretaker before age 10, high parental aspirations for the youth, having an older mother, and the family not being on welfare (Farrington, 2005; Farrington, Loeber, Jolliffe, & Pardini, 2008; Stouthamer-Loeber et al., 2008).

It is clear that there is no single discipline that can fully explain why people do what they do or why they develop in one way rather than another. Genes matter, but families, peers, neighbourhoods, labour markets, societies, cultures, and justice systems also do. One of the great strengths of the life course perspective is its explicit recognition of the multi-determined, historically contingent nature of human behaviour and development. Although the theoretical diversity encompassed by the life course perspective is a significant development, it has weaknesses. It is difficult to summarize the perspectives in simple terms. Researchers from a broad spectrum of disciplines

have not made clear how they all fit together. Therefore, in order to better understand antisocial behaviours, we need to examine them from several perspectives.

3: Adolescent Psychopathic Traits and Violent Delinquency

3.1 Relationship between characteristics of violent behaviour and psychopathy

As described in the previous chapter, Moffit (1993) and a number of other researchers (Farrington, Loeber, & Jolliffe, 2008; Loeber et al., 2001; Piquero & Brezina, 2006; White, Bates, & Buyske, 2001) distinguish between two types of delinquency adolescence limited (AL) and life course persistent (LCP). Juveniles in the LCP group are characterized by a young age of onset of problem behaviour, usually because of a complex interaction of biological, individual, and environmental factors (Moffit, 1993). Because of the persistence and severity of their delinquent behaviour, the LCP group is seen as the most problematic for society. Recidivism may be prevented if treatment targets the specific risk factors.

In order to understand the mechanism of recidivism, clinical approaches such as antisocial traits, aggression, and psychiatric problems have been consistently studied. Psychopathy is a clinical construct referred to as a personality disorder defined by a constellation of interpersonal, affective, lifestyle, and behaviour characteristics that manifest in wide-ranging antisocial behaviours (Hare, 1993). On the interpersonal dimension, it is characterized by glib or superficial charm, narcissism or grandiose self-worth, pathological lying, and conning/manipulation. In terms of affect, psychopathic personality is characterized by callousness and lack of guilt or empathy, failure to accept responsibility, shallow emotion, and lack of guilt or remorselessness. For the life style dimension, psychopaths lack realistic life goals, have a parasitic orientation, and are globally irresponsible, impulsive, and stimulation seeking. On the antisocial dimension, psychopaths have poor behavioural control, evince early behaviour problems, engage in juvenile delinquency, are criminally versatile, and have records of noncompliance/vocation of conditional release.

In short, the concept of psychopathy describes a person who is selfish, self-centered, and self-motivated to secure his or her self-interest. This pursuit of self-interest is achieved through manipulation or force with little to no concern for the other person. In fact, the lack of concern for others is noteworthy because it occurs without guilt, remorse, or the most basic empathic noting that another human being is being victimized (Delisi, 2009).

Recent studies on psychopaths argue that psychopathy is the unified theory of delinquency and crime and the purest explanation of antisocial behaviour (Delisi, 2009; Loeber et al., (2001). Research concerning psychopathy provides a rationale for linking instrumentality, emotional reactivity, and guilt/remorse features of an event with a specific personality profile associated with serious criminal behaviour and re-offending (Delisi, 2009; Loeber, et al., 2001). Psychopathy refers to a personality syndrome that includes manipulative, deceitful, narcissistic personality, and callous characteristics coupled with antisocial behaviour (Cleckley, 1976). Psychopaths, who tend to commit violence that is instrumentally motivated, who exhibit diminished fear reactivity, and who demonstrate a lack of empathy or guilt, also have high rates of delinquency, criminal behaviour, and recidivism (Corrado, Vincent, Hart, & Cohen, 2004; Hare, 1996).

Several investigations have linked instrumental offending with a psychopathic personality profile. Instrumental violence is defined as violence that is directed at achieving a specific, usually self-gratifying, goal that has been planned or considered before execution (Berkowitz, 1993). Cornell, Warren, Hawk, and Stafford (1996) examined psychopathy, as measured by the Hare Psychopathy Check List (PCL-R; Hare, 1991), among adult male offenders based on a review of their offence histories. Instrumental offenders who committed at least one violent crime for a clearly identifiable purpose had higher psychopathy scores than did reactive offenders, whose violent crimes were reactions to an interpersonal conflict with a victim. These results were supported in a subsequent investigation of adult male offenders at an inpatient treatment program (Hare & Neumann, 2008). Along similar lines, psychopathic offenders are more likely than non-psychopaths to be motivated by revenge or retaliation (Williamson, Hare, & Wong, 1987) and to report use of instrumental aggression (Serin, 1991). Thus

examinations with adult offenders converge on identifying a linkage between psychopathy and a pattern of instrumental, goal-directed violence.

As mentioned, psychopathy also is associated with a lack of empathy and remorse about the commission of violent behaviours. Cleckley (1976) attributed psychopathy to a core affective deficit that results in a lack of guilt or remorse and an absence of empathy for a victim. The association of a psychopathic personality style with instrumentally motivated aggression coupled with diminished guilt and remorse is consistent with Hare's conception of psychopaths as predators who use charm, manipulation, intimidation, and violence to control others and to satisfy their own selfish needs. Hare (1996) found that lacking in conscience and in feelings for others, they cold-bloodedly take what they want and do as they please, without the slightest sense of guilt or regret. Along similar lines, Cornell et al. (1996) observed that instrumental offenders were more likely than reactive offenders to be rated for a lack of remorse and a lack of empathy on the PCL-R.

The relationship between psychopathy and emotional reactivity has also received attention. A core affective deficit, as described by Cleckley (1976), would be expected to diminish emotional reactivity as a motivating factor. Hare (1996) points to a global hypo emotionality in psychopaths, which has a biological basis and accounts for diminished reactive responding. Whereas the cognitions and interpersonal interactions of most members of our species are heavily laden with emotion, the inner life, experiences, and behaviours of psychopaths seem shallow and emotionally barren. However, this hypo emotionality appears to relate primarily to emotions of fear and anxiety. Psychopaths do not reliably show reduced anger relative to non-psychopaths (Serin, 1991), and, indeed, the severe ferocity of some violent actions committed by psychopaths suggests high levels of emotional responding.

Frick and associates argue that the concept of psychopathy can be extended to youth populations (Christian, Frick, Hill, Tyler, & Frazer, 1997; Frick & Dickens, 2006). Based on several examinations of conduct disorder among children and adolescents, they have identified two subtypes of the disorder. One group, viewed as having impulse control-conduct problems, is characterized by high levels of antisocial behaviour and

poor impulse control. A second group of youth exhibit similar problems with antisocial behaviour and weak impulse controls, but show callous-unemotional features. This second cluster of youth is more likely to exhibit little empathy or guilt, has shallow unexpressed emotions, and often acts in a charming but insincere manner. The callous-unemotional youth have more conduct problems, a greater history of legal problems, and are more likely to have parents with antisocial personality features (Frick & Marsee, 2006). Frick points out that the distinction between antisocial youth with impulse-control problems versus those with callous-unemotional traits mirrors that observed between antisocial but non-psychopathic adults and psychopathic adults (Frick & Dickens, 2006). This body of research shows that, as is the case with adults, distinctions between the two types of anti-social youth revolve around aspects of empathy or guilt, reduced emotional reactivity, and a manipulative instrumental orientation (Loeber et al., 2001)

3.2 Psychopathic traits as a risk factor

As examined by research studies, psychopathy has strong predictive validity across a range of behavioural outcomes. Hare (1996) concluded that one of the interesting findings to emerge from this research is that in spite of their small numbers – perhaps 1% of the general population – psychopaths make up a significant portion of our prison populations and are responsible for a markedly disproportionate amount of serious crime and social distress. Psychopathy has shown empirical value in predicting antisocial outcomes among diverse populations and subpopulations selected from community, clinical, and correctional samples. Psychopathy is applicable across gender, ethnicity, and age and among civil psychiatric patients (Salekin, Rogers, & Sewell, 1996). In addition, psychopathy is applicable sub-clinically to the general population (Hare & Nuemann, 2008). Psychopathy is also relevant to common forms of childhood and adolescent delinquency. Psychopathy has also been shown to predict antisocial behaviour in environments that theoretically should protect against delinquency.

Psychopathy has been found as a predictor of both offending and recidivism. Corrado et al., (2004) found that Psychopathy Checklist Youth Version (PCL YV) (Forth, Kosson, & Hare, 2003) assessments appeared to be reliable and valid in predicting juvenile recidivism. Harris et al. (1993) examined the recidivism rates of 169 male

offenders released from a psychiatric facility and followed up 1 year later. Nearly 80% of psychopathic offenders committed a new violent offence, and psychopathy was the strongest predictor of recidivism. Campbell et al., (2004) studied 226 incarcerated adolescent offenders and found that about 9% exhibited high levels of psychopathic traits. For homicide offenders, Millon and Roger (1998) suggested that many murderers could be characterized as malevolent psychopaths, which is a particularly negative subtype of offender characterized as belligerent, mordant, rancorous, vicious, brutal, callous, and vengeful. Most homicides committed by psychopaths are more likely to be “cold-blooded” and completely premeditated.

A study of sexual homicides committed by psychopathic and non-psychopathic offenders in Canadian prisons revealed that nearly 85% of psychopathic murderers engaged in some degree of sadistic behaviour during the course of their murders. Psychopath-perpetrated murders contained significantly greater levels of gratuitous and sadistic violence (Porter, Woodworth, Earle, Drugge, & Boer, 2003). Psychopathy is also applicable in predicting sexual offending. Hare & Nuemann (2008) found significant evidence of psychopathic personalities among rapists, child molesters, and mixed-victim sexual predators. Gretton, Catchpole, & Hare (2004) found that youths scoring higher on the PCLYV (Forth et al., 2003) were more likely to escape from custody, violate the conditions of their probation, and accumulated more total, violent, and nonviolent offenses after release from treatment programs. Across an anthology of behavioural outcomes from aggression to delinquency to offending to institutional misconduct to recidivism to predatory violence, psychopathy has been shown to be an integral predictor of crime (Delisi, 2009).

3.3 Personality features associated with psychopathy

Several investigations establish a link between psychopathy, usually as measured by the PCL-R, and instrumentality, reduced emotional reactivity, and empathyguilt. To examine exactly what the personality features of psychopaths are, Hart and Hare (1997) used the Interpersonal Adjective Scales – Big 5 Version (IASR-B5; Trapnell & Wiggins, 1990). They found a relationship between psychopathy with increased dominance and reduced conscientiousness, openness, and neuroticism. In a study of personality features of prison inmates, Hart and Hare observed significant

relationships between the total PCL-R scores and scales measuring narcissistic, antisocial, aggressive, paranoid, borderline, and drug dependent features. Examinations of personality features and psychopathy among adolescents have revealed similar patterns (Hare & Neumann, 2008).

Murrie and Cornell (2002) examined the relationship between psychopathy, as measured by the PCL-R, and personality features of adolescents at a residential in-patient facility. They found that several scales from the Millon Adolescent Clinical Inventory (MACI; Millon, 1993) distinguished psychopathic from non-psychopathic adolescents. Youth with high PCL-R total scores showed a general pattern of heightened resistance to social standards (Unruly scale), a tendency to dominate and abuse others (Forceful scale), unpredictable and aggressive behaviour (Oppositional), as well as antisocial and illegal behaviour (Delinquent Predisposition, Substance Abuse). Inverse relationships with several scales indicated high PCL-R scorers as less likely to be kind-hearted in relationships with others (Submissive), less rule-conscious and serious-minded (Conforming), and less fearful (Anxious). In addition, Murrie and Cornell created a Psychopathy Content Scale based on selected items from the MACI with content similar to PCL-R items. The scale, proposed as a screening device, afforded excellent prediction of psychopathy as measured by the PCL-R. However, these data were collected from a sample of hospitalized youth with diagnosed mental disorders and may not generalise to a sample of violent juvenile offenders (Loeber et al., 2001).

3.4 Psychopathic traits in juvenile offenders

To understand youth psychopathy, researchers have examined the disorder's construct validity by means of identifying its emotional and behavioural correlates in youth samples (Brandt, Kenneaday, Patrick, & Curtin, 1997). These studies identify some apparent commonalities between youth and adult psychopathy (Frick, & Dickens, 2006). Specifically, psychopathic youths are more likely to be diagnosed with childhood-onset conduct disorder and present with a greater variety and seriousness of delinquent and antisocial behaviours such as fighting, causing serious injury, stealing, vandalism, and purposely killing animals (Murrie & Cornell, 2002; Myers, Burket, & Harris, 1995). Other study also points to a higher risk of substance abuse, earlier onset for drug use, and experimentation with a greater variety of drugs among psychopathic adolescents

(Murrie & Cornell, 2002). Moreover, adolescent psychopathy is associated with a higher number and annual rate of prior violent offences, a higher number of institutional misbehaviours and aggression while incarcerated, a higher escape and conditional release risk, and a greater tendency toward violent recidivism (Brandt et al., 1997). Pardini, Lochman, and Frick (2003) suggest that psychopathic adolescents anticipate positive rewards from the use of aggression. In contrast, the presence of youth psychopathy has been frequently associated with the absence of or low levels of emotional problems such as anxiety or depression (Brandt et al., 1997).

3.5 Origins of psychopathy

Regarding the origins of psychopathy, there has been extensive debate. Some researchers have argued in favour of biological or evolutionary causes, whereas others have pointed to environmental influences (Porter et al., 2003). In an early review, McCord et al. (1964) argued that psychopathy-like traits were associated with early emotional deprivation such as parental neglect and erratic punishment. Weiler and Widom (1996) found that adults who had been abused or neglected as children scored significantly higher than non-victimized matched controls on a modified version of the PCL-R. Marshall and Cooke (1999) compared adult psychopathic and non-psychopathic criminals on a number of early environment-related variables. It was found that problematic family conditions in childhood, poor discipline and supervision, parental antipathy, child antipathy to parents, emotional abuse and neglect, and school difficulties such as negative school experience and performance are strong factors in the development of psychopaths (McCord et al., 1959). Data from adult studies support the possibility that childhood exposure to a negative family environment and societal influences is related to psychopathic traits, at least to a degree (Frick & Hare, 2001).

Consistent with prior studies, Frick and Viding (2009) expected that higher psychopathic traits in juvenile would be associated with a greater severity of behavioural problems and criminal history, particularly aggression. In contrast, psychopathic traits were expected by Campbell, Porter, and Santor (2004) to be negatively or not associated with measures of emotional difficulties. Given the inconsistencies in the research regarding family and maltreatment correlates of youth psychopathy, no specific hypotheses were made (Campbell et al., 2004).

3.6 Callous and unemotional (CU) traits

3.6.1 *CU traits in adolescents*

Callous-unemotional (CU) traits are prominent in most conceptualizations of psychopathy in adults (Hare, 1993). In adult samples, it is the callous and unemotional dimension that seems to be most specific to individuals high on psychopathic traits compared to other antisocial individuals (Cooke & Michie, 1997). Although there is debate about how many dimensions best capture the construct of psychopathy in adult samples (Cooke, Michie, & Hart, 2006), at least three dimensions consistently emerge, one of which includes CU traits and has been variously labeled as deficient affective experience (Cooke et al., 2006) or the affective factor (Hare, 1993). The other two dimensions include (a) an arrogant and deceitful interpersonal style involving a narcissistic view of one's self and conning and manipulative behaviour and (b) an impulsive and irresponsible behavioural style involving poorly planned behaviour and proneness to boredom (Hare, 1993).

These three dimensions apply to youth psychopathy studies. Childhood and adolescent psychopathy is typified by an interactive mix of impulsivity, callous and unemotional traits (CU), and conduct problems (Delisi, 2009; Lynam, 1997). For empirical support of the dimensional approach to psychiatric traits, Barry, Frick, DeShazo, McCoy, Ellis, and Loney (2000) examined 154 children aged 6 to 13 years with diagnoses for attention deficit hyperactivity disorder (ADHD) and oppositional defiant disorder (ODD) conduct disorder (CD). They found that children with ADHD and ODD CD and those who scored high on CU demonstrated fearlessness, a reward-dominant response style, and reduced stress about their behavioural problems.

3.6.2 *Stability of CU traits in adolescents*

Frick, Stickle, Dandreaux, Farrell, and Kimonis (2005) conducted a 4-year longitudinal study of children in Grades 3, 4, 6, and 7 who were scored for behaviour problems and the presence of CU traits. Children with conduct problems who also showed CU traits had the highest rates of conduct problems, self-reported delinquency, and police contacts. Interestingly, CU traits including guiltlessness, lack of

consideration of other people's feelings, meanness, no interest in school and behavioural performance, social isolation, and rare displays of feelingemotion are not only problems of adult psychopathy, but also are strongly heritable. These characteristics of children with high levels of CU traits suggest that this group of children may have a unique temperamental style, characterized by low levels of fear and lack of sensitivity to punishment, factors that may make them difficult to socialize (Cornell & Frick, 2007). Caputo, Frick, and Brodsky (1999) found that CU traits were higher in violent sex offenders compared to other violent offenders and non-violent offenders, whereas the other dimensions of psychopathy did not differentiate across offender groups.

Another important issue regarding adolescents' CU traits is whether the behaviours that define CU traits are stable enough in children or adolescents to predict some level of stability across development (Seagrave & Grisso, 2002). Frick and Dickens (2006) found that CU traits were relatively stable from late childhood to early adolescence. Obradovic, Pardini, Long, and Loeber (2007) also reported relatively high rates of stability for parent and teacher ratings of CU traits in a sample of 506 inner-city boys assessed annually from ages 8 to 16. Based on these findings, it appears that a CU trait from childhood to adolescence is quite stable. However, the high stability does not mean that the traits are unchangeable. Frick et al. (2005) reported that there were a significant number of youth who decreased in their level of CU traits over the course of the study. In this study, the level of CU traits was related to the level of conduct problems displayed by the child, the socioeconomic status of the child's parents, and the quality of parenting the child received. Thus, CU traits seemed to be influenced by factors in the child's psychosocial environment (Frick et al., 2005).

3.6.3 *CU traits and delinquency*

One important aspect of the construct of psychopathy in adult groups is its presence enhances the ability to predict particularly violent and antisocial behaviours. In adolescent psychopathy research as well, Frick and Dickens (2006) found that CU traits were associated with more severe conduct problems, delinquency, or aggression. Furthermore, they reviewed five published studies showing an association between psychopathic traits and poor treatment outcome. However, a significant proportion of

these studies did not investigate the role of CU traits specifically, either alone or in comparison to the other dimensions of psychopathy (Frick & Morris, 2004). CU traits generally were less associated with measures of conduct problems than the impulsive and narcissism dimensions of psychopathy in the studies that examined this issue (Corrado, et al., 2004; Frick et al., 2003).

In terms of aggression and delinquency, CU traits have generally shown similar associations with general measures of aggression and violence as other dimensions of psychopathy (Kruh, Frick, & Clements, 2005; Frick & Marsee, 2006).). In the case of conduct problems, CU traits seemed to be important for designating a subgroup of antisocial youth who had severe aggression and violence (Frick et al., 2003; Kruh et al., 2005). Following a similar pattern, CU traits were related to measures of delinquency, although it is not clear if they were more predictive than other dimensions of psychopathy (Corrado et al., 2004). However, CU traits predicted delinquency when the level of conduct problems or antisocial behaviour was controlled (Pardini et al., 2007). Finally, empirical studies suggest that CU traits are associated with conduct problems, aggression, and delinquency. Edens, Cruise, and Buffington-Vollum (2001) examined offender samples showing that CU traits were associated with general or violent recidivism. Frick and Dickens (2006) examined 24 published studies. They found a concurrent association between CU traits and measures of aggressive, antisocial, or delinquent behaviours from 22 independent samples. Therefore CU traits seem to be one of the important factors in predicting antisocial youths who show a more stable and aggressive pattern of behaviours. Consequently, CU would be considered particularly important for designating a unique developmental pathway to severe antisocial behaviour and aggression (Frick & Marsee, 2006).

3.6.4 *Characteristics of adolescents with CU traits*

Study results on adult prisoners with antisocial traits including CU show an absence of guilt, constricted display of emotion, failure to show empathy, use of others for one's own gain, and pervasive deficits in conscience development (Hare, 1996; Lynam, 1997). Consistent with the studies on adult psychopathy, children with CU traits seem to show a more severe and aggressive pattern of conduct problems (Frick et al., 2003). They are likely to show instrumental and premeditated patterns of aggression.

Pardini et al. (2003) examined a sample of severely violent juvenile offenders who were incarcerated in adult prisons. The offenders who showed more severe, repeated, instrumental, and sadistic violence against their victims scored higher on a measure of CU traits. Furthermore, in a school-based sample, children with conduct problems and CU traits showed more aggression overall and more instrumental aggression than other conduct-problem children (Frick, et al., 2003). Taken together, the findings empirically support a link between CU traits and aggressive behaviour in adolescents.

Another finding is that youth with CU traits exhibit a number of characteristics consistent with low levels of fearful inhibitions. Frick et al. (1999; 2003) found that children with conduct problems who also showed CU traits showed a preference for novel, exciting, and dangerous activities. Also, children with CU traits, compared to other children with conduct problems, were less sensitive to cues of punishment, especially when a reward-oriented response set was primed (Barry et al., 2000; Frick et al., 2003). Finally, children with CU traits and conduct problems showed less reaction to threatening and emotionally distressing stimuli than other antisocial youth (Blair, 1999). Similarly, Loney, Frick, Clements, Ellis, and Kerlin (2003) reported that young adolescents who committed offenses and who scored high on measures of CU traits show reduced reactivity to negative emotional words.

In brief, the results of the compelling studies suggest that youth with conduct problems who also show CU traits exhibit deficits in conscience development, exhibit instrumental and premeditated aggressive behaviours, and show behavioural and psychophysiological characteristics associated with low levels of fearful inhibitions (Cornell & Frick, 2007). The antisocial and aggressive behaviours in this subgroup of youth seem to be related to deficits in conscience development. These children also have low characteristics of autonomic reactivity and, behaviourally, low levels of fear.

3.7 Assessment of psychopathy and CU traits

Because of the impact of psychopathy on society, many researchers state that the best time to prevent and intervene is early in life (Lynam, Caspi, Moffitt, Loeber, & Stouthamer-Loeber, 2007; Salekin et al., 1996). From the works of Lykken (1957) until the early 80s, Cleckley's diagnostic criteria were frequently used in sample selection for

the study of psychopathy (Salekin, 2008). In the 1980s, Robert Hare (1980) developed a systematic method to assess psychopathy, the Psychopathy Checklist (PCL; Hare, 1980), and, later, its revised editions (PCL-R; Hare, 1991). After PCL-R, there are self-report measures made to assess psychopathy in non-criminal samples. The assessment instruments of this type include the Screening Version of PCL-R (PCL SV; Hart, Cox, & Hare, 1995), the Psychopathic Personality Inventory (PPI; Lilienfeld & Widows, 2005), the Levenson Primary and Secondary Psychopathy Scale (LPSP; Levenson, Kiehl, & Fitzpatrick, 1995), and the Triarchic Psychopathy Measure (TriPM; Patrick, Fowles, & Krueger, 2009).

As discussed earlier, understanding psychopathic traits in childhood has been a great field of interest for researchers and in correctional studies (Edens & Ruiz, 2006; Salekin, 2008). Forth, Hart, and Hare (1996) adapted the Psychopathy Checklist (PLC; Hare, 1991) in a study with adolescent offenders, showing that psychopathy could be assessed in youth. Later researchers developed instruments to assess psychopathy in children and adolescents by adapting instruments used in adults or by creating new measures adjusted from a developmental point a view (Forth, Brown, Hart, & Hare, 1996; Kotler & McMahon, 2010; Lynam, 1997).

As Kotler and McMahon (2010) pointed out, the instruments used in the assessment of child and adolescent psychopathy are similar to the conceptualization of psychopathy in adulthood (see Table 1). Psychopathy Checklist Youth Version (PCL YV; Forth et al., 2003) is the most frequently used. The PCL YV is an adaptation for adolescents of the PCL-R (Hare, 1991), requiring trained raters and emphasizing the need for multi-domain and multi-source information (Salekin, 2008). This instrument is a full-scale assessment tool which includes a record review and a structured interview. The clinician rates the PCL YV's 20 items on a 3-point scale. PCL YV assesses adolescents aged 13 or more.

The Antisocial Process Screening Device (APSD; Frick & Hare, 2001) is a youth psychopathy screening measure. APSD is a 20-item questionnaire and has three available formats parentseducators, teachers, and self-report. Scoring for each item ranges from 0 (not at all true) to 2 (definitely true). APSD can be used with youth

between 4 and 18 years old. (Silva et al., 2012) compared this assessment to PCL-R. They find that “impulsivity and behavioural problems dimensions are mainly associated with factor 2 of the PCL-R for adults, assessing externalizing tendencies,” and that “the callous-unemotional (CU) factor is consistent with factor 1 of the PCL-R and it is associated with low anxiety, deficient emotional reactivity, thrill seeking, and proactive aggression” (p.73).

The Child Psychopathy Scale (CPS; Lynam,1997) is an instrument that includes 12 brief scales (with a minimum of 3 and a maximum of 7 items for each one). The items were adapted from the Child Behavioural Checklist (CBCL; Achenbach, 1991) andor the California Child Q-Set (CCQ; Block & Block, 1980). This instrument is applicable to parents of children aged 12 or more.

The Youth Psychopathic Traits Inventory (YPI; Andershed, Kerr, Stattin, & Levander, 2002) includes 10 different scales. This instrument was designed to assess 10 core personality traits associated with psychopathy (grandiosity, lying, manipulation, callousness, un-emotionally, impulsivity, irresponsibility, dishonest charm, remorselessness, and thrill seeking), grouped in three facets callous-unemotional, grandiose-manipulative, and impulsive-irresponsible (Silva et al., 2012).

Table 1. Child and Adolescent Psychopathy Measures

Measure	Informants	Age	No. of Items/scale	Factors
PCL: YV Psychopathy Checklist: Youth Version (Forth et al., 2003)	Skilled rater	13+ years	20 items (0-2)	Two factors (interpersonal–affective and socially deviant lifestyle) Three factors (interpersonal, affective, and behavioural) Four factors (interpersonal, affective, lifestyle, and antisocial)
APSD Antisocial Process Screening Device (Frick & Hare, 2001)	Parent, teacher, and youth	4–18 years	20 items (0-2)	Two factors (impulsivity/conduct problems, and callous- unemotional) Three factors (impulsivity, narcissism, and callous- unemotional)
CPS Child Psychopathy Scale (Lynam, 1997)	Parent	12+ years	12 items (multiple questions for each item)	Total score only
YPI Youth Psychopathic Traits Inventory (Andershed et al., 2002)	Youth	12+ years	50 items, 5 for each of 10 trait scales (1-4)	Grandiose/manipulative, callous-unemotional, and impulsivity/irresponsibility
PCS Psychopathy Content Scale (Murrie & Cornell, 2000)	Youth	12–18 years	True–false	Informal for 16 item version: interpersonal, affective, lifestyle

Note: Adapted from "Assessment of child and adolescent psychopathy." By Kotler and McMahon, 2010, in *Handbook of child and adolescent psychopathy*. Copyright 2010 by New York: Guilford Press.

The Inventory of Callous-Unemotional Traits (ICU; Frick, 2003) assesses the CU factor (consistent with factor 1 of PCL-R) of psychopathy. The ICU is a 24-item questionnaire available in parent/caregiver, teacher, and youth self-report form. Scoring is based on a 4-point scale (0 = not all true; 1 = somewhat true; 2 = very true; and 3 = definitely true). Items are grouped in three distinct factors callousness, uncaring, and unemotional. The ICU can be used to assess children and adolescents, aged between 4 and 18 years old (Silva et al., 2012).

Although in past years, many measures have been developed to assess psychopathy in children and adolescents, there is still a need for more precise instruments (Johnstone & Cooke, 2008). Silva et al., (2012) support Johnstone and Cooke's suggestion that "the lack of agreement on the dimensionality of the psychopathy construct is a major issue that should be addressed in order to better compare results from different studies" (p. 73). The diversity of psychopathy assessment instruments for assessing youths may be the cause of misunderstandings and mistakes when using the construct in forensic or clinical evaluations.

Psychological assessment tools may also be useful for assessing various constructs relevant to psychopathic traits and offender management. For example, the Minnesota Multiphasic Personality Inventory – 2 (MMPI – 2; Butcher, Dahlstrom, Graham, Tellegen, & Kaemmer, 1989) is used in the criminal justice system to assess prisoners and probationers. The Personality Assessment Inventory (PAI; Morey, 1991; 2007) is a multi-scale, self-administered questionnaire that is also widely used in the criminal justice system. The PAI may serve as an informative assessment tool for psychopathology (Cox et al., 2012).

Several PAI scales, such as Antisocial Features (ANT), Borderline Features (BOR), Aggression (AGG), and Drug Problems (DRG), assess domains of psychopathology and behaviour problems that might disrupt the course and ultimate outcome of treatment for substance abusing offenders. As Andrews and Bonta (2010) find, various models of criminality highlight the importance of antisocial attitudes. Ruiz and Edens (2008) suggest that many of the individual, lower-order scales can be aggregated to assess two broad, higher-order dimensions of psychopathology

externalizing (EXT) and internalizing (INT). The spectrum of externalizing psychopathology encompasses behaviours and personality traits such as substance abuse, aggression, anti-sociality, and impulsivity (Krueger et al., 2002). In contrast, internalizing psychopathology reflects a tendency to express pathology inwardly, as evidenced by symptoms such as depression or somatization (Edens et al., 2012). Given the nature of externalizing psychopathology, its assessment may be particularly relevant to rehabilitation attempts with substance abusers, although internalizing symptoms may play an important role in this process as well (Gray & Saum, 2005).

In addition to treatment motivation indices, the PAI includes scales intended to measure more basic features of interpersonal style Dominance (DOM) and Warmth (WRM) scales. Considerable researchers have been focused on interpersonal style and attitudes that relates to models of psychopathology (Pincus & Gurtman, 2006). The studies suggest that an offender group tends to present as more interpersonally dominant than the general population (Blackburn, 2000a). Furthermore, interpersonal characteristics may be relevant to various treatment-related issues (Edens et al., 2011). Despite relatively little empirical research focused on interpersonal features and treatment response specifically, to date, most research on the PAI in forensic and correctional settings has focused on its utility in predicting outcome variables, such as institutional misconduct, violent behaviour, and suicidal ideation (Edens & Ruiz, 2009;).

Some evidence also suggests that interpersonal features may predict institutional adjustment problems among prisoners (Edens, 2009) and that the variance explained may be partially independent of measures of psychopathology (Edens et al., 2011). Empirical studies investigated the use of the PAI in predicting treatment response or outcome among individuals involved with the criminal justice system (Edens, 2009; Hopwood, Baker, & Morey, 2008). Caperton, Edens, and Johnson (2004) reported that the Treatment Rejection (RXR) Scale was weakly but significantly correlated with treatment noncompliance among sexual offenders participating in a mandatory treatment program. In the study, ANT scores were related to rule-breaking behaviour during treatment and AGG scores predicted a history of assaultive behaviour. Edens (2009) found that DOM scores predicted the assaultive behaviour history as well. Also, DOM and WRM scores interacted statistically to predict aggressive behaviour, with a dominant

and cold interpersonal style indicating those at greatest risk for misconduct (Edens et al., 2011).

When a crime occurs, it is common for observers to examine the current crime, assess the character, personality, and behaviour history of the accused, and evaluate whether these two seem to mesh. The personality, behavioural history, and behavioural repertoire of the offender are often logically congruent with the current behaviour. As discussed in this chapter, the theory of psychopathy presents an actor who is believably compatible with antisocial outcomes. Although previous research noted that Antisocial Features, Borderline Features, Aggression, and Drug Problems of PAI-A assess domains of psychopathology, more accurate assessment of adolescents' psychopathic traits requires specific tools such as Psychopathy Checklist –Youth Version (Forth, Kosson, & Hare, 2003), Youth Psychopathic Traits Inventory (Andershed, Kerr, Stattin, & Levander, 2002), Antisocial Process Screening Device (Frick & Hare, 2001), or Child Psychopathy Scale (Lynam, 1997). The actor's core characteristics match the conceptual nature of antisocial behaviour and embody or exemplify the sordid essence that intrinsically defines violating the rights of others. Therefore, the findings from psychopathy studies could be used to assess the predictive validity across the universe of antisocial behaviour occurring in any age-rated groups: childhood, adolescence, and adulthood.

4: Methodology

4.1 Proposed hypotheses and research questions

Previous studies have gathered information regarding psychopathic traits in adolescents and applied that information to gaining a better understanding of young offenders. The current study proposes gathering information regarding CU traits found in young Korean offenders and using that to identify the following first, the relationship between the PAI-A (Morey, 2003) scales such as Antisocial Features (ANT), Borderline Features (BOR), Aggression (AGG), Drug Problem (DRG), Warmth (WRM), Dominance (DOM), and Treatment Rejection (RXR) and type of offence; and, second, the relationship between the Risk Assessment Tool (RAT; Lee & Cho, 2005) scales such as Family structure, Family function, School life, Peer relationship, Criminal involvement, Personal traits, and type of offence. Thus, this study will attempt to address the following research questions and hypotheses:

- Research questions: Can we predict that violent young offenders (VOs) who were incarcerated in the pre-sentence investigation stage of their court processing will have higher levels of CU traits on a PAI-A result than the VOs who were selected for diversion. If so, do the traits measured on the PAI-A and RAT have different predictive strengths for VOs
- Hypothesis 1-1: Youth who committed violent offences, when compared with those who committed non-violent offences, are predicted to have higher ANT scores on the PAI-A.
- Hypothesis 1-2: Youth who committed violent offences, when compared with those who committed non-violent offences, are predicted to have higher BOR scores on the PAI-A.
- Hypothesis 1-3: Youth who committed violent offences, when compared with those who committed non-violent offences, are predicted to have higher AGG scores on the PAI-A.
- Hypothesis 1-4: Youth who committed violent offences, when compared with those who committed non-violent offences, are predicted to have higher DRG scores on the PAI-A.

- Hypothesis 1-5: Youth who committed violent offences, when compared with those who committed non-violent offences, are predicted to have higher WRM scores on the PAI-A.
- Hypothesis 1-6: Youth who committed violent offences, when compared with those who committed non-violent offences, are predicted to have DOM scores on the PAI-A.
- Hypothesis 1-7: Youth who committed violent offences, when compared with those who committed non-violent offences, are predicted to have higher RXR scores on the PAI-A.
- Hypothesis 2-1: Incarcerated youth, when compared with non-incarcerated youth who committed offences, are predicted to have higher ANT scores on the PAI-A.
- Hypothesis 2-2: Incarcerated youth, when compared with non-incarcerated youth who committed offences, are predicted to have higher BOR scores on the PAI-A.
- Hypothesis 2-3: Incarcerated youth, when compared with non-incarcerated youth who committed offences, are predicted to have higher AGG scores on the PAI-A.
- Hypothesis 2-4: Incarcerated youth, when compared with non-incarcerated youth who committed offences, are predicted to have higher DRG scores on the PAI-A.
- Hypothesis 2-5: Incarcerated youth, when compared with non-incarcerated youth who committed offences, are predicted to have higher WRM scores on the PAI-A.
- Hypothesis 2-6: Incarcerated youth, when compared with non-incarcerated youth who committed offences, are predicted to have higher DOM scores on the PAI-A.
- Hypothesis 2-7: Incarcerated youth, when compared with non-incarcerated youth who committed offences, are predicted to have higher RXR scores on the PAI-A.
- Hypothesis 3-1: Youth who committed violent offences, when compared with those who committed non-violent offences, are predicted to have higher RAT scores on positive answers on Family structure.
- Hypothesis 3-2: Youth who committed violent offences, when compared with those who committed non-violent offences, are predicted to have higher RAT scores on positive answers on Family function.
- Hypothesis 3-3: Youth who committed violent offences, when compared with those who committed non-violent offences, are predicted to have higher RAT scores on positive answers on School life.

- Hypothesis 3-4: Youth who committed violent offences, when compared with those who committed non-violent offences, are predicted to have higher RAT scores on positive answers on Peer relationship.
- Hypothesis 3-5: Youth who committed violent offences, when compared with those who committed non-violent offences, are predicted to have higher RAT scores on positive answers on Criminal involvement.
- Hypothesis 3-6: Youth who committed violent offences, when compared with those who committed non-violent offences, are predicted to have higher RAT scores on positive answers on Personal traits.
- Hypothesis 4-1: Incarcerated youth who committed violent offences, when compared with non-incarcerated youths who committed violent offences, are predicted to have higher RAT scores on positive answers on Family structure.
- Hypothesis 4-2: Incarcerated youth who committed violent offences, when compared with non-incarcerated youths who committed violent offences, are predicted to have higher RAT scores on positive answers on Family function.
- Hypothesis 4-3: Incarcerated youth who committed violent offences, when compared with non-incarcerated youths who committed violent offences, are predicted to have higher RAT scores on positive answers on School life.
- Hypothesis 4-4: Incarcerated youth who committed violent offences, when compared with non-incarcerated youths who committed violent offences, are predicted to have higher RAT scores on positive answers on Peer relationship.
- Hypothesis 4-5: Incarcerated youth who committed violent offences, when compared with non-incarcerated youths who committed violent offences, are predicted to have higher RAT scores on positive answers on Criminal involvement.
- Hypothesis 4-6: Incarcerated youth who committed violent offences, when compared with non-incarcerated youths who committed violent offences, are predicted to have higher RAT scores on positive answers on Personal traits.

4.2 The sample

The current study examines a data sample of young offenders who were interviewed in either (a) a secure custody facility in Anyang, Korea, or (b) in a police station in Seoul, Korea, from 2010 to 2011. The data sample was collected for a study, Pre-Review for Advanced Standardization of Special Personality Inventory-R, which was

conducted by the Korean Ministry of Justice in 2010. For the Korean study, initially, 250 samples were collected. Among the samples, 43 samples were excluded from the analysis. The excluded samples had one or more numbers of high scores (*cut off = 60T*) of Inconsistency, Infrequency, Negative Impression Management, or Positive Impression Management of PAI-A. Participants were 207 offenders who committed violent offences such as assault, rape, robbery, and murder or non-violent offences such as burglary, fraud, forgery, and theft.

Among the participants, 100 offenders were from a security juvenile detention facility in Anyang, Korea. These were youth who had been placed in a detention facility under a classification review order issued by the court Placement in Juvenile Protection Education Institute. They could be held under detention for up to 1 month for a presentencing investigation and classification process. This is the initial step taken by the court for juveniles between ages 12 to 19 in order to determine the length and type of sentence that will be imposed. These youth are typically repeat offenders, have committed serious or violent offences, have more than four or five previous criminal records, or have breached probation conditions.

The other 106 offenders in the sample were from a juvenile diversion program of the Seoul Metropolitan Police. Individuals in this program were generally first-time offenders who had not committed serious crimes and for whom the police had the option not to request prosecution but, rather, to recommend juvenile diversion.

Individuals in the current sample ranged from ages 12 to 19, with a mean age of approximately 16. There were 158 male and 49 female adolescents in the sample. The participants had 0 to 13 criminal records. Table 2 shows the descriptive statistics of the participants.

For the current study, a secondary use of the subsample was approved by the Korean Ministry of Justice. Permission to conduct this study was also given by Simon Fraser University's Ethics Review Board.

Table 2. Descriptive information for the sample of study participants

	Violent Offenders		Non-violent Offenders	
	N	%	N	%
	101	48.8	106	51.2
<u>Stage</u>				
Detention facility	62	61.4	38	35.8
Police station	39	38.6	68	64.2
<u>Gender</u>				
Male	72	71.3	86	81.1
Female	29	28.7	20	18.9
<u>Age*</u>				
12	6	5.9	7	6.6
13	25	24.8	11	10.4
14	21	20.8	20	18.9
15	27	26.7	34	32.1
16	11	10.9	24	22.6
17	8	7.9	6	5.7
18	2	2.0	4	3.8
19	1	1.0	-	-
<u>Record**</u>				
0	30	29.7	48	45.3
1	24	23.8	21	19.8
2	14	13.9	16	15.1
3	5	5.0	10	9.4
4	7	6.9	5	4.7
5	3	3.0	2	1.9
6	7	6.9	1	.9
7	3	3.0	1	.9
9	1	1.0	-	-
10	2	2.0	-	-
11	1	1.0	-	-
12	3	3.0	2	1.9
13	1	1.0	-	-

*Mean = 15.68, SD = 1.46, **Mean = 1.98, SD = 2.72

4.3 Measures

For the initial study that used the data sample, the interviews followed standardized procedures to maintain the quality of the information collected. The interviews were conducted by a trained rater. For the first 60 to 90 min, participants completed a self-report of the Personality Assessment Inventory-A (PAI-A; Morey, 2003), which is a youth version of the PAI (Morey, 1991, 2007). Next, the rater conducted a structured interview based on questions of the Risk Assessment Tool. It might be assumable that young offenders in the detention facility are much familiar with PAI-A and RAT and manipulating the results because they would more likely have experienced the self-report and interview in Criminal Justice system. However, as discussed above, the attempts to manipulate PAI-A were filtered by higher scores of its validity scales. Also, a trained interviewer of RAT could discern lying since the interviewer had various pre-interview information from investigation report, police records, school records, and probations records.

4.3.1 Personal Assessment Inventory (PAI)

The PAI (Morey, 1991) is a 344-item, multi-scale, self-administered inventory of personality and psychopathology for adults (1991, 2007) and adolescents (2003). Although not developed specifically for use with offender populations, its low required reading level (fourth grade) and relatively brief protocol length make this instrument appealing for use with this group (Edens & Ruiz, 2006). The adolescent version of PAI (PAI-A: Personality Assessment Inventory-Adolescent) was introduced to Korea and translated into Korean in 2001. Korean version of PAI-A consists with 344 items. The PAI consists of 22 non-overlapping scales measuring various constructs of interest in clinical settings. In addition to the basic scales, various configural and composite indicators have been developed over the years (Morey, 2007). The specific scales and indicators of interest in this study are described below (see Appendix A for descriptions of the scales). For the current study, Borderline Features (BOR), Antisocial Features (ANT), Aggression (AGG), Drug Problem (DRG), Treatment Rejection (RXR), Dominance (DOM), and Warmth (WRM), which have proven to be comprehensive and excellent scales for assessing psychopathology and, especially, callous-unemotional traits, were used.

Borderline Features, Antisocial Features, Aggression, and Drug Problem were the clinical and treatment consideration scales. These are the scales most directly relevant to predicting treatment behaviour and outcome among substance abusers. The BOR scale assesses various elements of borderline personality disorder pathology (e.g., affective instability, impulsivity, potential self-destructive behaviours, and disrupted interpersonal relationships) and correlates with various indicators of borderline personality disorder, such as symptom counts on the Structured Interview for DSM–IV Personality Disorders (Krishnamurphy, 2010). The ANT scale was designed to assess key features of antisocial personality disorder and psychopathy, such as callousness, lack of empathy, and stimulus seeking. Moderate to strong correlations have been demonstrated between the ANT scale and both self-report and interview-based assessments of antisocial personality disorder and psychopathy (Edens, Campbell, & Weir, 2007). The AGG scale assesses temperamental anger and hostility, along with behavioural expressions of aggression, including both physical aggression and verbal aggression. It has also demonstrated significant relationships with staff ratings of aggression in correctional settings (Edens, 2009). The DRG scale assesses “behaviours and consequences related to drug use, abuse, and dependence” (Morey, 1991, p. 79). Morey (1991) suggested that individuals enrolled in substance abuse treatment typically have markedly elevated DRG scores 75T to 90T. Gender possibly has an effect on scores of Anxiety (ANX) and Depression (DEP) of PAI-A (Morey 1991; Morey, 2007). When the scores of ANX and DEP were separately examined into male and female, the score gap between male and female was insignificant.

The PAI has an indicator that was explicitly designed to provide information concerning treatment issues. The Treatment Rejection (RXR) scale is intended to assess motivation for major life changes. Morey (1991) recommends that a cut-off T score of RXR 43 typically suggests an “acknowledgment of personal difficulties” (p. 20). Therefore, lower scores on this scale suggest that an individual is more motivated to change, that is, endorses such characteristics as psychological mindedness and willingness to participate actively. Psychological mindedness refers to a person's capacity for self-examination, self-reflection, introspection, and personal insight. It includes an ability to recognize meanings that underlie overt words and actions, to appreciate emotional nuance and complexity, to recognize the links between past and

present, and to have insight into one's own and others' motives and intentions. Psychologically minded people have above-average insight into mental life. In terms of construct validity, various correlational studies have found that RXR is inversely related to measures of distress and treatment interest and commitment (Krishnamurphy, 2010).

The Dominance (DOM) scale assesses level of control and independence in interpersonal relationships, with low scores indicative of submissiveness (Morey, 1991). Convergent validity has been demonstrated in theoretically expected directions with the Interpersonal Adjective Scales – Revised (Rothweiler, 2004). The Warmth (WRM) scale assesses “the extent to which a person is interested in supportive and empathic personal relationships” (Morey, 2007, p. 3), and, finally, high levels of DOM is associated with avoidant and schizoid personality features (Morey, 2007).

Each PAI question is measured on a 4-point Likert-type scale with 1 = false, 2 = somewhat true, 3 = mainly true, and 4 = very true. Table 3 shows the descriptive statistics of the participants' PAI-A scores. Summary descriptions of the scales and the number of questions for each scale are noted in Table 4.

Table 3. Descriptive Statistics of PAI-A Scores of the Participants

PAI-A Scales	Minimum	Maximum	Mean	Std. Deviation
Inconsistency	31	77	47.44	10.622
Infrequency	26	80	50.49	8.920
Negative Impression Management	34	80	46.89	10.517
Positive Impression Management	20	76	53.81	11.462
Somatic Complaints	32	81	47.69	9.282
Anxiety	26	86	47.50	11.544
Anxiety Related Disorders	28	84	47.82	10.177
Depression	29	90	48.87	11.634
Mania	22	74	46.02	11.763
Paranoia	26	87	46.88	10.713
Schizophrenia	24	77	43.49	10.580
Borderline Features	21	86	46.27	12.560
Antisocial Features	27	92	50.04	10.760
Alcohol Problems	39	97	48.84	10.165
Drug Problems	37	81	50.00	9.588
Aggression	24	87	47.81	12.481
Suicidal Ideation	35	85	47.77	11.285
Stress	27	76	50.14	10.525
Nonsupport	28	81	47.34	11.140
Treatment Rejection	23	76	52.69	10.849
Dominance	22	81	50.45	10.343
Warmth	30	76	52.59	9.286

Table 4. Summary Descriptive information of the PAI-A scales

	Scale	Number of questions	Meaning of Elevations/ Subscales
Validity Scales	INC	10	Inconsistency
	INF	8	Infrequency
	NIM	9	Negative Impression Management
	PIM	9	Positive Impression Management
Clinical Scales	SOM	24	SOM-C (Conversion), SOM-S (Somatization), SOM-H (Health Concerns)
	ANX	24	ANX-C (Cognitive), ANX-A (Affective), ANX-P (Physiological)
	ARD	24	ARD-O (Obsessive-Compulsive), ARD-P (Phobias), ARD-T (Traumatic Stress)
	DEP	24	DEP-C (Cognitive), DEP-A (Affective), DEP-P (Physiological)
	MAN	24	MAN-A (Activity Level), MAN-G (Grandiosity), MAN-I (Irritability)
	PAR	24	PAR-H (Hyper vigilance), PAR-P (Persecution), PAR-R (Resentment)
	SCZ	24	SCZ-P (Psychopathic Experience), SCZ-S (Social Detachment), SCZ-T (Thought Disorder)
	BOR	24	BOR-A (Affective Instability), BOR-I (Identity Problems), BOR-N (Negative Relationships), BOR-S (Self-Harm)
	ANT	24	ANT-A (Antisocial Behaviours), ANT-E (Egocentricity), ANT-S (Stimulus Seeking)
		ALC	12
	DRG	12	Drug Problems
Treatment Consideration Scales	AGG	18	AGG-A (Aggression Attitude), AGG-V (Verbal Aggression), AGG-P (Physical Aggression)
	SUI	12	Suicidal Ideation
	STR	8	Stress
	NON	8	Non-support
	RXR	8	Treatment Rejection
Interpersonal Scales	DOM	12	Dominance
	WRM	12	Warmth

4.3.2 Risk Assessment Tool (RAT)

As discussed earlier, because of the persistence and severity of their delinquent behaviours, the LCP group is seen as the most problematic for society, and recidivism can best be prevented if treatment targets the specific risk factors that are present in serious juvenile offenders (Andrews & Bonta, 1994). For that reason, a better understanding of these specific risk factors is needed to increase treatment effect with the aim of preventing persistence of criminal behaviour and reducing severity of recidivism. Severity of recidivism can be defined by the frequency of offending, the type of new offences, or the amount of harm caused. In brief, looking at the severity of recidivism is important because the more serious the offence is, the greater the burden on society, depending, of course, on the way it affects society and the victims (Mulder, Joyce, & Fergusson, 1998).

For the effective prevention of recidivism in the early stages of juvenile delinquency, the Korean National Police have operated the Juvenile Diversion Program (JDP) and have used both the RAT and the PAI-A since 2005. When adolescents are arrested for delinquency, they are directed to the diversion program. The diversion program consists of, first, a psychological interview with a trained interviewer who is an external expert and, second, an order to attend a mandatory course of up to 12 hours. The course includes interpersonal and problem-solving skills. The main purpose of JDP is to assess adolescents' risk of recidivism and to help in the designing of an effective delinquency prevention program based on the adolescents' psychological traits and backgrounds. JDP is designed for first-time offenders and non-habitual adolescents, rather than repeat offenders. Korean studies find that the diversion program is most effective with first-time delinquencies, but is less effective with repeat offenders (Koh, Lee, & Lee, 2010; Lee & Yoon, 2003).

The RAT (Lee & Cho, 2005) was designed to assess objective risk factors of Korean adolescents using a psychological perspective. The main capability of the tool is to predict risk of a second offence. The RAT consists of 45 questions that assess six subject areas family structure, family function, school life, delinquent career, runaway experience, and personal problems. The family structure subject covers relationship with parents, living arrangements (e.g., lives alone), and presence of a guardian or

family supporter. The family function section has questions addressing issues such as family problems, physical or verbal aggression between family members, mental abuse, attachment to parents, and family members' criminality. The school life area covers the highest level of education achieved, incidents of absence without notice for longer than 10 days, problems in school (e.g., bullying or exclusion), suspensions from school, pursuit of higher education, and peer relationships.

The run-away factor includes a pattern of running away, association with peers who run away, and experience of living with run-away adolescents. Delinquent career aspects looks at previous arrests, previous convictions, previous incarcerations in a detention center, violation of probation orders, serious violent offences (e.g., battery, sexual offences, robbery, murder), purpose of any offence, nature of offence (conspired or premeditated), skilled modus operandi, aggravation of seriousness of the delinquency and the first offence at age 11 or under. Personal factors includes drinking, substance use, drinking problem, video game or sexual contents addictions, sexual problems, prostitution, a sense of responsibility for a criminal act, remorse for a victim, awareness of one's conduct and consequences, law-abiding attitude, goal in life and efforts, low cognitive ability, emotional stability, ability to deal with difficult matters, impulsivity, outrageousness, and attitude toward interview (see Appendix B for list of RAT questions).

Empirical studies in Korea show confident internal consistency reliability ($r = .86$) of the RAT and high inter-rater reliability ($r = .92$) (Lee & Cho, 2005; Lee & Lee, 2009; Lee & Yoon, 2003). The strongest point of the RAT is that it examines adolescents' family function and school life, which are not as thoroughly considered in risk assessments of adult offenders. For the 45 questions, the adolescent responds yes (1) or no (0), and the total score is 45 points. A total RAT score of 10 or below is interpreted as low risk for recidivism, 11 to 20 predicts considerable risk, and 21 or more indicates high risk. Table 5 shows the frequencies of participants' RAT scores in the current study.

Table 5. Frequency table of RAT total scores

Score	Frequency	Percent	Cumulative Percent
0	6	2.9	2.9
1	3	1.4	4.3
2	9	4.3	8.7
3	8	3.9	12.6
4	14	6.8	19.3
5	15	7.2	26.6
6	9	4.3	30.9
7	10	4.8	35.7
8	6	2.9	38.6
9	7	3.4	42.0
10	11	5.3	47.3
11	19	9.2	56.5
12	12	5.8	62.3
13	14	6.8	69.1
14	17	8.2	77.3
15	18	8.7	86.0
16	8	3.9	89.9
17	9	4.3	94.2
18	6	2.9	97.1
19	1	.5	97.6
20	2	1.0	98.6
21	1	.5	99.0
22	1	.5	99.5
23	1	.5	100.0
Total	207	100.0	

5: Result

5.1 The sample

As described in Chapter 4, the sample for the current study consisted of 100 incarcerated and 107 non-incarcerated youth considered violent and non-violent offenders. Their ages ranged from 12 years to 19 years with the mean age being 15.68 (SD = 1.464) years old. The sample consisted of 158 male and 49 female East Asian youth (N = 207).

5.2 Analyses

The violent (VO) and non-violent youth (NVO) groups were first examined to see whether the PAI-A scales showed a significant correlation between each group and type of offence. The differences between the two groups' PAI-A scores were assessed with comparison of mean analyses of variance (ANOVA). In the early stage of this study, pre analysis considered testing more than two groups and finding how big of a difference there is between the groups. In the analysis, ANOVA was used to control unacceptable errors and its results were interpreted for this study. The results of this analysis are presented in Table 6. As can be seen from these data in Table 6, the ANOVA analysis shows significant differences between the violent and non-violent youth on the PAI-A scores. The violent youth had higher PAI scores on Dominance (DOM) ($F = 6.570, p < .05$) and Warmth (WRM) ($F = 3.841, p < .05$). Interestingly, the non-violent youth had higher scores on ICN and DRG. Of interest was a tendency for violent youth to have lower scores on the measures Inconsistency (ICN) ($F = 7.013, p < .01$) and Drug Problems (DRG) ($F = 7.464, p < .01$). The PAI scores on DRG were contrary to what was expected as a previous study showed that violent youth had higher scores on DRG (Koh et al., 2010).

Violent and non-violent youth subjects were found not to differ on overall levels of Borderline (BOR), Antisocial Features (ANT), Aggression (AGG), and Treatment Rejection (RXR), the PAI-A scales that measure psychopathic traits. Higher PAI-A scores on aggression and anti-social features were expected for violent youth. However, this expectation was not borne out. PAI-A scales and subscales dealing with Antisocial Features (ANT) (in particular, Antisocial Behaviour, Antisocial Egocentricity, and Antisocial Stimulus Seeking) and Aggression (AGG) (in particular, Aggression Attitude, Verbal Aggression, and Physical Aggression) were not meaningfully higher in the violent youth group.

With respect to the PAI-A sub-scale of Mania, violent youth presented higher scores on Mania – Grandiosity (MAN-G) ($F = 5.461, p < .05$), which is one of three subscales of Mania (MAN).

In brief, the analyses of the data indicated a significant tendency among violent youth on the DOM, WRM, and MAN-G scales and, among non-violent youth, on the ICN and DRG scales of the PAI-A. These results do not support Hypothesis 1-1: *Youth who committed violent offences, when compared with those who committed non-violent offences, are predicted to have higher ANT scores on the PAI-A*; Hypothesis 1-2: *Youth who committed violent offences, when compared with those who committed non-violent offences, are predicted to have higher BOR scores on the PAI-A*; Hypothesis 1-3: *Youth who committed violent offences, when compared with those who committed non-violent offences, are predicted to have higher AGG scores on the PAI-A*; Hypothesis 1-4: *Youth who committed violent offences, when compared with those who committed non-violent offences, are predicted to have higher DRG scores on the PAI-A*; and Hypothesis 1-7: *Youth who committed violent offences, when compared with those who committed non-violent offences, are predicted to have higher RXR scores on the PAI-A*. On the other hand, the results support Hypothesis 1-5: *Youth who committed violent offences, when compared with those who committed non-violent offences, are predicted to have higher WRM scores on the PAI-A*; and Hypothesis 1-6: *Youth who committed violent offences, when compared with those who committed non-violent offences, are predicted to have DOM scores on the PAI-A*.

Table 6. Personality Assessment Inventory-A (PAI-A) scores for Violent youth and Non-violent youth

PAI Scales and subscales	<u>Violent youth</u>		<u>Non-violent youth</u>		F	
	M	SD	M	SD		
<u>Validity Scales</u>						
Inconsistency (ICN)	45.47	10.25	49.32	10.67	7.01	**
Infrequency (INF)	49.90	8.72	51.05	9.10	.85	
Negative Impression Management (NIM)	46.50	10.23	47.26	10.81	.26	
Positive Impression Management (PIM)	54.10	11.85	53.53	11.12	.12	
<u>Clinical Scales</u>						
Somatic Complaints (SOM)	47.42	8.99	47.94	9.58	.16	
SOM-Conversion	48.11	10.90	47.12	9.15	.49	
SOM-Somatization	48.19	8.46	48.51	10.22	.06	
SOM-Health Concerns	47.21	8.23	49.47	9.22	3.46	
Anxiety (ANX)	46.95	11.92	48.11	11.18	.61	
ANX-Cognitive	47.21	11.67	48.01	10.27	.27	
ANX-Affective	46.92	10.82	48.48	10.70	1.08	
ANX-Physiological	47.42	11.37	48.85	11.15	.51	
Anxiety Related Disorders (ARD)	47.85	10.28	47.78	10.11	.00	
ARD-Obsessive Compulsive	48.60	10.02	46.96	10.03	1.38	
ARD-Phobias	49.20	10.21	50.23	9.42	.56	
ARD-Traumatic Stress	47.39	11.28	47.85	10.87	.09	
Depression (DEP)	48.08	12.40	49.63	10.85	.92	
DEP-Cognitive	46.81	11.13	49.30	10.58	2.72	
DEP-Affective	47.14	11.95	49.28	10.97	1.81	
DEP-Physiological	51.54	11.32	50.50	10.52	.47	
Mania (MAN)	47.05	11.40	45.04	12.60	1.51	
MAN-Activity Level	46.07	12.22	45.41	11.24	.16	
MAN-Grandiosity	50.86	10.10	47.36	11.38	5.46	*
MAN-Irritability	46.26	12.66	46.18	11.61	.00	
Paranoia (PAR)	46.40	11.64	47.34	9.77	.40	
PAR-Hyper vigilance	47.19	10.53	47.62	9.63	.09	
PAR-Persecution	47.80	11.42	47.44	8.60	.06	
PAR-Resentment	46.65	10.79	48.60	11.87	1.52	

PAI Scales and subscales	<u>Violent youth</u>		<u>Non-violent youth</u>		F	
	M	SD	M	SD		
Schizophrenia (SCZ)	42.69	10.72	44.25	10.43	1.12	
SCZ-Psychotic Experiences	44.45	10.66	43.61	9.47	.35	
SCZ-Social Detachment	45.73	8.13	48.37	11.08	3.77	
SCZ-Thought Disorder	43.83	11.85	45.25	10.61	.81	
Borderline Features (BOR)	46.07	12.98	46.46	12.20	.05	
BOR-Affective Instability	46.50	12.14	48.28	11.19	1.21	
BOR-Identity Problems	46.18	10.83	45.07	11.25	.52	
BOR-Negative Relationships	44.96	12.03	45.43	11.54	.08	
BOR-Self harm	50.11	11.36	50.12	10.61	.00	
Antisocial Features (ANT)	49.75	11.58	50.32	9.95	.14	
ANT-Antisocial Behaviors	57.09	10.65	56.64	11.20	.13	
ANT-Egocentricity	46.92	11.32	47.25	11.02	.04	
ANT-Stimulus seeking	45.91	11.28	47.07	10.48	.58	
Alcohol Problems (ALC)	49.28	10.22	48.42	10.13	.37	
Drug Problems (DRG)	48.17	9.07	51.75	9.77	7.46	**
Aggression (AGG)	48.32	13.39	47.32	11.58	.32	
AGG-Attitude	48.72	12.50	47.50	10.52	.58	
AGG-Verbal Aggression	48.80	10.46	48.82	10.91	.00	
AGG-Physical Aggression	48.49	13.42	47.19	11.22	.57	
Suicidal Ideation (SUI)	46.84	11.87	48.66	10.67	1.34	
Stress (STR)	50.50	10.93	49.80	10.15	.23	
Non-support (NON)	46.25	11.24	48.38	10.99	1.89	
Treatment Rejection (RXR)	51.81	10.41	53.52	11.23	1.28	
Dominance (DOM)	52.32	9.90	48.68	11.15	6.57	*
Warmth (WRM)	53.88	8.30	51.37	10.01	3.84	*

* $p < .05$.

** $p < .01$.

Next, the violent youth sample ($n = 101$) was examined separately to see whether there was a significant correlation between the PAI-A scales of those in detention and of those being diverted. As shown in Table 7, comparison of mean analyses of variance (ANOVA) indicated significant differences in PAI-A scores between the adolescents in the detention facility and those being diverted by the police. Overall, the results were contrary to the second hypothesis group: *Incarcerated youth, when compared to non-incarcerated youth who committed offences, are predicted to have higher ANT (Hypothesis 2-1), BOR (Hypothesis 2-2), AGG (Hypothesis 2-3), DRG (Hypothesis 2-4), WRM (Hypothesis 2-5), DOM (Hypothesis 2-6), and RXR (Hypothesis 2-7) scores on the PAI-A.* The adolescents being diverted showed higher scores on BOR ($F = 12.183, p < .05$), ANT ($F = 14.504, p < .001$), DRG ($F = 29.018, p < .001$), and AGG ($F = 15.312, p < .001$). Among the PAI-A scales that predict callous-unemotional traits, Dominance (DOM), Warmth (WRM), and Treatment Rejection (RXR) did not show any significance.

Furthermore, the un-incarcerated, diverted adolescents demonstrated higher scores on PIM ($F = 10.406, p < .05$), ANX ($F = 7.596, p < .05$), ARD ($F = 9.9, p < .05$), DEP ($F = 7.285, p < .05$), MAN ($F = 10.948, p < .05$), PAR ($F = 9.624, p < .05$), SCZ ($F = 16.426, p < .001$), SUI ($F = 10.879, p < .05$), and STR ($F = 8.481, p < .05$). Of particular importance was the fact that the diverted adolescents had higher scores on PAI-A scales and subscales dealing with Antisocial features (ANT), in particular, Egocentricity (ANT-E) and Stimulus Seeking (ANT-S). Of interest was a tendency for detention facility subjects to have lower scores on the PAI-A measure of Negative Impression Management (NIM) and, in contrast, to have higher scores on the measure of Positive Impression Management (PIM).

Table 7. Personality Assessment Inventory-A (PAI-A) scores for Violent youth in Detention facility and Police stage

PAI Scales and subscales	<u>Detention facility</u>		<u>Police stage</u>		F	
	M	SD	M	SD		
<u>Validity Scales</u>						
Inconsistency (ICN)	43.77	8.81	48.15	11.82	4.52	*
Infrequency (INF)	48.73	8.40	51.77	9.00	2.96	
Negative Impression Management (NIM)	43.55	8.61	51.21	10.95	15.30	***
Positive Impression Management (PIM)	56.98	9.66	49.51	13.58	10.40	**
<u>Clinical Scales</u>						
Somatic Complaints (SOM)	45.77	8.16	50.05	9.71	5.60	*
SOM-Conversion	45.95	9.55	51.54	12.11	6.63	*
SOM-Somatization	46.94	8.13	50.18	8.71	3.60	
SOM-Health Concerns	46.69	7.67	48.03	9.08	.62	
Anxiety (ANX)	44.34	9.92	50.85	13.77	7.59	**
ANX-Cognitive	44.66	10.50	51.26	12.40	8.19	**
ANX-Affective	45.03	9.31	49.92	12.41	5.08	*
ANX-Physiological	45.66	9.58	51.00	13.22	5.51	*
Anxiety Related Disorders (ARD)	45.40	8.27	51.74	11.97	9.90	**
ARD-Obsessive Compulsive	47.21	8.93	50.82	11.32	3.17	
ARD-Phobias	47.61	9.13	51.72	11.41	3.98	*
ARD-Traumatic Stress	45.03	9.38	51.13	13.04	7.44	**
Depression (DEP)	45.52	9.88	52.15	14.84	7.28	**
DEP-Cognitive	44.42	9.45	50.62	12.58	7.93	**
DEP-Affective	43.87	8.83	52.33	14.33	13.50	***
DEP-Physiological	51.03	10.51	52.36	12.59	.32	
Mania (MAN)	44.21	9.50	51.56	14.84	10.94	**
MAN-Activity Level	43.15	10.90	50.72	12.89	10.01	**
MAN-Grandiosity	51.55	10.60	49.77	9.26	.74	
MAN-Irritability	42.06	9.84	52.92	13.87	21.13	***
Paranoia (PAR)	43.66	9.35	50.74	13.58	9.62	**
PAR-Hyper vigilance	45.94	8.62	49.18	12.89	2.29	
PAR-Persecution	45.16	8.80	52.00	13.78	9.28	**
PAR-Resentment	44.35	10.20	50.31	10.81	7.77	**

PAI Scales and subscales	<u>Detention facility</u>		<u>Police stage</u>		F	
	M	SD	M	SD		
Schizophrenia (SCZ)	39.50	8.37	47.77	12.12	16.42	***
SCZ-Psychotic Experiences	41.52	8.41	49.10	12.22	13.64	***
SCZ-Social Detachment	45.26	7.95	46.49	8.45	.54	
SCZ-Thought Disorder	40.35	9.64	49.36	13.03	15.85	***
Borderline Features (BOR)	42.68	10.38	51.46	14.89	12.18	**
BOR-Affective Instability	43.39	10.14	51.44	13.49	11.63	**
BOR-Identity Problems	44.55	9.81	48.77	11.96	3.73	
BOR-Negative Relationships	42.16	10.28	49.41	13.35	9.41	**
BOR-Self harm	47.44	9.65	54.36	12.64	9.65	**
Antisocial Features (ANT)	46.48	8.48	54.95	13.87	14.50	***
ANT-Antisocial Behaviors	56.85	10.25	57.46	11.39	.07	
ANT-Egocentricity	43.82	8.40	51.85	13.55	13.52	***
ANT-Stimulus seeking	41.92	7.90	52.26	12.95	24.87	***
Alcohol Problems (ALC)	47.74	7.93	51.72	12.81	3.71	
Drug Problems (DRG)	44.76	5.95	53.59	10.52	29.01	***
Aggression (AGG)	44.47	11.92	54.44	13.46	15.31	***
AGG-Attitude	45.56	11.75	53.74	12.13	11.30	**
AGG-Verbal Aggression	47.45	9.85	50.95	11.16	2.71	
AGG-Physical Aggression	43.94	10.81	55.72	14.12	22.36	***
Suicidal Ideation (SUI)	43.90	10.14	51.51	13.02	10.78	**
Stress (STR)	48.08	9.85	54.36	11.57	8.48	**
Non-support (NON)	44.56	10.20	48.92	12.37	3.69	
Treatment Rejection (RXR)	51.39	9.56	52.49	11.73	.26	
Dominance (DOM)	52.23	9.86	52.46	7.85	.01	
Warmth (WRM)	54.19	8.34	53.38	8.34	.22	

* $p < .05$. ** $p < .01$. *** $p < .001$

Next, the total violent and non-violent sample ($N = 207$) was examined to see whether RAT scores had a significant correlation with type of offence. Table 8 shows the comparison of the ANOVA results. As can be seen in these data, there are significant differences between violent youth and non-violent youth on the RAT scores. Violent youth showed a significant tendency on Family structure ($F = 7.771, p < .05$), School life ($F = 29.331, p < .001$), Delinquent career ($F = 55.313, p < .001$), and Personal factors ($F = 10.041, p < .05$). Overall, violent youth showed significantly higher total RAT scores ($F = 36.117, p < .001$).

The results supported Hypothesis 3-1: *Youth who committed violent offences, when compared with those who committed non-violent offences, are predicted to have an increased level of RAT scores on positive answers on Family structure*; Hypothesis 3-3: *Youth who committed violent offences, when compared with those who committed non-violent offences, are predicted to have an increased level of RAT scores on positive answers on School life*; Hypothesis 3-5: *Youth who committed violent offences, when compared with those who committed non-violent offences, are predicted to have an increased level of RAT scores on positive answers on Criminal involvement*; and Hypothesis 3-6: *Youth who committed violent offences, when compared with those who committed non-violent offences, are predicted to have an increased level of RAT scores on positive answers on Personal traits*. Furthermore, these results were consistent with Korean studies on the RAT assessing risk of recidivism (Lee, 2007; Lee & Lee, 2009; Lee & Yun, 2003; Park et al., 2002).

Finally, the violent youth sample ($n = 101$) was examined separately to see whether RAT scores correlated significantly with types of outcomes (i.e., detention or diversion) of the two groups of offenders. As shown on Table 9, comparison of mean analyses of variance indicated significant differences on RAT scores between adolescents being diverted and those in detention. The adolescents in the detention facility showed higher scores on Family structure ($F = 10.369, p < .05$), School life ($F = 25.437, p < .001$), Run-away from home ($F = 6.353, p < .05$), and Delinquent career ($F = 38.977, p < .001$). The results supported Hypothesis 4-1: *Incarcerated youth who committed violent offences, when compared with non-incarcerated youths who committed violent offences, are predicted to have higher RAT scores on positive*

answers on Family structure; Hypothesis 4-2: Incarcerated youth who committed violent offences, when compared with non-incarcerated youths who committed violent offences, are predicted to have higher RAT scores on positive answers on Family function; Hypothesis 4-4: Incarcerated youth who committed violent offences, when compared with non-incarcerated youths who committed violent offences, are predicted to have higher RAT scores on positive answers on Peer relationship; and Hypothesis 4-5: Incarcerated youth who committed violent offences, when compared with non-incarcerated youths who committed violent offences, are predicted to have higher RAT scores on positive answers on Criminal involvement. Overall, the increased level of RAT total scores of incarcerated violent youths support the research question in part (Total scores $F = 24.170$, $p < .001$).

Table 8. Risk Assessment Tool (RAT) scores for violent youth and non-violent youth

	<u>Violent Youth</u>		<u>Non-violent Youth</u>		F	
	M	SD	M	SD		
Family structure	.63	.57	.42	.55	7.77	**
Family function	.20	.60	.17	.447	.14	
School life	2.95	1.35	1.83	1.60	29.33	***
Run-away from home	.76	1.06	.66	1.02	.49	
Delinquent career	4.67	1.81	2.84	1.73	55.31	***
Personal factors	2.90	1.53	2.14	1.68	10.04	**
Total	12.12	4.27	8.06	5.36	36.11	***

* p < .05. ** p < .01. *** p < .001

Table 9. Risk Assessment Tool (RAT) scores for violent youth in detention facility and being diverted

	<u>Detention Facility</u>		<u>Police Diversion</u>		F	
	M	SD	M	SD		
Family structure	.77	.58	.41	.49	10.36	**
Family function	.26	.72	.10	.30	1.61	
School life	3.44	1.25	2.18	1.16	25.43	***
Run-away from home	.97	1.10	.44	.91	6.35	**
Delinquent career	5.44	1.31	3.46	1.86	38.97	***
Personal factors	2.74	1.60	3.15	1.38	1.74	
Total	13.61	3.64	9.74	4.15	24.17	***

* p < .05. ** p < .01. *** p < .001

6: Discussion

6.1 Conclusions

The purpose of this study was to examine, first, the relationship between types of offence and personality traits, such as Borderline features, Antisocial features, Drug problems, Aggression, Treatment rejection, Dominance, and Warmth as measured by the PAI-A; and, second, to see if factors covered by the Risk Assessment Tool predict types of offence. The analyses performed found weak, but significant, correlations between the type of offence and the PAI-A scales. Also, the results demonstrated a strong correlation between the types of offence and RAT scores. The significance, as well as the limitations, of these findings will be discussed below.

With regards to the hypotheses in the first group – *Youth who committed violent offences, when compared with those who committed non-violent offences, are predicted to have higher ANT (Hypothesis 1-1), BOR (Hypothesis 1-2), AGG (Hypothesis 1-3), DRG (Hypothesis 1-4), and RXR (Hypothesis 1-7) scores on the PAI-A* – the current study found that the interpersonal scales of the PAI-A did contribute significantly to the prediction of violent adolescents. The results support only two hypotheses in the first group: *Youth who committed violent offences, when compared with those who committed non-violent offences, are predicted to have higher WRM (Hypothesis 1-5) and DOM (Hypothesis 1-6)*. These findings from the first comparison of mean analyses of variance would suggest that predictive strength of the PAI-A scales: ANT, BOR, AGG, DRG, and RXR, which assess psychopathic traits was quite weak.

The hypotheses in the second group – *Incarcerated youth, when compared with non-incarcerated youth who committed offences, are predicted to have higher ANT (Hypothesis 2-1), BOR (Hypothesis 2-2), AGG (Hypothesis 2-3), DRG (Hypothesis 2-4), WRM (Hypothesis 2-5), DOM (Hypothesis 2-6), and RXR (Hypothesis 2-7) scores on the PAI-A* – were also rejected. Results showed that adolescents who were detained in the

security detention facility did not have higher scores on the PAI–A scales for predicting violent adolescents; rather, the analyses found entirely opposite outcomes, namely that the adolescents being diverted showed higher scores on BOR ($F = 12.183, p < .05$), ANT ($F = 14.504, p < .001$), DRG ($F = 29.018, p < .001$), and AGG ($F = 15.312, p < .001$). The findings were also inconsistent with previous research (Caperton et al., 2004; Edens, 2009; Edens et al., 2001; Hopwood et al., 2008).

The results from analyses of the RAT supported four hypotheses in the third group – Youth who committed violent offences, when compared with those who committed non-violent offences, are predicted to have higher RAT scores on positive answers on Family structure (Hypothesis 3-1), School life (Hypothesis 3-3), Criminal involvement (Hypothesis 3-5), and Personal traits (Hypothesis 3-6). Results from ANOVA analyses regarding types of offence showed that violent adolescents had higher total scores on the RAT, as well as higher scores on Family structure, School life, Criminal involvement, and Personal factors. These results support the studies of situational risk factors of serious persistent offenders. In the research, family factors associated with conduct problems and delinquent behaviour includes family structure and family discord (Farrington et al., 2008; Loeber & Farrington, 1998; Savage, 2009). Furthermore, violent adolescents' significantly higher scores on school life and delinquent career categories are consistent with the findings of the life course persistent studies of Farrington, Loeber, Jolliffe, and Pardini (2008) who found that the strongest preventive promotive factors predicting a low probability of violence were high academic achievement and a good relationship with peers. The results also supported Farrington et al.'s (2008) and Loeber et al.'s (2008) findings that the strongest aggravating risk factors are prior violence and high peer delinquency.

The violent adolescents group scored higher on Personal risk factors, compared to the non-violent adolescent group. The Personal risk factor includes questions on drug problems, remorse for a victim, impulsivity, and outrageousness. The traits on those questions are personality features that are associated with callous and unemotional (CU) studies (Frick & Dickens; 2006; Hart & Hare, 1997; Loper, Hoffschmidt, & Ash, 2001). The results on the RAT scores between violent and non-violent adolescent groups supported the finding that CU traits seem to be important for designating a subgroup of

violent youth (Frick et al., 2003) and that CU traits are related to measures of delinquency (Corrado et al., 2004).

Four hypotheses in the fourth group of hypotheses – *Incarcerated youths, when compared with non-incarcerated youths who committed offences, are predicted to have an increased level of RAT scores on positive answers on Family structure (Hypothesis 4-1), School life (Hypothesis 4-3), Peer relationship (Hypothesis 4-4), and Criminal involvement (Hypothesis 4-5)* – were borne out by the results of the RAT scores of violent adolescents from both the detention facility and the diversion group. In the final output, Peer relationship was one of the significant traits among the violent detained adolescents. The elevated score on Peer relationship indicates that adolescents who ran away from home had a higher risk of offending; these results support contextual risk factor studies (Douglas & Webster, 1999; Estroff & Zimmer, 1994) as well as situational risk factors for persistent offenders (Loeber & Farrington, 2008; Farrington, Loeber, Jolliffe, & Pardini, 2008; Savage, 2009).

6.2 Implications

The purpose of this study was to examine the relationship between a number of distinctive traits and types of offence. To pursue this objective further, it will be important to conduct more research on the correlations between PAI-A scales and types of offence. Although Dominance (DOM), Warmth (WRM) and Mania-Grandiosity (MAN-G) showed significance results, overall results were not consistent with PAI-A research (Edens et al., 2001; Edens & Ruiz, 2006; Morey, 1991). To date, most studies of the PAI-A clinical and treatment consideration scales have related to the prediction of treatment behaviour and outcome among substance abusers. Further study should examine the clinical and treatment consideration scales of the PAI-A in the context of the type of crime and delinquency. Also, further study should look at which PAI-A scales and sub-scales would be useful measures for identifying psychopathic traits in young offenders.

A second goal of this study was to highlight quantitative differences in the personal traits of violent adolescents as compared to non-violent adolescents. The examination of the RAT demonstrated meaningful results. For example, the total RAT

score for violent adolescents was 12.12 ($SD = 4.27$), and the score for non-violent adolescent was 8.06 ($SD = 5.36$) ($F = 36.11, p < .001$). Furthermore, the total RAT score for violent adolescents in the detention facility was 13.61 ($SD = 3.64$), and the score for violent adolescents in diversion was 9.74 ($SD = 4.14$) ($F = 24.17, p < .001$). The gap between the PAI-A and RAT findings might be explained by whether or not a measure assessed risk factors of the environment or of the person-environment interaction, as previous research has found (Douglas & Webster, 1999). It is thus important that criminology studies examine personality traits and contextual factors referring to family, school, and peer group information taking into consideration the complex interactions between these traits and factors.

6.3 Limitations

The current study has five limitations. First, the data sample size was relatively small compared to previous studies that examined the PAI-A. This small sample might hinder a full examination of the first and second groups of hypotheses that violent adolescents will show distinctive results on PAI-A scores. The smaller sample size, however, does not mean that this study is meaningless, given that the results from the current study represent certain aspects of personality traits of Korean young offenders. Second, an application of the results to other types of minority groups or to any other ethnic group would be limited because this study examined only East Asian Koreans. If further studies examine the PAI-A and RAT scores of adolescent from various ethnic groups, interracial relationships can be drawn. Third, because the majority of the sample were male ($N = 158, 76.3\%$), this study will mostly be applicable to male adolescents. Fourth, the RAT shares the limitations common to self-report assessment methods, and it is often to useful to supplement self-reports with background information including family records, courts reports, police investigation report, school records, and previous probation records. The background information was not analyzed for this study because of privacy protection policy of Korea Ministry of Justice. If further studies examine at PAI-A and RAT with the background information, it would be useful. Finally, although previous research noted that some scales of PAI and PAI-A measure domains of domains of psychopathology and risk of antisocial behaviour, for the more accurate

assessment it will be required to examine adolescents' environmental factors as well as socio-economic factors.

6.4 Suggestions

In Korea, after the prosecution stage, approximately 90% of juvenile offenders are released without physical detention. Despite ongoing treatment for the adolescents in their community such as the Juvenile Diversion Program and the youth probation system, the exacerbation of the rate of delinquency does not seem to change. The reason may be a lack of treatment that is suitable to what the youths' risk factors are. A number of studies have examined the reliability and validity of the Risk Assessment Tool for predicting a risk of recidivism in Korea. The more important focus now should be designing helpful prevention or treatment programs based on the weaknesses of adolescents, which is determined by empirically verified assessment.

Also, in spite of various developmental pathway studies in North American and in Europe that refer to the life-course persistent (LCP) and adolescent limited (AL) trajectories, there is a lack of longitudinal trajectory study on adolescents in Korea. Future research should examine the developmental pathways of Korean juvenile delinquency in order to apply the meaningful outputs of LCP and AL studies of youth at risk in Korea.

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Appendix A.

List of PAI-A Scales and Subscales

	Scale	Meaning of Elevations
Validity Scales		
INC	Inconsistency	Concentration or attention problems
INF	Infrequency	Idiosyncratic or random responding
NIM	Negative Impression Management	Pessimism and/or intentional feigning
PIM	Positive Impression Management	Naïveté, lack of insight, or intentional dissimulation
Clinical Scales		
SOM	Somatic Complaints	
SOM-C	Conversion	Unusual medical symptoms
SOM-S	Somatization	Diffuse health-related complaints
SOM-H	Health Concerns	Preoccupation with physical health
ANX	Anxiety	
ANX-C	Cognitive	Ruminative worry
ANX-A	Affective	Tension and difficulty relaxing
ANX-P	Physiological	Sweating, increased heart rate, and other overt signs of anxiety
ARD	Anxiety Related Disorders	
ARD-O	Obsessive-Compulsive	Presence of obsessive compulsive disorder and personality features
ARD-P	Phobias	Fearfulness, particularly with regard to social situations
ARD-T	Traumatic Stress	History of trauma with enduring psychological consequences
DEP	Depression	
DEP-C	Cognitive	Worthlessness and hopelessness, with low scores indicating self-efficacy
DEP-A	Affective	Sadness, lack of interest, and anhedonia
DEP-P	Physiological	Fatigue and sleep or eating problems
MAN	Mania	
MAN-A	Activity Level	Energy and behavioural over-extension
MAN-G	Grandiosity	Inflated sense of self-worth with low scores indicating low self-esteem

MAN-I	Irritability	Impatience and low frustration tolerance
PAR	Paranoia	
PAR-H	Hyper vigilance	Suspiciousness, with low scores indicating tendency to trust others
PAR-P	Persecution	Belief that others are actively preventing one's success
PAR-R	Resentment	Tendency to hold grudges and externalize blame
SCZ	Schizophrenia	
SCZ-P	Psychopathic Experience	Unusual perceptions or ideas including positive psychotic symptoms
SCZ-S	Social Detachment	Social isolation and detachment
SCZ-T	Thought Disorder	Concentration difficulties and disorganized thinking
BOR	Borderline Features	
BOR-A	Affective Instability	Emotional reactivity and difficulties modulating
BOR-I	Identity Problems	Feelings of emptiness and being uncertain about one's role or place in life
BOR-N	Negative Relationships	History chaotic and conflicted relationships
BOR-S	Self-Harm	Impulsivity
ANT	Antisocial Features	
ANT-A	Antisocial Behaviours	History of rule-breaking
ANT-E	Egocentricity	Difficulties with empathy and a tendency to exploit
ANT-S	Stimulus Seeking	Low boredom tolerance and tendency to seek out exciting activities
ALC	Alcohol Problems	Problems with alcohol use
DRG	Drug Problems	Problems with drug use

Treatment Consideration Scales

AGG	Aggression	
AGG-A	Aggression Attitude	Belief that it is appropriate to use violence for personal gain
AGG-V	Verbal Aggression	Assertiveness and verbal abusiveness
AGG-P	Physical Aggression	Tendency to flight or physically aggress
SUI	Suicidal Ideation	Consideration of suicide
STR	Stress	Stress related to sudden or dramatic changes in the environment
NON	Non-support	Lack of available social supports

RXR	Treatment Rejection	Low motivation for treatment or openness to the need for personal change
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Interpersonal Scales

DOM	Dominance	Assertiveness and tendency to control others, with low scores indicating interpersonal passivity
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WRM	Warmth	Need for closeness and tendency to be empathic, with low scores indicating interpersonal aloofness
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Appendix B.

Risk Assessment Tool

1. Family structure	Point:	5. Delinquent Career	Point:
1) Parentless: Mother's or father's death	No(0) Yes(1)	1) Arrest(s)	None(0) Yes(1)
Parents' divorce, separation, or disappearance	No(0) Yes(1)	2) Conviction(s)	None(0) Yes(1)
Living alone	No(0) Yes(1)	3) Youth detention center or correction institute	None(0) Yes(1)
2) Guardian or Family supporter	Yes(0) None(1)	4) Violation of probation order	None(0) Yes(1)
		5) Serious violence offence (Battery, Sexual offence, robbery, or murder)	None(0) Yes(1)
2. Family function	Point:	6) The present offence	Property(0) Person (1)
1) Family trouble/ indifference	Not severe(0) Severe(1)	7) Conspired or planned the offence	None(0) Yes(1)
2) Physical/verbal aggression between family members	Not severe(0) Severe(1)	8) Skilled modus operandi	No(0) Yes(1)
3) Mental abuse between family members	Normal(0) Abnormal(1)	9) Exacerbation of delinquent	No(0) Yes(1)
4) Attachment to parents	Normal(0) Abnormal(1)	10) The first offence at age 11 or under	No(0) Yes(1)
5) Family members' criminal career	None(0) Yes(1)		
3. School life	Point:	6. Personal factors	Point:
1) The highest level of education	Attending middle school or higher (0) Dropped out of middle school (1)	1) Drinking	None(0) Habitual(1)
2) Absence without notice or longer than 10days	None(0) Yes(1)	2) Drug or substances use	None(0) Yes(1)
3) Problem in attachment to school	None(0)	3) Alcoholic or drinking problem	None(0)

(Attacker or victim of bully, exclusion)	Yes(1)		Yes(1)
4) Warning or suspension from school	None(0) Yes(1)	4) Video game or sexual contents addiction	None(0) Yes(1)
5) Pursuing higher level of education	None(0) Yes(1)	5) Sexual problem	None(0) Yes(1)
6) Peer relationship : peer who has been arrested for violation	None(0) Yes(1)	6) Prostitution	None(0) Yes(1)
		7) Responsibility	None(0) Yes(1)
4. Run-away from home	Point:	8) Remorse for a victim	None(0) Yes(1)
1) Pattern of run-away	Non-habitual (0) Habitual(1)	9) Awareness of his/her conduct and its result	None(0) Yes(1)
2) Peer associable for fleeing	None(0) Yes(1)	10) Law-abiding attitude	None(0) Yes(1)
3) Experience of living with runaway adolescent(s)	None(0) Yes(1)	11) Goal in life and efforts for the goal	None(0) Yes(1)
		12) Low cognitive abilities	None(0) Yes(1)
		13) Emotional stability	Stable(0) Unstable(1)
		14) Ability to difficult matters	None(0) Yes(1)
		15) Impulsivity	None(0) Yes(1)
		16) Outrageousness	None(0) Yes(1)
		17) Attitude to interview	Favorable(0) Hostile(1)