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Implicit and Explicit Self-Esteem, Narcissism, Risk, and Psychopathy in a Forensic Population

by

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Abstract

The purpose of this cross-sectional study was to identify the relationships between explicit and implicit self-esteem, offender categorization, risk of reoffence, narcissism, and psychopathy. Participants were 90 adult male offenders sentenced for a nonviolent, violent, or sexual offence against a child, recruited from both federal and provincial institutions. Participants completed the Rosenberg Self-Esteem Survey, a self-esteem implicit association test (IAT), the Narcissism Personality Inventory, and the Self-Report Psychopathy Scale – III. File information was used to collect demographic information and to score the Violence Risk Appraisal Guide and/or Sexual Offence Risk Appraisal Guide. It was found that sexual offenders had lower explicit, but not implicit, self-esteem scores than the nonviolent and violent offenders. Offender group, risk of reoffence, narcissism, and psychopathy could not be predicted by main effects or interaction effects of self-esteem. Overall, the results suggest that self-esteem, whether explicit or implicit, at most plays a very minor role in criminal behaviour.

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Criminal behaviour affects the lives of everyone: the offender, the offender's family, the victim and their family, judges, lawyers, correctional officers, as well as those more indirectly involved, such as the taxpayer. In 2008 alone, the Canadian federal government spent $1.87 billion on the incarceration, supervision, and rehabilitation of federal inmates (Office of the Auditor General, 2008). This figure does not include the monies spent on the justice system or the monies spent at the provincial level. Clearly, the commission of offences costs society greatly, in more ways than one. Therefore, it behooves us to discover as much as possible about the reasons individuals commit crime and how to best help them refrain from doing so again.

Numerous theories abound attempting to explain criminal behaviour: choice theory suggests that crime is a rational choice made by an individual; trait theories suggest that there is a biological or genetic component to crime; social structure theories suggest forces operating in lower-class neighbourhoods push residents into crime; social process theories hold that criminality is a function of individual socialization; and social conflict theory suggests that crime is caused by societal intergroup conflict and rivalry. None of these theories, however, have been able to explain every type of crime or account for every individual that commits a crime.

More recent theories of crime focus on "criminogenic needs"; that is, factors that increase or decrease the risk of an individual committing a crime.

Numerous criminogenic needs have been identified including antisocial attitudes, negative peers, family and marital problems, drug and alcohol use, unstable employment history, self-esteem, and depression. These have been grouped into "major" and "minor" criminogenic needs, such that major needs are thought to have the most impact on risk and recidivism and therefore should be the target of intervention. Major criminogenic needs include antisocial attitudes, negative peer groups, family and marital problems, drug and alcohol use, and unstable employment history. Self-esteem and depression are considered to be minor criminogenic needs and therefore unworthy of being the focus of treatment, as altering these factors is thought to be unlikely to influence recidivism rates.

Important links between self-esteem and criminal behaviour have been found, however. For example, the finding that sex offenders with child victims have lower self-esteem than other types of offenders and non-offenders, suggests that self-esteem may influence the types of crimes people choose to commit. Not all research is supports the link between low self-esteem and crime however. New paradigms with which to study self-esteem have recently been developed which promise to explain the conflicting results found in this area. These new paradigms attempt to measure automatically activated attitudes towards the self, which are thought to be unavailable to the conscious self. This is in contrast to the traditional measures of self-esteem based upon self-report.

Already these new paradigms have shed fresh light on narcissism, a trait defined by grandiosity and self-absorption. Because of the seemingly high regard narcissists hold themselves in, narcissism can be conceptualized as an extremely

high form of self-esteem. However, narcissists may use this egotism to protect their underlying feelings of low self-worth. Hence, the concepts of narcissism and self-esteem have been inextricably linked.

Narcissism has also been linked with psychopathy, a personality disorder that strongly predicts future criminal behaviour, particularly violence. Given the links between narcissism and self-esteem, this suggests that self-esteem may also help to deepen our understanding of psychopathy and risk of reoffence. Therefore, the purpose of this study is to examine self-esteem in a forensic population using both the traditional and contemporary paradigms to determine self-esteem's effects on offender categorization, risk, narcissism, and psychopathy.

The remainder of this document will review the relevant self-esteem literature, beginning with defining and delineating the importance of self-esteem in daily life. This will be followed by a review of the methods of measuring self-esteem, with a focus on differentiating explicit and implicit self-esteem. The association between self-esteem and crime will then be described before exploring narcissism more closely, in the context of self-esteem, and its relationship to criminal behaviour, more specifically offence type, risk of reoffending, and psychopathy. Based on the review of the pertinent literature, this study's hypotheses will be posited.

The methods section will describe how the hypotheses will be tested, including a detailed description of the participants, the questionnaires used, and the procedure that was followed during data collection. The results section

outlines the statistics used to test the hypotheses, as well as the results of the test statistics. This is followed by a discussion that reviews the results of the statistical analysis, provides potential explanations of the results, and discusses treatment implications, as well as limitations of the study.

Chapter 2: Literature Review

Self-esteem is one of the most widely studied constructs in psychology. A keyword search of 'self-esteem' on PsycInfo returned 19,222 results, and that number grows daily. Despite the plethora of research on self-esteem there is surprisingly little consensus with respect to definition, effects, and even measurement.

Self-esteem is a central component of daily experience, having "profound consequences for every aspect of our existence" (Branden, 1994, p. 5). Branden (1994) further postulates that there is not a single problem from "anxiety and depression, to fear of intimacy or of success, to spouse battery or child molestation – that is not traceable to the problem of low self-esteem" (p. 12). Despite the apparent importance of self-esteem, a consensual definition is lacking (Krizan & Suls, 2008; Lynum, Wilberg, & Karterud, 2008; Oakes, Brown, & Cai, 2008).

It is generally agreed that self-esteem has both affective and cognitive components, although some theorists emphasize affective self-regard, that is self-esteem as a feeling of affection toward oneself, whereas others take a more cognitive view, defining self-esteem as an overall judgment one makes of oneself (Kernis, 2003; Oakes et al., 2008; Rosenberg, 1979). Interestingly, many studies on self-esteem actually fail to define self-esteem, presumably because it is such a popular and familiar term that a definition is considered unnecessary. Despite the lack of definitional consensus—which complicates research as authors may actually be studying different albeit closely-related constructs—self-esteem is

generally acknowledged as an important psychological construct and has been found to be related to a wide variety of outcomes including happiness, academic performance, job performance, leadership, depression, relationship dissatisfaction, and delinquency (Baumeister, Campbell, Krueger, & Vohs, 2003).

More specifically, high self-esteem has been linked to positive outcomes such as school performance, performance quality, persistence, optimism, life satisfaction, emotional stability, lower levels of depression, and better coping abilities following negative events, to name only a few (Baumeister et al., 2003; Schroder-Abe, Rudolph, & Schutz, 2007). On the other hand, low self-esteem has been associated with more negative outcomes, including aggression, delinquency, smoking, risk taking, anger, emotional reactivity, substance use, and sexual offending (Baumeister et al., 2003; Jankowski, 1991; Long, 1990; Marshall & Barbaree, 1990; Rhodewalt, Madrian, & Cheney, 1998; Waschull & Kernis, 1996). However, it is not all "cut and dried" that high self-esteem results in optimal functioning while low self-esteem results in poorer functioning. Most of the research done has been cross-sectional in nature, thereby identifying association not causation. Thus, it is equally plausible that optimal functioning results in high self-esteem. In addition, much of the research in the area of self-esteem is inconsistent; some has failed to show an association between self-esteem and problem behaviour, while other research has linked both high and low self-esteem to problem behaviours (Salmivalli, Kaukianen, Kaistaniemi, & Lagerspetz, 1999; Zeigler-Hill, Clark, Beckman, 2011). In an extensive review of the literature, Baumeister and colleagues (2003) concluded that self-esteem

increases motivation for both positive and negative behaviours, not adaptive functioning directly.

Measurement of Self-Esteem

Part of the reason for the discrepancies in the self-esteem research findings may be an artefact of measurement. Traditionally, self-esteem research has used self-report questionnaires. Self-report questionnaires allow for quick and easy administration and almost immediate results, but are susceptible to demand characteristics and impression management. The concept of demand characteristics was introduced by Orne (1962) as the problem of differentiating between the effect of the specific experimental variable and the non-specific aspects of the experimental condition that may affect what the participant does. According to Luchins (2011), a demand characteristic of "participating in almost any psychological experiment, is that human subjects believe that they need to be 'good subjects' in order to validate the experimental hypothesis" (p. 118). Impression management, on the other hand, a term introduced by Goffman (1959), is the process by which people engage in actions which present a desired image to others during interactions (Rosenberg & Egbert, 2011). People may also not want to admit, to others or even themselves, that they have negative feelings about themselves, thus skewing their reports (Krizan & Suls, 2008). Even if subjects answer honestly, self-knowledge is known to be flawed; in particular, self-report measures may fail to detect defended aspects of the self or unconscious processes that nevertheless affect behaviour (Krizan & Suls, 2008; Stoessel, 2007).

Despite the problems inherent in self-reporting self-esteem, numerous self-report measures exist including the Rosenberg Self-Esteem Scale (Rosenberg, 1979) the Coopersmith Self-Esteem Inventory (Coopersmith, 1981), and the Tennessee Self-Concept Scale (Roid & Fitts, 1988) scale, among others. These scales measure what is known as explicit self-esteem—the aspect of self-esteem that is consciously knowable to the individual.

Implicit and Explicit Self-Esteem. The concept of conscious and unconscious aspects of the same construct is not new. The idea that important aspects of the self-concept are introspectively unavailable dates back to at least the time of Freud (as cited in Kernis, 2003). Interest waned, however, as there was no known ways of measuring these unconscious processes. There has been a resurgence of interest in these ideas recently, courtesy of the dual-process theory of human cognition, which argues that there are two ways in which people simultaneously process information (Chaiken & Trope, 1999; Strack & Deutsch, 2004). This theory states that people process information in terms of a

> rational system, in which declarative propositional knowledge is used in serial, effortful, usually conscious, processing, or in terms of the experiential system, which uses concrete images and narratives in a rapid, holistic manner based on associative structures and involves unconscious processing. (Krizan & Suls, 2009, p. 660).

These implicit systems occur outside of conscious awareness and control, requiring few cognitive resources to guide behaviour (Bargh, 1994; Devos &

Banaji, 2003). It is thought that traditional self-report measures tap into the rational, cognitive system to measure what is known as explicit self-esteem (Krizan & Suls, 2009).

When referring to self-esteem, the experiential system is known as implicit self-esteem, defined by Greenwald and Banaji (1995) as "the introspectively unidentified (or inaccurately identified) effect of the self-attitude on evaluation of self-associated and self-dissociated objects" (p. 11). It is thought that traditional self-report measures do not access these processes, and that there was a need for measurement instruments that could tap into this unconscious system (Franck, De Raedt, & De Houwer, 2008; Koole & DeHar, 2007; Krizan & Suls, 2009; Spalding & Hardin, 1999).

Newly developed instruments are designed to assess implicit self-esteem. These new measures are generally based on the assumption that people assign value to objects that are closely related to themselves and that when these objects are encountered, attitudes are automatically activated (Stoessel, 2007). These measures are designed to avoid the misrepresentation of self-reports, by tapping into behaviours, attitudes, and cognitions that are not subject to conscious control. However, they also have their shortcomings (Tafarodi & Ho, 2006). A study comparing seven implicit self-esteem measures indicated that none of the measures correlated with each other (Bosson et al., 2000). Proponents of these new measures argue that this does not indicate that the measures are inadequate, rather it is reflective of the multidimensionality of the self-esteem construct, while opponents argue that this means that either only one of the measures is measuring

implicit self-esteem or none of them are (Bosson et al., 2000; Buhrmester, Blanton, & Swann, 2011). Test-retest correlations for these measures are consistently lower than correlations for explicit measures, which suggests that implicit measures are more "statelike and malleable than are trait explicit self-esteem measures" (Buhrmester et al., 2011, p. 367). It is unknown why implicit self-esteem scores tend to fluctuate more than explicit scores, although it has been hypothesized that this is due to the instability of the underlying construct or the high amounts of measurement error inherent in the measures (Buhrmester et al., 2011).

Krizan (2008) found that, among those who are aware of the self-relevant nature of the measures, at least some of the variance in implicit scores is accounted for by relevant conscious beliefs. This calls into question the basic premise upon which these measures are based: their ability to tap into processes beyond conscious control. Indeed, work by Olson, Fazio, and Hermann (2007) indicates that implicitly measured self-esteem is not unconscious. They demonstrated that individuals who manifest discrepant self-esteem such that their explicit self-esteem is much higher than their implicit self-esteem, admit to inflating their explicit scores. When individuals are urged to not over (or under) present themselves, convergence between implicit and explicit measures is increased. While an advantage to the implicit measures is their supposed resistance to faking, Rohner, Schroder-Abe and Schutz (2011) found that it was possible for participants to fake their scores, even without a recommended strategy. Other researchers have found that implicit self-esteem scores are

influenced by the selection of stimuli. For example, implicit self-esteem scores are higher when self-relevant stimuli are used versus self-neutral stimuli (Oakes et al., 2008).

Despite the drawbacks that even implicit measures have, numerous implicit measures now exist. The two most commonly used implicit measures of self-esteem are the Name-Letter Preference Task (Nuttin, 1985) and the Implicit Association Test (Greenwald & Farnham, 2000), as they are the most reliable and valid measures currently available (Bosson et al., 2000; Krizan & Suls, 2008; Schroder-Abe et al., 2007).

Scores on implicit and explicit measures of self-esteem are only modestly correlated with each other, which is normally considered to be problematic when measures are assumed to be assessing similar constructs. It has been argued that the low correlations between the two measures stem from the lower test-retest reliability of implicit measures and the misrepresentation, deliberate or not, on explicit measures (Krizan & Suls, 2009). However, it has also been argued that low correlations between implicit and explicit measures of self-esteem should be expected, since this is consistent with the idea that there are two paths by which information is processed (Krizan & Suls, 2008; Stoessel, 2007).

Unlike the literature on explicit self-esteem, research linking implicit self-esteem to actual behaviours is rare (Rudolph, Schroder-Abe, Riketta, & Schutz, 2010). Bos, Huijdin, Muris, Vogel, and Biesheuvel (2010) found that implicit self-esteem was not related to psychopathology such as depression, anxiety, or eating problems in adolescents, unlike explicit self-esteem. Contrary to these

findings, Franck, De Raedt, and De Houwer (2007) found that implicit self-esteem significantly predicted depressive symptomology at six-month follow up among currently depressed, formerly depressed, and never depressed individuals, whereas explicit self-esteem did not. In a study of 63 undergraduate students, Meagher and Aidman (2004) found that while explicit self-esteem predicted participants' evaluations of a person providing feedback, implicit self-esteem predicted the size of the emotional response to the actual feedback. Spalding and Hardin (1999) concluded that implicit self-esteem measures are better predictors of automatic behaviours, based on their findings that implicit self-esteem predicted anxiety in a self-relevant interview (although not in a self-irrelevant interview), while explicit self-esteem did not; although, explicit self-esteem was found to predict participants' self-judgments of their anxiety. These studies appear to support the idea that explicit and implicit self-esteem predict different types of behaviours in isolation, and perhaps their utility may improve if they are combined.

Discrepancies between Implicit and Explicit Self-Esteem. Using both explicit and implicit measures of self-esteem within the same sample has revealed the possibility of four distinct types of self-esteem: a secure or genuine type of high self-esteem in which participants score highly on both explicit and implicit measures, defensive or fragile self-esteem in which participants score high on explicit but low on implicit, damaged self-esteem in which participants score low on explicit but high on implicit, and congruent low self-esteem in which participants score low on both types of measures (Kernis, 2003; Schroder-Abe,

Rudolph, & Wiesner, 2007; Spencer, Jordan, Logel, & Zanna, 2005). Importantly, these types of self-esteem have been linked to different outcomes.

Any form of self-esteem discrepancy appears to be unhealthy, as it is indicative of poor self-integration (Schroder-Abe, Rudolph, & Schutz, 2007). In support of this, Schroder-Abe, Rudolph, and Schutz (2007) found that individuals with discrepant self-esteem, regardless of the nature of the discrepancy, scored lower on a scale measuring mental and physical health, and reported more days of impaired health, than individuals with congruent self-esteem. In fact, individuals with damaged self-esteem scored even lower on levels of health than individuals with congruent low self-esteem. Evidence has also been found for increased defensive behaviour among those with discrepant self-esteem (Kernis et al., 2008; Schroder-Abe, Rudolph, & Wiesner, 2007). Sandstrom and Jordan (2008) found increased aggressive behaviour, as compared to those with congruent self-esteem, in those with damaged self-esteem (low explicit and high implicit). These results suggest that congruence may be more important for psychological health than absolute values of self-esteem.

Individuals with discrepant self-esteem simultaneously hold two conflicting attitudes towards themselves, which has significant implications for mental health. At a conscious level, these individuals may think or feel quite good about themselves, but at an unconscious level they actually view themselves quite negatively. Subjects with discrepant self-esteem were shown in a study by Park and John (2011) to have more materialistic tendencies. These authors suggested that materialism is a form of self-enhancement in which individuals attempt to

moderate their psychological discomfort with material possessions. In a study of depressed individuals, Franck, De Raedt, Dereu, and Van den Abbeele (2007) found self-esteem discrepancies in those that were currently depressed and had suicidal ideation, but not in those who were currently depressed without suicidal ideation or in normal controls. Jordan and colleagues (2003) found higher levels of narcissism, dissonance reduction, and self-enhancement in individuals with a combination of high explicit and low implicit self-esteem.

Individuals with discrepant self-esteem may also be more likely to react with anger, criticism, and aggression to perceived self-esteem threats or "ego threats" (Kernis, Granneman, & Barclay, 1989; Kernis et al., 2008). Kernis, Lakey and Heppner (2008) found that the higher an individual's implicit self-esteem was, the lower their verbal defensiveness, particularly if they also had high explicit self-esteem. Bosson (2001) found that participants with discrepant self-esteem expressed more anger when reacting to feedback, while Sandstrom and Jordan (2008) in a study of 8th graders, found that children with high levels of explicit self-esteem and low levels of implicit self-esteem tended to engage in more aggressive behaviours.

Self-Esteem and Violent Crime

The literature seems to suggest that low self-esteem predisposes one to act aggressively, as a consequence of people wanting to harm those that they see as superior to themselves. Aggressive domination of others was thought to increase self-esteem (Horney, 1950 as cited in Bushman, Baumeister, Thomas, Begeer, & West, 2009). This theory has been supported by a line of research that found

relationships between low self-esteem and aggressive or violent behaviour. Despite the plethora of studies (Oser, 2006; Locke, 2009; Webster, Mann, Thornton, & Wakeling, 2007) demonstrating a link between low self-esteem and adult antisocial behaviour, including violence, Andrew and Bonta's (1994) influential meta-analysis of the criminogenic literature concluded that self-esteem has little influence on violence and crime. Following their review, self-esteem was relegated to the category of "minor criminogenic needs", reducing the attention paid to such a relationship.

Two years later, Baumeister, Smart, and Boden (1996) conducted an extensive literature review of their own, also finding no evidence that low self-esteem causes aggression and violence as traditionally thought. While this appears to support Andrew and Bonta's meta-analysis, upon further investigation Baumeister and colleagues concluded that it is actually high self-esteem that is related to aggression. They argue in a recent publication that aggression is the result of threatening an individual's favourable view of themselves, that is, their self-esteem (Bushman et al., 2009). In support of this argument, they found in a study of 280 undergraduate students that the most aggressive individuals were those who felt insulted and had both high self-esteem and high narcissism. Low self-esteem actually reduced or eliminated the effect of narcissism on aggression.

More recently, Walker and Bright (2009) conducted a meta-analysis on the relationship between self-esteem and criminality and concluded that 12 of the 19 reviewed studies found that low self-esteem was associated with violence, five found no association, one found that high self-esteem was associated with

violence, and only one indicated that both high and low levels of self-esteem were associated with violence. Six studies found that narcissism predicted aggression.

Oser (2006) contends that one of the reasons for the lack of consensus regarding self-esteem and offending behaviour, including violent behaviour, is that the majority of self-esteem studies do not use samples of people who have committed violent crimes. His study, involving 146 male and female inmates in two medium security prisons, found that inmates convicted of violent or drug offences had significantly lower self-reported self-esteem than inmates convicted of other offences. He also found that the more criminal convictions as an adult, the lower the reported level of self-esteem. Based on his findings, Oser argued that the relationship between low self-esteem and criminal behaviour was supported. In addition, he argued that because these inmates reported low levels of explicit self-esteem, they were not displaying a defensive or narcissistic form of self-esteem as Baumeister suggested in his review.

> Frank (2004), in a study of 158 male offenders argued that
>
> the unlikelihood that an individual holds both high and low self-esteem at the moment the decision is made to commit a criminal act indicates that one of the postulates concerning which type of self-esteem is more influential in violent behavior is incorrect, therefore there is a need to clarify which type of self-esteem is actually more influential in an individual's decision to participate in violent (or nonviolent) criminal behavior. (p. 6).

Frank's conclusion that one cannot simultaneously have both high and low self-esteem may have been premature. Given the new paradigms for studying self-esteem, it is now considered possible for an individual to hold both high and low self-esteem simultaneously (e.g., high explicit and low implicit), yet no studies have examined the relationship between implicit self-esteem and criminality or discrepant self-esteem and criminality, indicating that the role self-esteem plays in criminality is still open to investigation.

Sex Offending. The debate about the influence of self-esteem on offending behaviour is even more heated with regard to sexual offending. Along with Andrews and Bonta (1994), Hanson and Bussiere's (1998) meta-analysis concluded that self-esteem was unrelated to sexual recidivism, as commonly associated problems such as depression, anxiety, and general psychological problems were uncorrelated with sexual recidivism. Subsequent meta-analyses have further confirmed these conclusions (Hanson & Morton-Bourgon, 2005).

Despite this apparently indisputable conclusion, Marshall and colleagues have continued to research self-esteem, and have repeatedly found that sex offenders, particularly those with child victims, have lower self-esteem than other types of offenders (Marshall, Barbaree, & Fernandez, 1995; Marshall and Mazzucco, 1995; Thornton, Beech, & Marshall, 2004). Thornton, Beech, and Marshall (2004) found that low self-esteem prior to treatment was associated with higher sexual recidivism rates in a sample of incarcerated and paroled sexual offenders.

While the debate continues regarding whether or not self-esteem is predictive of sexual reoffending, it has generally been found that sex offenders, particularly child molesters, tend to score lower on self-esteem measures than violent offenders and community samples (Hosser & Bosold, 2006; Marshall, Christie, & Lanthier, 1979; Marshall & Mazzucco, 1995). Beckett (1999) found that child sexual offenders had lower self-esteem scores than nonoffenders, despite treatment gains. Shine, McCloskey, and Newton (2002) similarly found that child molesters reported lower self-esteem than rapists and that those with male victims had the lowest self-esteem.

Proponents of the link between self-esteem and sexual offending suggest that "individuals with low self-esteem may be more attracted to nonthreatening or non-demanding ways of meeting their sexual needs, such as sex with a child or coerced sex" (Webster, Mann, Thornton, & Wakeling, 2004, p. 207). Contrary to this view, Fernandez and Marshall (2003) have stated,

> it seems likely that someone who has little self-esteem and is therefore preoccupied with their own shortcomings would not have enough emotional energy left to concern themselves with other people's feelings. In addition we might expect that an individual with little self-confidence would be so consumed with meeting their own needs that they might disregard the feelings of others in order to reach their own goals; this may be particularly true for psychopathic individuals who are characterized as callous, manipulative, and egocentric. (p. 13).

Fernandez and Marshall (2003) have also suggested that common defense mechanisms used by sex offenders, such as denial, minimization, and rationalization, allow the offender to reduce their anxiety, guilt, and loss of self-esteem, thereby allowing them to continue offending.

Narcissism

Narcissistic Personality Disorder is defined in the American Psychiatric Association's (2000) Diagnostic and Statistical Manual of Mental Disorders Fourth Edition, Text Revision (DSM-IV-TR) as having a grandiose sense of self-importance, fantasies of power and or success, feeling special or unique, a sense of entitlement, being interpersonally exploitive, lacking empathy, showing arrogant behaviours or attitudes, and being highly sensitive to perceived criticism such that they might react with rage to a perceived attack. The classic presentation of narcissism is an inflated, grandiose self-concept, with extreme defensiveness (McBride, 2002). This has traditionally been thought to reflect high positive explicit self-esteem, covering implicit self-loathing, although until recently it was never possible to demonstrate this empirically. Using the implicit self-esteem paradigm, Jordan and colleagues (2003) found support for this theory, finding that in a sample of university students, participants with high explicit but low implicit self-esteem on the IAT showed significantly more narcissism than individuals high in both types of self-esteem. Zeigler-Hill (2006) replicated this finding, although Lima (2008) and Stoessel (2008) did not.

Narcissism and Criminal Behaviour. While a PsycInfo literature search using the keywords narcissism and crime returned only 40 results, research in the

area of narcissism and aggression or violence is much more proliferate. Much of this research has used non-offending populations, such as Champion's (2002) study on 308 male college students. He found that those high in sexual aggression tended to also be high in narcissism. Bushman and Baumeister's (1998) study with undergraduates found that when participants were given an opportunity to aggress (using a loud noise) against someone who had insulted them or against an innocent third party, only those high in narcissism displayed high levels of aggression towards the insulter. Bushman and Baumeister (2002) replicated these results and followed-up with a population of offenders, finding that violent offenders had higher narcissism scores than non-offenders.

Meier (2004) found that men with higher covert (hypersensitive) narcissism scores were more likely to be perpetrators of intimate partner violence, compared to a control group of self-reported non-perpetrators. Blanchard (2001) also found that narcissism was a factor in the expression of anger and psychological aggression in a sample of 157 participants enrolled in a domestic violence treatment program. In a study of 186 psychiatric patients, high narcissism was significantly associated with severe violence (Svindseth, Nottestad, Wallin, Roaldset, & Dahl, 2008). Vaughn, Newhill, DeLisi, Beaver, and Howard (2008) found that the relationship between narcissism and crime also applies to juveniles, with narcissism significantly associated with violence and theft in a sample of 94 female juvenile offenders. Narcissism has been qualitatively linked to violence as well, in a study of six adolescent males who had committed acts of homicide or aggravated assault (Jordan, 2005). Stone has

stated that although "criminality can be found in conjunction with NPD (Narcissistic Personality Disorder) ...the majority of persons with NPD do not engage in criminal behaviour" (p. 195). He further argues that "narcissism does not imply criminality, but criminality...implies narcissism (p. 195). Clearly, regardless of the sample, measures, or paradigm, a relationship between narcissism and criminal behaviour exists, although it is unclear if narcissism can predict risk of future criminal behaviour.

Despite Hook's (2007) assertion that "[r]esearch suggests that certain personality traits, such as narcissism, increase the likelihood of an individual acting aggressively and perpetrating violence against another" (p. 2), there is little research that directly examines narcissism's ability to predict criminal risk. Johnson and colleagues (2000) in one of the first studies to examine the association between personality disorders and violent behaviour among adolescents in the community using longitudinally prospective data to investigate whether specific personality disorders are associated with increased risk for violent behaviour among adolescents or adults, found in a study of 717 youth that subjects with cluster B personality disorders (not including ASPD, but including NPD) were significantly more likely than those without cluster B personality disorders to be involved in arson or vandalism, initiate physical fights, commit a mugging or robbery, and engage in any violent acts. Narcissistic personality disorder symptoms were associated with a significant increase in risk of being involved in arson or vandalism, threatening to injure others, initiating physical fights, and committing assault resulting in injury to others. This remained true

even after controlling for parental psychopathology, socioeconomic status, co-occurring personality disorder symptoms, co-occurring axis I disorders, and conduct disorder or oppositional defiant disorder.

Barry, Frick, Adler and Grafeman (2007) conducted a similar study. The authors were interested in determining if narcissism was related to risk of future criminal behaviour in a sample of 98 children and adolescents. They found that maladaptive narcissism (i.e., narcissism that included traits of exploitation, exhibitionism, and entitlement) significantly predicted self-reported delinquency at one, two, and three year follow-ups. Contrary to this finding, Morris' (2007) study of 56 male offenders found that narcissism did not predict recidivism at eight-month follow-up post-release. Nonetheless, Quinsey, Harris, Rice, and Cormier (2006) included the diagnosis of any personality disorder on both of their widely used risk assessment instruments, the Violence Risk Appraisal Guide (VRAG) and the Sex Offender Risk Appraisal Guide (SORAG), indicating that clinical levels of narcissism are predictive of both violent and sexual recidivism.

Psychopathy. Not surprisingly, given the overlap in diagnostic criteria, Gifford (2005) found narcissism to be positively related to Antisocial Personality Disorder and psychopathy. Psychopathy, Hare argues, differs from antisocial personality disorder (ASPD) as defined by the DSM-IV-TR, which reflects mainly behaviour (Hart & Hare, 1997; Hart, Hare, & Harpur, 1992). The relationship between ASPD and psychopathy is such that greater than 50% of offenders have a diagnosis of ASPD, but only 15-25% will have a diagnosis of psychopathy (Hart & Hare, 1997).

Basing his work on Cleckley's (1976) conceptualization, Hare argues that psychopathy is a personality disorder characterized by a constellation of interpersonal, affective, and behavioural traits. Hare organized this constellation into a 20-item measure, known as the Psychopathy Checklist –Revised (PCL-R); this is considered the "gold standard" for assessing psychopathy. Items include glibness/superficial charm, grandiose sense of self-worth, need for stimulation/proneness to boredom, pathological lying, conning/manipulation, lack of remorse or guilt, shallow affect, callousness/lack of empathy, parasitic lifestyle, poor behavioural controls, promiscuous sexual behaviour, early behaviour problems, lack of realistic long-term goals, impulsivity, irresponsibility, failure to accept responsibility for one's actions, many short-term marital relationships, juvenile delinquency, revocation of conditional release, and criminal versatility. The PCL-R is scored based on information gathered from an extensive file review and a semi-structured interview. Total scores range from 0 to 40, with higher scores representing a closer fit between the individual and the prototypical psychopath. In addition to the total score, the PCL-R has been demonstrated to have a stable two-factor structure reflecting interpersonal/affective characteristics, and a chronically unstable/antisocial lifestyle (Hare, 1991).

Recent preliminary re-conceptualizations of psychopathy have posited narcissism as a possible third factor (Cooke & Michie, 2001; Gifford, 2005; Gustafson & Ritzer, 1995). Walsh (1999) reported that the majority of psychopaths report feelings of satisfaction, justification, and increased narcissism following violent acts. With a noncriminal sample of 162 adults completing the

Narcissistic Personality Inventory (NPI), Psychopathic Personality Inventory (PPI), and Rosenberg Self-Esteem Scale (RSES), McBride (2002) found a large correlation (r = .53) between NPI and PPI scores.

Despite the links between self-esteem and narcissism, and narcissism and psychopathy, there has been very little research examining the links between self-esteem and psychopathy or ASPD (Gifford, 2005). In fact, there has been limited research examining the relationship between self-esteem and most personality disorders, with existing research mostly conducted with non clinical populations who self-report personality disorder features (Lynum et al., 2008). Thus, while there is a paucity of research investigating the relationship between psychopathy and self-esteem, research in the related areas of narcissism, aggression, and crime, suggests that a relationship between these constructs may exist. As well, the current explicit measures of self-esteem in use only provide a narrow view of the construct of self-esteem, and can be broadened with the use of implicit measures.

Rationale

As demonstrated by the extant literature, self-esteem is an important construct in the understanding of human behaviour in both the academic and practical field of psychology. It is a well-researched phenomenon, although traditionally the focus has been on explicit self-esteem, which can be measured through self-report. With the introduction of implicit measures, more recent research has focused on implicit self-esteem which is thought to be unavailable to conscious awareness. Comparison of these two types of self-esteem indicates that they are at best, weakly related, and predict different behaviours. Discrepant self-

esteem, which occurs when explicit and implicit self-esteem are not the same, appears to be related to different outcomes than either type of self-esteem alone.

Historically, it was thought that low self-esteem was a cause of delinquency, violence, and sexual offending. However, a competing line of research suggests that it is actually high self-esteem, possibly in the form of narcissism, which is more likely to be the cause of offending behaviour, particularly violence. Narcissism was thought to actually be a defense mechanism, masking low self-esteem, although there was no way to empirically demonstrate this until the advent of the implicit self-esteem measures. Given the overlap between narcissism and psychopathy, it seems plausible that psychopaths' grandiosity also conceals low self-esteem.

Therefore, the purpose of this study was to examine the relationships between explicit and implicit self-esteem, offender categorization, narcissism, risk of reoffence, and psychopathy. This study is the first of its kind to examine these relationships in a forensic population. This was done by recruiting adult male participants that are currently serving a sentence from various forensic institutions. Participants were categorized as being nonviolent, violent, or sex offenders based upon the most serious of their current index offences. Participants were asked to complete measures of explicit and implicit self-esteem, narcissism, and psychopathy. Using interview and file information, measures of risk were completed.

Hypotheses

Based on the current state of the literature as outlined above the following hypotheses were proposed:

1. Consistent with the idea that child molesters have low self-esteem, sexual offenders with child victims will have lower explicit self-esteem scores than both the violent offenders and non-violent offenders.
2. Sexual offenders with child victims will have lower implicit self-esteem scores than both the violent offenders, and non-violent offenders.
3. Violent offenders, including sex offenders, are more likely to have discrepant self-esteem than nonviolent offenders.
4. Offenders with discrepant self-esteem will be at higher risk to reoffend than offenders with congruent self-esteem.
5. Offenders with discrepant self-esteem will score higher on a measure of narcissism than offenders with congruent self-esteem.
6. Psychopathy will be positively correlated with narcissism.
7. Offenders with discrepant self-esteem will score higher on a measure of psychopathy.

Chapter 3: Method

Study Design

This study is a cross-sectional or correlational design, as it entails the collection of multiple data points (in this case a sample of 90) at a single point in time in order to collect a body of quantifiable data in connection with two or more variables (e.g., self-esteem, narcissism, psychopathy, risk of recidivism), which will then be examined to detect patterns of association (e.g., if relationships exist between these variables or if there are group differences; Bryman, 2004). A cross-sectional design was the best design for this type of research, as subjects could not be randomly assigned to groups (e.g., one could not randomly assign an inmate to being a sex offender or not or a psychopath or not), nor is there any manipulation of variables. In addition to these considerations, additional advantages to this type of design are its efficiency in terms of time and money and its replicability if the procedures have been well-documented (Bryman, 2004). External validity, or the ability to generalize to other samples and settings, can also be strong in this type of design, particularly if the sample has been randomly selected (Bryman, 2004). In this study, the sample was recruited from a wide base, including both federal and provincial inmates, as well as parolees/probationers, which increases external validity, although inmates self-selected to participate, which may reduce external validity.

Disadvantages of this study design include weak internal validity; that is, it is difficult to establish causal direction from the resulting data (Bryman, 2004). Rather associations and group differences will be produced; however, since the

purpose of the design is to discover associations and group differences, the design's inability to resolve causal ambiguity is not necessarily a disadvantage.

Participants

Participants were recruited from the Alberta Solicitor General's probation offices, Fort Saskatchewan Correctional Centre, Bowden Institution, Pe Sakastew Healing Facility, Grierson Centre, the Phoenix Program at Alberta Hospital Edmonton, and Forensic Assessment and Community Services. The sample consisted of a total of 90 adult males that had been convicted of a sexual offence against children (SO), a non-sexual violent offence (VO), or a non-violent offence (e.g., property or drug offences) (NVO) and were serving a sentence at the time of data collection, which occurred over a 14-month period. It was decided to exclude offenders who had sexually offended against adults due to the difficulties in recruiting members of this group (refer to the Limitations section in the Discussion for further information). To ensure participants understood the questions in the self-report surveys, it was originally decided to only include participants if they had a minimum reading level of grade six. Again, due to recruitment difficulty, it was decided to include all participants, regardless of reading level. Although this decision prevents assurance that the participants understood the questions, the data was examined for outliers that may have suggested comprehension difficulties.

Participants were categorized into one of the three offence groups based upon their index offence, similar to the categorization method used by Harris and Hanson (2004) and Webster and colleagues (2007). A form of purposive

sampling, known as quota sampling was used, which involved pre-specifying the minimum number of sampled units wanted in each category; in this instance 30 participants were sought for each of the three pre-determined offence categories (i.e., SO, VO, or NVO) (Bryman, 2004). The number of participants was determined using a combination of Cohen's (1988) tables and Field's (2005) graphs for determining sample size. According to Cohen's tables, with three groups, setting the alpha level at .05, a sample size of 52 would be required to detect an effect size of .25 (medium effect size) in an ANOVA. According to Field's graphs showing the sample size required in a regression for three predictors, a sample size of 80 would be required to find a medium effect. Therefore, a sample size of 90 was decided upon which was robust enough to allow for participant exclusion if required during analysis. This number exposed the fewest possible number of participants to the procedure but was large enough to allow for parametric statistical analysis (Pallant, 2007; Tri-Council Policy Statement, 2010). Upon reaching 30 participants in a category, no further recruiting was needed in that category.

Treatment data was not collected for the VO and NVO groups, although it was for the SO group. With the exception of one participant who had previously completed treatment, all other participants in the SO group were currently in treatment. Thirteen were in a high-intensity inpatient sex offender treatment facility, ten were in a high intensity program within a federal institution, five were in a moderate intensity program in a federal institution, and one was participating in an outpatient group.

Measures

Reading Comprehension. The Wide Range Achievement Test (WRAT) was first published in 1946; several versions have been published since that time with the most recent being the fourth edition (WRAT-4). The WRAT-4 was designed to be a quick, simple, and psychometrically sound measure of basic academic skills in those aged 5 to 94 (Wilkinson & Robertson, 2006). It was normed on a sample of 3,021 individuals selected to be representative of the population with respect to age, gender, ethnicity, geographic region, and parental/obtained education (Roid & Bos, 2009; Wilkinson & Robertson, 2006).

The WRAT-4 is made up of four subtests: Word Reading, Sentence Comprehension, Spelling, and Math Computation. Administration time of all four subtests is between 30 and 45 minutes, with each subtest taking between 8 and 10 minutes (Roid & Bos, 2009). The Word Reading and Sentence Comprehension subtest scores can be combined to yield a Reading Composite score; in addition the Word Reading subtest is used as a routing test to determine the appropriate start point on the Sentence Comprehension subtest. Both the Word Reading and the Sentence Comprehension subtests have high internal consistencies (*alpha* = .92 and .93, respectively), as does the Reading Composite (*alpha* = .96) (Wilkinson & Robertson, 2006). Alternate form reliability, both immediate and delayed, ranges from .75 to .90 and is considered to be acceptable (Roid & Bos, 2009; Wilkinson & Robertson, 2006). The Word Reading and Sentence Comprehension subtest scores also correlate moderately to highly with other measures of word recognition and reading comprehension, such as the Wechsler

Individual Achievement Test – II (WIAT-II) Word Reading (r = .71) , Decoding (r = .71), and Reading Comprehension (r = .60) subtests, as well as the Woodcock-Johnson –III (W-J III) Basic Reading (r = .66) and Reading Comprehension subtests (r = .60) (Wilkinson & Robertson, 2006).

The various editions of the WRAT have been frequently used in medical, neuropsychological, educational, and other research areas (Roid & Bos, 2009). The authors of the WRAT-4 note however that these subtests are not designed to measure higher-level reading skills needed to comprehend longer passages that might be found in older participants with more advanced reading skills.

Based on the reliability and the validity of the WRAT-4 Word Reading and Sentence Comprehension subtests as described above, as well as one of the suggested purposes of the WRAT-4, which is to contribute to research projects that require assessment of basic academic skills for pretesting and/or posttesting purposes, it was decided to incorporate these subtests into this study to screen potential participants for the minimum required reading level (i.e., grade six) to complete the study. However, due to recruitment difficulties it was decided to allow all participants to complete the study regardless of reading levels and to control for reading level during the final data analyses if necessary.

Final Reading Comprehension scores of the 64 participants who completed the WRAT ranged from grade 3.7 to above 12.9, with 88 percent of participants meeting or exceeding the minimum grade six threshold.

Self-Esteem. As previously stated, implicit cognitions and processes are not available to conscious awareness and therefore cannot be self-reported, unlike

explicit processes. Thus implicit and explicit self-esteem must be measured in two different ways. Implicit cognitions are often assessed through response latency (or reaction time) measures, whereas explicit cognitions are usually measured through self-report measures. In this study, both were used.

Implicit Self-Esteem. To assess participant's implicit self-esteem, an Implicit Association Test (IAT) was administered focusing on self-evaluation. The categories and stimulus words for this IAT are presented in Appendix A. IAT measures involve the categorization of stimulus words into different categories. In the IAT, the strength of automatic association in memory between a concept (e.g., self) and an attribute (e.g., positive) are inferred from the speed with which one sorts stimulus words into categories. Participants must sort each stimulus word into one of four categories by pressing one of two keys on a computer keyboard; thus each key represents two categories. Response speed is expected to depend on the extent to which the categories sharing one key are associated in one's memory, hence the stronger the association between the two categories sharing the key, the quicker the response time.

Of the seven implicit measures tested in Bosson and colleagues' (2000) study, the IAT showed the most promise. While it did not correlate significantly with any of the other implicit measures of self-esteem, it did positively correlate with measures of self-competence, self-esteem, and self-certainty, as well as with explicit self-esteem measures and had the highest test-retest reliability (r = .69) (Bosson, et al.). Similar test-retest reliabilities (r = .52) have been demonstrated by Greenwald and Farnham (2000). Greenwald and Farnham also demonstrated

that two self-esteem IAT's using different sets of positive and negative items correlated positively with each other (r = .43). In addition, the IAT has been demonstrated to have good internal consistency according to two studies by Asendorph, Banse, and Mucke (2002; alphas = .82 and .84), Bosson and colleagues (2000; alpha = .88), and Cunningham, Preacher, and Banaji (2001; alpha = .78). Farnham and colleagues (1999) demonstrated weak positive correlations between the IAT and six measures of explicit self-esteem (average r = .18).

In addition to these psychometric properties, the IAT has been shown to be stable across several procedural variations including assignment of the pleasant valence to left and right-side response keys, time interval between stimulus presentation (from 150 to 750 ms), representation of concepts by different number of stimuli (5 or 25), and relative familiarity of stimuli (Dasgupta, McGhee, & Banaji, 2000; Greenwald, McGhee, & Schwartz, 1998; Ottaway, Hayden, & Oakes, 2001; Rudman, Greenwald, Mellott, & Schwartz, 1999).

The IAT is limited to measuring the relative strengths of pairs of associations because it uses complementary pairs of concepts and attributes; as many socially significant categories form complementary pairs (e.g., positive-negative, self-other, male-female, young-old, weak-strong), the IAT can be effectively used in many situations (Greenwald & Farnham, 2000). The IAT has been used to measure various constructs, such as self-esteem (Greenwald & Farnham, 2000), gender self-concept (Rudman, Greenwald, & McGhee, 2001), racial stereotypes (McConnell & Leibold, 2001), shyness (Asendorpf, Banse, &

Mucke, 2002), racial bias (Richeson & Shelton, 2003), eating behaviours (Vartanian, Polivy, & Herman, 2004) and can also discriminate between the cognitions of sex offenders and child molesters (Gray, Brown, MacCulloch, Smith, & Snowden, 2005; Mihailides, Devilly, Ward, 2004). It also appears to be relatively immune to deliberate attempts at dissimulation and socially desirable responding (Asendorpf et al., 2002; Greenwald & Farnham, 2000).

Based on the above properties, Greenwald and Farnham (2000) concluded that the IAT measures of implicit self-esteem have adequate psychometric properties to justify their use in research settings.

The task in the self-esteem IAT for this dissertation (as illustrated in Figure 1) was to sort words into the four categories of *self, other, positive* and *negative* (see Appendix A for stimuli). The self-other categories and stimulus words were presented in upper-case letters while the positive-negative and stimulus words were presented in lower-case letters to increase the distinction of the categorization task. Participants with a negative self-evaluation should have quicker response times when *SELF* and *negative* share the same response key (as in the first screen in Figure 1) than when *SELF* and *positive* share the same response key (as in the second screen in Figure 1). The reverse was expected for those participants with positive self-evaluations or high self-esteem.

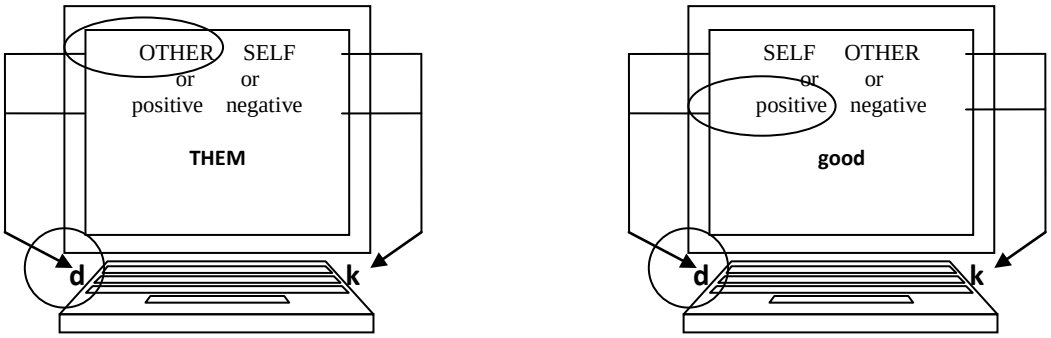

Figure 1. Example of trials in the self-esteem Implicit Association Test.

IAT scores are calculated as differences between the response times on one critical category-combination task and the other, taking into account variability in response times. More precisely, for each participant the average response time on Block 3 (i.e., SELF or good vs. Other or bad) are subtracted from those on Block 6 (i.e., Self or bad vs OTHER or good). This provides an index of the relative implicit evaluation of self-esteem such that higher positive difference scores are associated with higher levels of implicit self-esteem.

Explicit Self-Esteem. The Rosenberg Self-Esteem Scale (RSES) (see Appendix B), a 10-item measure of global self-esteem, was selected as the explicit self-esteem measure (Rosenberg, 1979). Participants respond on a likert scale ranging from strongly agree to strongly disagree; overall scores range from 10 to 90, with higher numbers being indicative of higher self-esteem (Rosenberg, 1979). The RSES is one of the most often used measures of self-esteem, due in part to its brevity and its high face validity (Baranik et al., 2008). The RSES can be administered to both children and adults and has been used in a wide variety of settings with a wide variety of clients (Meyer, 2002).

Test-retest reliability correlations of the RSES range from .82 to .88 (Blascovich & Tomaka, 1993; Fleming & Courtney, 1984; Rosenberg, 1986), while Cronbach's alpha, a measure of internal consistency, has been reported to be .77 for one sample (Blascovich & Tomaka, 1993) and .88 for another (Fleming & Courtney, 1984). The RSES also correlates significantly with other measures of self-esteem, including the Coopersmith Self-Esteem Inventory (r = .78; Watson, Suls, & Haig, 2002), the State Self-Esteem Scale (r = .72; Heatherton & Polivy, 1991) and the Beck Self-Concept Test (r = .51; Beck, Epstein, Steer, & Brown, 1990).

The RSES has been criticized as being too simplistic, as it results in a unidimensional construct, which some argue is an oversimplification of the self-esteem construct (Baranik et al., 2008). It has also been argued that the RSES is only applicable to Western cultures (Baranik et al., 2008). However, a recent study by Schmitt and Allik (2005) concluded that across 53 countries the RSES has an invariant factor structure and that, as in Western cultures, most respondents report having positive self-esteem.

Narcissism. The Narcissistic Personality Inventory (NPI) (see Appendix C) is one of the most widely used and researched measures of narcissism, in part because it is not a measure of the personality disorder per se, but rather a measure of the degree to which individuals differ in the trait of narcissism (Hook, 2007; Raskin & Hall, 1979). The NPI is a 37-item measure, in which participants indicate their level of agreement with each question on a seven point Likert scale.

Responses are summed with higher sums indicating greater degrees of narcissism (Bushman et al., 2009).

The NPI has good internal consistency, with Cronbach's alpha ranging from .80 to .86 with various samples (Brown & Zeigler-Hill, 2004; Emmons, 1987, 1984; Raskin & Terry, 1988; Sakellaropoulo & Baldwin, 2007). Raskin and Hall (1981) found an eight-week alternate reliability of .72. In addition, there is support for this measure's construct validity (Emmons, 1984, 1987). The NPI has been found to have a four-factor structure (Leadership/Authority, Superiority/Arrogance, Self-Absorption/Self-Admiration, and Entitlement/Exploitation) with internal consistencies for each of the four-factors ranging from .68 to .81 (Emmons, 1984, 1987).

Risk. Risk to reoffend was measured with the Violence Risk Appraisal Guide (VRAG) and the Sex Offender Risk Appraisal Guide (SORAG).

VRAG. The VRAG, a 12-item weighted variable rating scale, was designed to predict violent recidivism for all serious offenders (Kroner & Mills, 2001; Quinsey, Harris, Rice, & Cormier, 2006). The total score, ranging from -26 to +38, is the sum of the weighted scores (Kroner & Mills, 2001; Langton, Barbaree, Seto, Peacock, Harkins, & Hansen, 2007). Individuals can then be assigned to one of nine risk categories ranging from 1 (lowest risk) to 9 (highest risk) based on their total score (Langton et al., 2007).

The 12 items of the VRAG, scored by the assessor based on clinical interview data and file information, are as follows: PCL-R score, elementary school maladjustment, meets DSM-III criteria for any personality disorder, age at

index offence, separation from either biological parent by age 16, failure on prior conditional release, criminal history score for nonviolent offences, never married, meets DSM-III schizophrenia criteria, victim injury, alcohol problems score, and female victim (Quinsey et al., 2006). Although the original sample was a group of 685 male offenders that had been mental patients at Oak Ridge Institute at one time, Quinsey and colleagues (2006) believed there was no threat to generalizability as the clinical and criminal histories of the offenders in this heterogeneous sample did not differ significantly from that of other offenders in correctional institutions and psychoses did not increase the likelihood of violent recidivism.

SORAG. Because some variables predict violent offences, including sexual offences, while other variables predict violent but nonsexual offences, and still others predict sexual offences but not violence in general, it appeared that a specific instrument for predicting sexual recidivism was required (Quinsey et al., 2006). The Sex Offender Risk Appraisal Guide (SORAG) is a modified version of the VRAG, having 10 common items and 4 additional items, designed to predict at least one reconviction for a sexual offence (Langton et al., 2007; Quinsey et al., 2006). The SORAG's additional variables include criminal history score for violent offences, number of previous convictions for previous sexual offences, history of sex offences against male children or adults, and phallometrically determined deviance, while it does not include victim injury or female victim. Scoring on the SORAG is similar to that of the VRAG, with weighted total scores

ranging from -27 to +51 and individuals being assigned to one of nine risk categories based on the total score (Langton et al., 2007).

Psychometric Properties of the VRAG and SORAG. Considerable research has been conducted with the VRAG and the SORAG. Harris, Rice, and Quinsey (1993) initially reported the interrater reliability of the VRAG to have a correlation coefficient of .90; however, Kroner and Mills (2001) have found it to be as high as .95. In a study of 476 federal sex offenders whose files were retrospectively coded, Langton and colleagues (2007) reported the interrater reliability of the VRAG to be slightly lower at .88. The SORAG's interrater reliability is approximately equivalent to that of the VRAG, with coefficient correlations ranging between .90 and .95 (Kroner & Mills, 2001; Langton et al., 2007; Quinsey et al., 2006).

VRAG scores have been found to be significantly associated with recidivism (r = .42 in a study by Simmons, 2001). In a study of 97 males convicted of violent offences, excluding sexual offences, Kroner and Mills (2001) found that the VRAG significantly correlated with reconvictions and revocations (*r's* =.28 and .30, respectively) In addition, VRAG scores correlated significantly with minor and major institutional misconduct (*r's* = .40 and .26, respectively). These correlations were stronger than those for the Psychopathy Checklist List-Revised, Level of Service Inventory-Revised (LSI-R), and the Historical Clinical Risk Management-20 (HCR-20) (Kroner & Mills, 2001). In a study of four different offender populations, the VRAG was found to have an overall correlation of .40 with violent recidivism, while the SORAG was found to have an

overall correlation of .38 (Harris, Rice, Quinsey, Lalumiere, Boer, & Lang, 2003). These correlations were significantly higher than that of the Rapid Risk Assessment for Sexual Offense Recidivism (RRASOR) or the STATIC-99 at .11 and .21, respectively (Harris et al., 2003). The VRAG and SORAG scores also correlated with speed of recidivism (r = .33 for both), severity of outcome (r's = .21 and .18, respectively), and severity of injury to victim on recidivism (r's = .35 and .30, respectively). While the RRASOR and the STATIC-99 both correlate with speed of recidivism (r = .23 and .36, respectively), neither of these two instruments relate to the latter two criteria of severity (Harris et al., 2003).

The VRAG and SORAG's predictive accuracy is equivalent to or exceeds that of other instruments, regardless of base rates. The ROC areas range from a minimum of .73 for the VRAG and .74 for the SORAG to a high of .85 for the VRAG and .77 for the SORAG, demonstrating at least moderate levels of predictive accuracy (Harris et al., 2003; Langton et al, 2007; Quinsey et al., 2006). Polvi (1999) found that the VRAG was more accurate than the HCR-20, the PCL-SV (short version), and clinical judgment in a follow up of 215 mentally disordered offenders, while the SORAG has been found to be more accurate than the RRASOR or the Minnesota Sex Offender Screening Tool-Revised (MnSOST-R) (Langton et al., 2007). This is consistent with Kroner and Mills (2001) findings that the VRAG had the strongest correlation and largest ROC for nonviolent convictions and revocations, as compared to the LSI-R, HCR-20, and the PCL-R, although the LSI-R had the strongest correlation and largest ROC for total convictions and violent convictions. In a sample of 571 adult male sex offenders,

Langton and colleagues (2007) found that the SORAG had the highest predictive accuracy for any serious recidivism, compared to the RRASOR and MnSOST-R. Quinsey and colleagues (2006) found that the SORAG outperforms the RRASOR with regards to predictive accuracy in high risk samples.

As expected, the VRAG and the SORAG correlated significantly and highly (r = .88 to .93) in four different samples of sex offenders (Harris et al., 2003). With respect to convergent validity, the VRAG and SORAG correlated with the RRASOR to varying degrees in different samples (r = .12 to .31 and .40 to .45, respectively) (Harris et al., 2003; Langton et al., 2007). Both also correlated with the STATIC-99 and -2002 (updated version), with correlations ranging from .44 to .49 with the VRAG and .64 to .71 with the SORAG (Harris et al., 2003; Langton et al., 2007). The MnSOST-R also correlated with the VRAG and SORAG, with correlations of .39 and .49, respectively (Langton et al., 2007).

Kroner and Mills (2001) concluded that the effect sizes for the VRAG and the SORAG were large for violent recidivism and moderate for sexual recidivism, which were higher than the small to moderate effect sizes found with the RRASOR and STATIC-99. Overall, the research on the VRAG gives "us considerable confidence that the VRAG is ready for application to new cases" (Quinsey et al., 2006, p. 169)

Screening Scale for Pedophilia Interests. One of the downfalls of the SORAG is the requirement for phallometric testing, a relatively invasive procedure that involves measuring changes in penile circumference or volume in response to sexual and nonsexual stimuli. However, according to Quinsey and

colleagues (2006) it is possible to substitute the phallometric test results for scores from the Screening Scale for Pedophilia Interests (SSPI). A score of four or five on the SSPI contributes +1 to the SORAG total score; a score of 1 or 2 on the SSPI contributes a score of -1 to the SORAG total score, and finally a score of 3 on the SSPI would contribute a score of 0 to the SORAG total score (Quinsey et al., 2006). Given that phallometric testing will not be used in this study, this substitution rule will be instituted.

The SSPI is a simple historical measure of pedophilic sexual interests for clinical screening and research purposes (Seto & Lalumiere, 2001). The SSPI consists of four items that have been shown to significantly predict sexual recidivism in a meta-analysis by Hanson and Bussiere (1998). The SSPI codes the following data as absent (0) or present (1) a) if the participant had multiple victims, b) any victims that were at least five years younger than the perpetrator, and c) any extrafamilial victims; d) having any male victim is scored as a 2, as regression analyses demonstrated that the sex of the victim has greater contribution than any of the other items (Seto & Lalumiere, 2001; Ennis, 2003). Total scores range from 0 to 5.

The SSPI was originally validated with a sample of 1113 sex offenders with child victims under the age of 14 and 206 non-child molesters (Seto & Lalumiere, 2001). They found that the total SSPI score was significantly and positively correlated with the Pedophilic Index (phallometric testing data) (r = .34, $p < .001$) (Seto & Lalumiere, 2001). When using ROC analysis (Relative Operating Characteristic Analysis) in which the area value under the curve can

range from 0 to 1, with .5 representing discrimination at the level of chance, the ROC value for the SSPI was .70. In addition, subjects with the maximum SSPI score were more than 5 times as likely to show pedophilic interests when tested phallometrically than those who received the minimal score (Seto & Lalumiere, 2001). Correlations with phallometric data with other samples, including adolescent male sex offenders range from a low of $r = .17$ to a high of $r = .46$, concluding that the SSPI correlates at least moderately with phallometric test data, lending support for its use as a screening measure (Seto, Harris, Rice, & Barbaree, 2004; Ennis, 2003). Interrater reliability for the SSPI has been found to be $r = .90$ (Seto et al., 2004). While Seto and Lalumiere (2001) recommend that the SSPI not be used as a substitute for phallometric testing, they did conclude that it may be a useful measure when phallometric test results are unavailable.

Psychopathy. Due to the time restrictions placed upon the researcher by the Correctional Services of Canada ethics board which limited the time to 2 hours with each participant, as well as the restriction placed upon the researcher by the Alberta Solicitor General's Office ethics board which did not allow for file review of provincial offenders under their care, it was not possible to use the "gold standard" to assess psychopathy, the PCL-R. Instead, it was decided to use the Self-Report Psychopathy Scale – III (SRP-III), a 64-item measure based on the PCL-R in which participants rate their level of agreement with the statement on a 1 (strongly disagree) to 5 (strongly agree) scale (Paulhus, Neumann, & Hare, in press). Scores range from 64 to 320. The original SRP was comprised of 29 items written by Hare in 1985. This was then expanded to 60 items for the SRP-II

in 1989 by Hare, Hemphill and Harpur (as cited in Williams, Paulhus, & Hare, 2007) before becoming the SRP-III. Although there is not a lot of research on the various version of the SRP's psychometric properties, the research that exists supports its use for this study.

The SRP-II demonstrates acceptable convergent and divergent validity. Zagon and Jackson (1994) reported moderate correlations between the SRP-II scales and measures of narcissism, impulsivity, dishonesty, and empathy in a sample of 149 university students. Widiger, Frances, Pincus, Davis and First (1991) reported correlations ranging from .24 to .56 with DSM-III-R diagnoses of APD, from .13 to .50 with ICD-10 diagnoses of dyssocial personality disorder, as well as correlations ranging from .23 to .68 with a set of 10 items derived from the PCL-R. The SRP has also been shown to correlate positively with other self-report measures of psychopathy, namely the Levenson Self-Report Psychopathy Scale and the Psychopathic Personality Inventory (Williams, Nathanson, & Paulhus, 2003).

Confirmatory factor analysis performed by Williams, Paulhus, and Hare (2007) revealed that the SRP-III has a four factor structure. The four factors are Interpersonal Manipulation, which taps into characteristics such as pathological lying, conning, and manipulation; Criminal Tendencies, which is self-explanatory; Erratic Lifestyle, which reflects undependability, recklessness, and impulsivity; as well as Callous Affect, which taps into deficiencies in affect including lack of remorse, guilt, and empathy. All four factors positively and moderately correlate,

with coefficients ranging from .20 to .33, which suggests that the factors are not redundant, yet tap into a common underlying factor: psychopathy.

Procedure

To ensure ethical practice in the conduct of research ethics approval was sought from the Education, Extension, Augustana, Campus St. Jean's Research Ethics Board at the University of Alberta, Correctional Services of Canada Research Ethics Board, and Alberta Solicitor General Research Ethics Board prior to the commencement of this study.

Participants were solicited by their parole/probation officers, primary workers, treatment providers, and the primary investigator. This was deemed by the researchers, in consultation with the various institutions, to be the most appropriate way to facilitate recruitment. Potential participants were given an information sheet to review and were read directly the following 2 sentences: "Your choice to participate or not participate in this University of Alberta study will have no impact on your supervision, programming, or treatment. Participation is solely voluntary and my understanding is that it will benefit the assessment of forensic clients in the future, however it will have no direct benefit to you or me if you choose to partake in the research nor will I be made aware if you have chosen to participate or not". If interested, participants returned the information sheet to the researcher when she was on-site.

Prior to participating the primary investigator or her research assistant, paid for by a grant from MacEwan University, reviewed the information sheet with the participants to ensure understanding and answer any questions they might

have. At this time, participants were again assured that participation was completely voluntary and anonymous and that participation or refusal to participate would in no way impact their treatment, programming, and/or parole/probation chances. Participants were informed that they were free to decline to participate or withdraw from participation at any time during the informed consent or data collection phase by either verbally informing the researcher or refusing to continue filling out the questionnaires or answering the interview questions. Once data collection was complete, participants were no longer able to withdraw their data, due to the inability to trace data to a particular participant. Potential participants were given time to ask any questions or voice any concerns that they may have regarding participation. Participants were also made aware that their data would be kept confidential and anonymous, unless they revealed information that violated the safety and security of the institution, that they posed an imminent danger to themselves or others, or if a child or other dependent person was in danger. This information would be reported to the appropriate authorities, as required by institutional policy and Canadian law. Those who wished to proceed under these conditions then signed the consent form and data collection was initiated.

Demographic information such as date of birth, age at index offence, ethnicity, number of sentences, number of previous convictions, was collected from participants' files, when available. For some participants who were not under federal jurisdiction and had been given a psychological assessment that included a PCL-R (as part of their intake procedure, probation/parole application,

and/or conditional release), the documented PCL-R score was obtained in order to compare with SRP-III scores.

Data collection took place in a private or semi-private area (office, boardroom, alcove), depending upon the location of the participant's incarceration. Most participants completed the IAT, RSES, NPI, and SRP-III in counter-balanced order on the laptop, however some completed the RSES, NPI, and SRP-III using paper and pen. These answers were then entered into the laptop by the primary researcher or her assistant prior to the participant completing the IAT. This was done to facilitate timely completion of the procedure, as according to the Correctional Services of Canada Research Ethics Board participation was limited to a maximum of two hours. Most participants completed the procedure in 60 to 90 minutes. The WRAT-IV reading subtests and the semi-structured interview were completed either prior to or immediately following completion of the questionnaires based upon coordination of time with the research assistant.

Chapter Four: Results

Statistical analysis was performed on the data using the computer program Statistical Package for the Social Sciences (SPSS) version 13.0 for Windows. It should be noted that the significance level for all statistical analyses was set at $p < .05$. Two participants' data was excluded from the final IAT analysis as more than 10% of their trials had latencies of less than 300 ms (see Improved Scoring Algorithm in Appendix D). Although their data was excluded from any IAT analysis, it was included in all other analyses. Both of these participants belonged to the violent offender sample.

Preliminary Analyses of Demographic Characteristics

Descriptive statistics were calculated for all demographic variables (see Tables 1 and 2). Prior to conducting the final analyses the three groups of offenders, sex offenders against children (SO), violent offenders (VO), and nonviolent offenders (NVO), were first compared on demographic variables, criminal history variables, and the main study variables to determine group equivalency.

Fisher's exact test, which has no assumption regarding cell frequency, was used to determine if the groups significantly varied on any of the categorical demographic variables (see Table 1). The results of the Fisher's exact test indicate that there was a significant difference between the groups with respect to level of institutionalization ($p = .04$), ethnicity ($p = .02$), and childhood abuse histories ($p = .01$). There was no difference between the groups with respect to level of education ($p = .83$) and marital status ($p = .69$).

Table 1

Offender Characteristics: Categorical Variables

		Total	Sex	Violent	Non-violent	Fisher's exact test *p* value
Level of Institution-alization[a]	Min	13.3% (12)	0% (0)	7.8% (7)	5.6% (5)	.04*
	Med	17.8% (16)	17.8% (16)	0% (0)	0% (0)	
	Parole	6.7% (6)	6.7% (6)	0% (0)	0% (0)	
	Prov	46.7% (42)	1.1% (1)	23.3% (21)	22.2% (20)	
	Prob	15.6% (14)	7.7% (7)	2.2%(2)	5.6% (5)	
Level of Education[b]	< Gr. 12	54.4% (49)	14.4% (13)	22.2% (20)	17.7% (16)	.83
	Gr. 12	17.8% (16)	7.8% (7)	4.4% (4)	5.6% (5)	
	GED	14.4% (13)	6.7% (6)	3.3% (3)	4.4% (4)	
	Univ/College	6.7% (6)	2.2% (2)	2.2% (2)	2.2% (2)	
	Trade	6.7% (6)	2.2% (2)	1.1% (1)	3.3% (3)	
Ethnicity[c]	Cauc.	61.1% (59)	25.6% (23)	13.3% (12)	22.2% (20)	.02*
	Native/Metis	36.7% (33)	7.8% (7)	18.8% (17)	10% (9)	
	Asian	1.1% (1)	0% (0)	1.1% (1)	0% (0)	
	Other	1.1% (1)	0% (0)	0% (0)	1.1% (1)	
Marital Status[d]	Single	56.7% (51)	20% (18)	16.7% (15)	20% (18)	.68
	Married/CL	31.1% (28)	8.9% (8)	13.3% (12)	8.9% (8)	
	Sep./Div.	11.1% (10)	4.4% (4)	2.2% (2)	4.4% (4)	
	Widow	1.1% (1)	0% (0)	1.1% (1)	0% (0)	
History of Abuse	Sexual	8.9% (8)	5.6% (5)	1.1% (1)	2.2% (2)	.01*
	Physical	18.9% (17)	4.4% (4)	10% (9)	4.4% (4)	
	Both	13.3% (12)	10% (9)	1.1% (1)	2.2% (2)	
	Unclear	4.4% (4)	0% (0)	2.2% (2)	2.2% (2)	
	None	54.4% (49)	13.3% (12)	18.9% (17)	22.2% (20)	

Note. *N* is in parentheses.
[a]Level of Institutionalization categories were Federal Minimum, Federal Medium, Parole, Provincial, or Probation.
[b]Level of Education categories were Less than Grade 12, Grade 12, General Equivalency Diploma, University/College, or Trade School.
[c]Ethnicity categories were Caucasian, Native/Metis, Asian, or Other.
[d]Martial Status categories were Single, Married/Common-Law, Separated/Divorced, or Widowed.
*p < .05, two-tailed.

One-way between-groups analyses of variance were conducted to explore the differences between the three offence groups on the continuous variables in this study (see Table 2). The groups did not differ from each other on age at time of index offence, $F(2, 87) = .87$, $p = .42$ or on the number of index convictions; $F(2, 86) = .01$, $p = .99$. The groups did differ on the remaining variables, however.

Table 2

Offender Characteristics: Continuous Variables

		Total	Sex	Violent	Non-violent	*F (df)*
Reading Comp.	*M*	9.98	11.47	9.29	9.84	3.23 (2, 61)
	SD	2.57	2.03	2.54	2.61	
Offence Age	*M*	33.50	35.60	31.83	33.07	.87 (2, 87)
	SD	11.27	12.88	9.80	10.96	
Current Age	*M*	36.46	41.31	34.13	34.10	3.97 (2, 86) *
	SD	11.66	11.68	11.25	10.92	
Number of Sentences	*M*	7.05	3.90	8.38	8.80	4.02 (2, 85)*
	SD	7.58	4.60	8.45	8.25	
Number of Youth Priors	*M*	2.30	.17	2.62	4.13	3.85 (2, 86)*
	SD	5.77	.91	5.69	7.79	
Number of Adult Priors	*M*	12.20	5.40	13.79	17.47	4.53 (2, 86)*
	SD	16.54	10.14	16.41	19.69	
Number of NV Priors	*M*	10.37	4.00	11.34	15.80	4.62 (2, 86)*
	SD	15.79	8.61	15.44	19.47	
Number of V Priors	*M*	1.42	.33	2.34	1.60	4.39 (2, 86)*
	SD	2.74	1.16	2.53	3.64	
Number of S Priors	*M*	.42	1.10	.07	.07	6.60 (2, 86)*
	SD	1.36	2.17	.26	.25	
VRAG Score	*M*	6.97	2.73	8.93	9.23	4.74 (2, 87) *
	SD	9.61	1.66	1.80	1.60	
SORAG Scores	*M*	-	3.93	-	-	-
	SD	-	11.54	-	-	
RSES Scores	*M*	65.43	60.03	69.23	67.03	3.42 (2, 87)*
	SD	14.62	14.77	14.16	13.77	
IAT Scores	*M*	.63	.71	.55	.64	1.15 (2, 85)
	SD	.40	.45	.33	.41	
NPI Scores	*M*	155.87	142.67	160.93	164.00	4.12 (2, 87)*
	SD	32.19	30.39	30.38	32.52	
SRP Scores	*M*	173.56	157.33	182.20	181.13	8.05 (2, 87)*
	SD	29.21	25.30	27.50	28.51	

*$p < .05$

Using the harmonic mean sample size for unequal groups and the Tukey HSD for post-hoc comparisons, statistically significant differences in reading comprehension score; $F(2, 61) = 3.23$, $p < .05$, current age; $F(2, 86) = 3.97$, $p < .05$, and total number of sentencing dates; $F(2, 85) = 4.02$, $p < .05$, for the three offence groups was found. The sex offender's had higher reading levels, were older, and had less sentencing dates than the nonviolent and violent offender. There were no differences between the violent and nonviolent offenders on these variables.

For the number of youth convictions, number of prior adult convictions, number of nonviolent prior convictions, number of violent prior convictions, and the number of sexual prior convictions, the homogeneity of variance assumption was violated, therefore the alternative version of the F-ratio, the Brown-Forsythe F, was calculated.

There was a statistically significant difference between the groups on the number of youth convictions; $F(2, 86) = 3.85$, $p < .05$, number of prior adult convictions; $F(2, 86) = 4.53$, $p < .05$; number of non-violent prior convictions; $F(2, 86) = 4.62$, $p < .05$, the number of violent prior convictions; $F(2, 86) = 4.39$, $p < .05$, and the number of sexual prior convictions; $F(2, 86) = 6.60$, $p < .05$. Post hoc comparisons using the Games-Howell test indicated that the sex offenders' number of youth convictions, prior adult convictions, prior nonviolent convictions, and prior violent convictions were significantly lower than the nonviolent offenders. There was no significant difference between the sex offenders' number of youth convictions, prior adult convictions, prior nonviolent

convictions, and prior violent convictions and the violent offenders, or between the violent offenders and the nonviolent offenders.

However, post hoc comparisons revealed that the sex offender's number of prior sexual convictions was significantly higher than both the violent offenders' and nonviolent offenders' number of prior sexual convictions, although there was no significant difference between the violent offenders and the nonviolent offenders.

As can be seen from the above results, the three offence groups differed significantly from each other prior to beginning the study. They varied on the categorical variables of level of institutionalization, ethnicity, and history of childhood abuse. They also varied on several continuous variables. Overall, the sex offender group tended to differ the most from the other two offender groups; they had higher reading comprehension, were older, had fewer sentencing dates, and had more prior sex offence convictions than either the violent offenders or the nonviolent offenders. They also had fewer previous youth convictions, fewer prior adult convictions, and fewer prior nonviolent convictions than the nonviolent offenders. The sex offender group also had fewer prior violent convictions than the violent offenders. There were no significant differences between the nonviolent and violent groups on these variables.

Given the differences between the groups on the above demographic variables, the following results examining the research hypotheses must be interpreted with caution.

Hypothesis 1

It was hypothesized that sexual offenders with child victims would have lower explicit self-esteem scores than both the violent offenders and non-violent offenders. This hypothesis was tested by calculating a one-way between-groups Analysis of Variance (ANOVA) with offence type as the categorical independent variable and scores on the RSES as the continuous dependent variable.

A statistically significant difference was found among the three groups, $F(2, 87) = 3.42$, $p < .05$. Using planned comparisons, it was found that the SOs had significantly lower scores on the RSES than the VOs and the NVOs. This was consistent with the hypothesis. Post hoc analysis revealed no differences between the total RSES scores for the VOs and the NVOs.

Hypothesis 2

It was hypothesized that sexual offenders with child victims would have lower implicit self-esteem scores than violent offenders and non-violent offenders. This hypothesis was tested by calculating a one-way between-groups ANOVA with offence type as the categorical independent variable and scores on the IAT as the continuous dependent variable.

No statistically significant difference was found amongst the three groups, $F(2, 85) = 1.16$, $p > .05$. Hypothesis two was not supported.

Hypothesis 3

It was hypothesized that violent offenders, including sex offenders, would be more likely to have discrepant self-esteem than nonviolent offenders. If this hypothesis was supported, the interaction term (implicit * explicit) should have

significantly predicted group membership. This hypothesis was tested using a forced-entry binary logistic regression with group (violent/nonviolent) as the categorical outcome variable. Implicit self-esteem (IAT scores), explicit self-esteem (RSES scores), and their interaction term (implicit * explicit) were the continuous predictor variables.

Binary logistic regression (see Table 3) was performed to assess the impact of explicit, implicit, and the interaction of these two variables on group membership (violent or nonviolent). The full model containing all predictors was not statistically significant, $\chi^2(3, N = 88) = 1.39$, $p = .71$, indicating that the model was not able to distinguish between violent and nonviolent participants. The model as a whole explained only 1.6% (Cox and Snell R Square) to 2.2% (Nagelkerke R square) of the variance in offender group, and correctly classified 65.9% of the cases, which is equivalent to the model's predictive ability with only the constant in the equation. This indicates that there was no support for the hypothesis that violent offenders were more likely to have discrepant self-esteem.

Aiken and West (1991) suggest centering the interaction term when performing a regression, as it reduces problems with multicollinearity, helps yield proper interpretation of the data, as well as making the scales of the dependent and independent variables comparable. Hence, a post-hoc logistic regression was run again, by first "centering" the implicit and explicit self-esteem scores (i.e., subtracting the mean from each individual score) to arrive at a deviation score, before multiplying the two terms together to arrive at a centered interaction term.

However, this post-hoc analysis was not significant and was virtually identical to the analysis produced without centering the interaction term.

Table 3

Logistic Regression Predicting Offender Group Membership Using Implicit and Explicit Self-Esteem

	B	S.E.	Wald	*df*	*p*	Odds Ratio	95.0% C.I. For Odds Ratio	
							Lower	Upper
Constant	-.55	1.77	.09	1	.76	.58	-	-
Explicit/RSES	-.00	.03	.01	1	.91	.99	.95	1.05
Implicit/IAT	-1.53	2.27	.45	1	.50	.22	.002	19.04
Interaction	0.03	.03	.55	1	.46	1.03	.96	1.09

Hypothesis 4

It was hypothesized that offenders with discrepant self-esteem would be at higher risk to reoffend than offenders with congruent self-esteem. If those with discrepant self-esteem were at higher risk to reoffend than those with congruent self-esteem, the interaction term should have significantly contributed to the prediction of level of risk. This hypothesis was tested using a multiple regression with risk scores (VRAG scores) as the continuous outcome variable. Implicit self-esteem (IAT scores), explicit self-esteem (RSES scores), and their interaction term (implicit * explicit) were the continuous predictor variables.

Multiple regression was used to assess the ability of three independent variables (explicit self-esteem, implicit self-esteem, and the interaction of these two terms) to predict levels of risk on the VRAG. Preliminary analyses were conducted to ensure no violations of the assumptions of normality, linearity,

multicollinearity, and homoscedasticity. This multiple regression was run twice; once without centering the variables as described above and once centering the variables. The two models were not significantly different. Therefore, the centered variable model is reported, as this reduced the issue of multicollinearity, an assumption of multiple regression.

The model did not reach statistical significance, *R square* = .03, $F(3, 84) = .99$, $p = .40$. The hypothesis that offenders with discrepant self-esteem would be at higher risk to reoffend violently was not supported by these results.

It was decided post-hoc to re-run the above multiple regression using only the sex offender portion of the sample, despite the small sample size. The dependent variable was changed from the VRAG to the SORAG score. Preliminary analyses were conducted to ensure no violations of the assumptions of normality, linearity, multicollinearity, and homeoscedasticity. The total variance in risk scores explained by the model did not reach statistical significance; adjusted R square statistic for a small sample size = .01, $F(3, 26) = 2.06$, $p = .13$. This analysis, consistent with the above analysis, does not provide support for the hypothesis that offenders with discrepant self-esteem would be at higher risk to reoffend violently or sexually.

Hypothesis 5

It was hypothesized that offenders with discrepant self-esteem would score higher on a measure of narcissism than offenders with congruent self-esteem. If those with discrepant self-esteem are higher in narcissism than those with congruent self-esteem, the interaction term should significantly contribute to the

prediction of level of narcissism. This hypothesis was tested using a multiple regression with narcissism scores (NPI scores) as the continuous outcome variable. Implicit self-esteem (IAT scores), explicit self-esteem (RSES scores), and their interaction term (implicit * explicit) were the continuous predictor variables.

Preliminary analyses were conducted to ensure no violations of the assumptions of normality, linearity, multicollinearity, and homeoscedasticity. The centered variables were again used for this analysis, to prevent problems with multicollinearity. The model as a whole did not reach statistical significance, *R square* = .08, $F(3, 84) = 2.50$, $p = .07$. These results do not support the above hypothesis that offenders with discrepant self-esteem would score higher on a measure of narcissism.

Hypothesis 6

It was hypothesized that psychopathy scores would be positively correlated with narcissism scores. This hypothesis was tested by calculating Pearson's product-moment correlations between NPI scores and SRP-III scores.

Preliminary analyses were performed to ensure no violation of the assumptions of normality, linearity, and homoscedasticity. There was a large, positive correlation between the two variables, $r = .57$, $n = 90$, $p < .05$, with higher scores on a measure of narcissism associated with higher scores on a measure of psychopathy. This supports the above hypothesis that psychopathy scores would be positively correlated with narcissism scores.

Hypothesis 7

It was hypothesized that offenders with discrepant self-esteem would score higher on a measure of psychopathy. If those with discrepant self-esteem were higher in psychopathy than those with congruent self-esteem, the interaction term should significantly contribute to the prediction of level of psychopathy. This hypothesis was tested using a multiple regression with psychopathy scores (SRP-III scores) as the continuous outcome variable. Implicit self-esteem (IAT scores), explicit self-esteem (RSES scores), and their interaction term (implicit * explicit) were the continuous predictor variables.

Preliminary analyses were conducted to ensure no violations of the assumptions of normality, linearity, multicollinearity, and homeoscedasticity. The centered variables were again used for this analysis, to prevent problems with multicollinearity. The model as a whole did not reach statistical significance, *R square* = .001, $F(3, 84) = .03$, $p = .99$. This does not support the above hypothesis that offenders with discrepant self-esteem would score higher on a measure of psychopathy.

Follow Up Data Analyses

Following planned data analysis, exploratory data analyses were conducted post-hoc to determine other possible relationships between the variables. Replicating the common finding that implicit and explicit self-esteem are independent of each other, RSES scores and IAT scores were not correlated with each other ($r = .01$, n = 88, $p > .05$). Other results are reported below.

Preliminary analyses were first conducted to ensure no violation of the assumptions of normality, linearity, and homoscedasticity. Pearson product-moment correlations were then calculated; a Bonferroni correction was applied to control the family-wise or experiment-wise error rate. Results are presented in Table 4.

Table 4

Pearson Product-Moment Correlations Between Dependent Variables

Scale	1	2	3	4	5	6	7	8
1. NPI Total	-	.40	.35*	.55*	.37*	.48*	.44*	.57*
2. SORAG		-	.90*	.02	.28	.15	.46	.32
3. VRAG			-	.29*	.45*	.43*	.54*	.53*
4. SRP-III IM[a]				-	.64*	.62*	.50*	.85*
5. SRP-III CA[b]					-	.55*	.49*	.82*
6. SRP-III EL[c]						-	.47*	.81*
7. SRP-III CT[d]							-	.77*
8. SRP-III Total								-

[a]SRP-III Interpersonal Manipulation
[b]SRP-III Callous Affect
[c]SRP-III Erratic Lifestyle
[d]SRP-III Criminal Tendencies
*$p < .001$

According to Cohen (1988), correlations are deemed to be small when r = .10 to .29, medium when r = .30 to .49, and large when r = .50 to 1.0. As can be seen from the above table, NPI total scores were found to have a medium, positive

correlation with VRAG scores, SRP-III Callous Affect Scores, SRP-III Erratic Lifestyle scores, and SRP-III Criminal Tendency Scores. NPI total scores had a large positive correlation with SRP-III Interpersonal Manipulation Scores and SRP-III Total Scores. SORAG scores were found to have a large positive correlation with VRAG scores. VRAG scores were found to have a small positive correlation with SRP-III Interpersonal Manipulation scores, a medium positive correlation with SRP-III Callous Affect scores and SRP-III Erratic Lifestyle scores and a strong positive correlation with SRP-III Criminal Tendency Scores and SRP total scores. Within the SRP-III measure, all subscales were found to have a medium to strong positive correlation with each other and with the SRP-III Total score.

Based on the strength of the correlations between the NPI, SRP-III, and VRAG scores, it was decided to conduct post-hoc analyses to determine if narcissism and psychopathy scores predicted risk, as measured by the VRAG. Preliminary analyses were conducted to ensure no violations of the assumptions of normality, linearity, multicollinearity, and homeoscedasticity before conducting a multiple regression with NPI and SRP-III scores as continuous predictor variables and VRAG scores as the continuous dependent variable. The total variance in risk explained by the model as a whole was 28.5%, $F(2, 87) = 17.37$, $p < .05$. However, as seen in Table 5 only the SRP-III total score made a statistically significant unique contribution (beta = .49, $p < .05$), accounting for 16.5% of the total variance in VRAG scores. NPI scores did not make a

statistically significant unique contribution. This indicates that SRP-III scores significantly predict risk, as measured by the VRAG.

Table 5

Multiple Regression Predicting Risk Using Narcissism and Psychopathy

	B	SE B	β	p value
Constant	-24.33	5.47		.00
SRP	.16	.04	.49	.00
NPI	.02	.03	.07	.54

Post hoc analysis was then conducted to determine if a relationship existed between the SRP-III total scores and the PCL-R scores that were available, despite the small sample size. The relationship between SRP-III scores and PCL-R scores were investigated using Pearson product-moment correlation coefficients. Preliminary analyses were performed to ensure no violation of the assumptions of normality, linearity, and homoscedasticity. There was no statistically significant relationship between these two variables, $r = .37$, $n = 11$, $p = .26$.

It was decided to re-categorize the participants based on the predominant type of offence they had committed, as opposed to their index offence. This resulted in 56 nonviolent offenders, 19 sex offenders, seven violent offenders, and eight offenders that could not be categorized as they had no predominant offence type. The violent and non-categorized offenders were excluded from the following two analyses, due to the small sample size.

An independent samples t-test was conducted to compare the explicit self-esteem scores of the recategorized nonviolent and sex offenders. There was a significant difference in scores for these groups; $t(73) = 3.78$, $p < .05$, such that

the sex offenders (M = 56.05, SD = 13.87) had significantly lower explicit self esteem scores than the nonviolent offenders (M = 69.80, SD = 13.67). This is consistent with the results from hypothesis one, which also found lower explicit self-esteem scores amongst offenders categorized as sex offenders based on their index offence.

Another independent samples t-test was conducted to compare the implicit self-esteem scores of the recategorized nonviolent and sex offenders. Similar to the findings of hypothesis two based upon categorization by index offence, no difference was found between the nonviolent offenders (M = .60, SD = .40) and sex offenders (M = .76, SD = .44); t (72) = -1.49, p = .14.

It was decided to combine the re-categorized sex and violent offenders into one category of 26 violent offenders and to re-run the logistic regression from hypothesis three, which predicted that violent offenders would be more likely to have discrepant self-esteem than nonviolent offenders.

A binary logistic regression (see Table 6) was performed to assess the impact of explicit, implicit, and the interaction of these two variables on group membership (violent or nonviolent). The full model containing all predictors was statistically significant, $\chi^2(3, N = 80) = 15.41$, $p < .05$, indicating that the model was able to distinguish between violent and nonviolent participants. The model as a whole explained between 17.5% (Cox and Snell R Square) and 24.6% (Nagelkerke R square) of the variance in offender group, and correctly classified 73.8% of the cases, which is significantly higher than the models' predictive ability with only the constant, which correctly classified 68.8% of the cases.

However, as shown in Table 6, only one of the predictor variables made a unique statistically significant contribution to the model, explicit self-esteem scores. Neither implicit self-esteem nor the interaction of these two terms made a statistically significant contribution to the model. These results do not support the hypothesis that violent offenders are more likely to have discrepant self-esteem and is consistent with the previous logistic regression, which was based upon index offence categorization.

Table 6

Logistic Regression Predicting Alternative Offender Group Membership Using Implicit and Explicit Self-Esteem

	B	S.E.	Wald	*df*	*p*	Odds Ratio	95.0% C.I. For Odds Ratio	
							Lower	Upper
Constant	-.89	.27	10.45	1	.76	.41	-	-
Explicit/RSES	-.07	.02	9.19	1	.00	.94	.90	.98
Implicit/IAT	.89	.73	1.50	1	.50	2.44	.57	10.17
Interaction	-.05	.05	1.14	1	.46	.95	.86	1.05

Chapter 5: Discussion

The results of this study add to the body of literature that suggests self-esteem, whether explicit or implicit, at most plays a very minor role in criminal behaviour. Overall, the data indicates that self-esteem, whether explicit, implicit, or combined, does not predict the type of crime that offenders choose to commit, their risk of committing another crime, or their level of psychopathy. Nonetheless, despite the lack of significant findings, this study is the first to examine the relationship among these variables in a forensic population.

Consistent with previous studies (Marshall, Marshall, Sachdev, & Kruger, 2003; Pervan & Hunter, 2007), support was found for this study's first hypothesis; sex offenders with child victims had lower explicit self-esteem than other types of offenders, in this case violent and nonviolent offenders. This finding does not necessarily suggest that offenders with low self-esteem are more likely to be sex offenders. In fact, it is equally likely that this finding is a result of being a sex offender, rather than a cause. Incarcerated sex offenders find themselves in an environment in which they are reviled by other types of offenders. There is a well-known hierarchy within the prison system, a hierarchy in which sex offenders find themselves at the bottom, particularly if they have offended against children. In fact, many institutions that are not deemed to be protective custody are forced to keep their sex offenders in a segregated area for the offenders' safety. It seems plausible that being in this environment would inevitably lower one's self-esteem. This reasoning is supported by Shine, McCloskey and Newton (2002), who

concluded that low self-esteem was likely due to experiences during imprisonment, rather than offending.

Many of the differences found between the study groups may also account for this finding. For example, all of the sex offenders in this sample were either currently in treatment or had completed treatment. Combined with their higher reading comprehension scores, this may result in a sample that has a better understanding of the impact of their actions on themselves, their family, their victim, their victim's family, and society as a whole, which could reasonably be expected to result in lower self-esteem scores. However, this combination could also result in a sample that knows they are expected to think less of themselves because of their crime and therefore succumb to demand characteristics, resulting in what appears to be lower self-esteem.

The sex offender sample also had fewer previous convictions and fewer sentences, therefore they may also be less acclimatized to being classified as a criminal due to their shorter criminal histories. This sample was also older than the violent and nonviolent samples; due to their older age and shorter criminal histories, they have had a longer period of time to identify themselves as a noncriminal, which means their current status may have greater impact on them, which could conceivably result in lower self-esteem. This is reminiscent of Meyer's (2002) hypothesis that inmates who were felt as if they belonged to the criminal community would likely have higher self-esteem. In this case, it would be presupposed that sex offenders would not feel as if they belong, given the view in which their crime is held, their shorter criminal histories, and their older age.

This lack of belongingness could result in lower self-esteem. Meyer's hypothesis was not supported by his results, however, suggesting that it may not apply to this population either.

Despite the finding that sex offenders had lower explicit self-esteem than nonviolent and violent offenders, it is important to note that "low self-esteem" is a relative term. Self-esteem measures typically result in an average score that lies far above the midpoint of the scale: "often by more than a standard deviation" (Baumeister et al., 2003, p. 4). Thus, most people score toward the high end on self-esteem measures and people classified as being "low" in self-esteem often still score above the midpoint of the scale, but are relatively lower than those who are classified as having "high" self esteem. This continued to be true in the current study's sample, including the sex offender sample, where the mean score was essentially identical to that found by Schmitt and Allik (2005) in their study of 53 countries. This suggests that overall, similar to 'normal' populations, this sample of offenders does not suffer from "low" self-esteem.

The results from the first hypothesis (that sexual offenders with child victims would have lower explicit self-esteem scores than both the violent offenders and non-violent offenders) did not generalize to implicit self-esteem as expected, however. In fact, there was no statistically significant difference between the three groups on implicit self-esteem, failing to support the second hypothesis. If the earlier suggestion that the sex offenders succumbed to demand characteristics on the explicit measures is true, which the IAT is theoretically impervious to, then this finding could indicate that there really is no difference in

self-esteem between different types of offenders. However, other reasons could also result in this finding.

Once again, it must be noted that these groups varied systematically to begin with and therefore any finding, or non-finding, could be a result of these pre-study differences as explained earlier. However, given the issues surrounding the IAT, (such as the question of whether it is a true measure of self-esteem, the influence that different types of stimuli have on the results, as well the fact that a high IAT score can be attained either by quickly associating self with positive stimuli or by quickly associating others with negative stimuli), it must also be considered that this measure was not measuring implicit self-esteem but actually some other construct (Buhrmester, Blanton, Swann, 2011; Oakes, Brown, & Cai, 2008; Tafardoi & Ho, 2006). In support of this idea, the common finding that implicit and explicit self-esteem are independent of each other was replicated, as there was no statistically significant correlation between RSES and IAT scores.

However, previous research suggests that the IAT is a good measure of implicit self-esteem and that the lack of relationship between explicit and implicit self-esteem scores is a result of the multidimensionality of the self-esteem construct (Bosson, et al., 2000). The pattern of IAT scores replicates the pattern of RSES scores as the overall, relatively high implicit self-esteem of this sample is consistent with the self-esteem literature and previous findings of the positivity bias of the IAT (Bosson, Swann, & Pennebaker, 2000; Greenwald & Banaji, 1995; Taylor & Brown, 1988). This supports the validity of the IAT.

It was hypothesized that violent offenders, including sex offenders, would be more likely to have discrepant self-esteem than nonviolent offenders, but this was not supported by the data. In fact the model with the predictors of explicit, implicit, and the interaction term, was not able to correctly classify the offenders with any greater accuracy than the model without the predictors (i.e. constant only). These results support Andrews and Bonta's (1994) meta-analysis, which concluded that self-esteem is not a factor in determining the types of crimes people choose to commit, despite the fact that sex offenders had significantly lower explicit self-esteem scores in relation to the other groups. Again, it must be noted that the sex offenders' overall self-esteem was still high as measured by the RSES. And, despite the difference in the groups on explicit self-esteem, there was no difference on implicit self-esteem scores between the groups; this lack of difference would have not only impacted the implicit self-esteem predictor variable, it would also have impacted the interaction term variable. Thus, it is not surprising that the overall model was not significant.

For this analysis, the sex offender sample was combined with the violent offender sample to form one group, as in the Criminal Code of Canada all sex offences are considered to be violent offences. The combination of these groups might have suppressed any predictive value that the variables might have had. Considering that the sex offender and violent offender groups differed on a wide variety of variables pre-study, combining them on the basis of their index offence may have obscured any differences that might exist.

This potential explanation could apply to the idea of categorizing offenders in general, particularly on the basis of index offence, as was done in this study. Within this sample, 59% of offenders were not a "pure type". That is to say, they demonstrate "criminal versatility" indicating that their criminal record has convictions for many different types of offences. This suggests that categorizing them on the basis of their index offence as being "violent" or "nonviolent" is a tool of convenience for researchers. True differences between types of offenders may be found if only the "pure" types were studied; however this would significantly limit the generalizability of the results, not to mention that collecting any meaningful data would take a significant period of time given the rarity of these "pure" types.

In addition to hypothesizing that discrepant self-esteem would predict group membership, it was also predicted that discrepant self-esteem would predict risk. This was not supported by the data. It is possible that this is a consequence of the variables and statistics used to analyze this hypothesis. Statistically, when performing a multiple regression one hopes to find moderate correlations between the predictor variables and the outcome variables (Pallant, 2007). This was not the case for this study, where neither implicit nor explicit self-esteem (or their interaction term) were significantly related to the VRAG or SORAG scores. In addition to this statistical problem, because one of the predictor terms was actually the interaction of the other two predictor terms, multicollinearity could have been a problem. This problem was resolved by centering the variables, as

suggested by Aiken and West (1991). However, regardless of whether the interaction term was centered or not, the model did not significantly predict risk.

Nor did it matter if the outcome risk variable was measured by the VRAG or the SORAG. In a further attempt to explore the relationship between discrepant self-esteem and risk, the multiple regression was run on the sex offender sample only, using the SORAG score as an outcome variable. Despite the fact that the sample size was too small to reliably run a multiple regression with three predictor variables, it was thought that it might provide direction for future studies. The results were the same as the larger model however, indicating that discrepant self-esteem does not predict either risk to violently recidivate or risk to sexually recidivate. These results support previous research findings that suggest that self-esteem is not a variable worth pursuing with respect to reducing risk and recidivism. This is contrary, however, to the anecdotal evidence provided without solicitation by the participants in this study upon debriefing, indicating that they thought self-esteem played a large role in their decision to offend.

It is possible that the VRAG and SORAG scores themselves were not accurate, given that the answers were often self-report, verified when possible with file information. However, it must be stated that the file information was also often self-report. Therefore, there was no way to confirm or disconfirm the information provided by the offender in the semi-structured interview. However, given the confidential nature of the study and that many of the items are nonthreatening and lack face validity (i.e., they do not appear to be “risk-related”),

it is unlikely that the participants falsified this information when providing it for the purposes of this research study.

Consistent with Jordan's (2003) work, it was hypothesized that offenders with discrepant self-esteem would score higher on a measure of narcissism than offenders with congruent self-esteem. While there was a significant, small, positive correlation found between the RSES and NPI scores, as with the previous multiple regression, the predictor variables of implicit self-esteem (i.e., the IAT scores) and discrepant self-esteem (i.e., the interaction term) were not correlated with the outcome variable of narcissism (i.e., NPI scores). Given the lack of relationship between these variables, it was not surprising that the model was not significant. Again, due to problems of multicollinearity the interaction term was centered prior to being entered into the multiple regression. While the model as a whole did not predict scores on the NPI, RSES scores did, accounting for 7.8% of the total variance in NPI scores. This indicates that explicit self-esteem is related to, although distinct from, narcissism. While these finding do not support Jordan's findings that narcissism was predicted by discrepant self-esteem scores, this is consistent with studies conducted by Lima (2008) and Stoessel (2008), who were also unable to replicate Jordan's findings.

The inability to replicate Jordan's results could be explained in many different ways. Researchers using the IAT found that narcissists do not uniformly dislike themselves, but rather that they report high explicit and implicit views on measures of agency and neutral self-views on measures of communion (Campbell, Bosson, Goheen, Lakey, & Kernis, 2007). It has also been found that narcissism is

predicted by a combination of a high level of implicit self-attractiveness and a low level of implicit self-liking (Sakellaropoulo & Baldwin, 2007).

Wink (1991) suggested that there may actually be two types of narcissism; vulnerable narcissism, which is associated with introversion, defensiveness and anxiety, and grandiose narcissism, which is associated with extraversion, self-assurance, exhibitionism, and aggression. Grandiose narcissism has been associated with high explicit self-esteem, while vulnerable narcissism has been associated with low explicit self-esteem (Stoessel, 2007). Stoessel (2007) found no differences on implicit self-esteem between the two groups, although he did find that the grandiose subtypes and the controls had larger explicit-implicit self-esteem discrepancies than did the vulnerable types. Therefore, conceptualizing narcissism as positive, explicit self-esteem concealing negative, implicit self-esteem may be an oversimplification.

The differences in results could also be explained by sample type. Jordan's (2003) study involved a group of 57 university students, three-quarters of which were female. It is possible that Jordan's findings that the "amount of narcissism displayed thus depended on the correspondence between their levels of explicit and implicit self-esteem" (p. 16) may hold true in a sample of female university students, but does not generalize to a population of incarcerated male offenders in which personality disorders occur in relatively high frequency. Thus, discrepancies between explicit and implicit self-esteem may predict "normal" or "subclinical" levels of narcissism, which is what the NPI was designed to measure (Hook, 2007), but may not predict clinical levels of narcissism, suggesting that

"normal" narcissism and clinical narcissism (i.e., Narcissistic Personality Disorder as defined by the DSM-IV-TR) are different constructs.

As previously suggested, it is also possible that the RSES scores were inaccurate and were intentionally inflated by this group as a defense mechanism (e.g., posturing for survival within a prison environment), or that the IAT is not truly measuring what it purports to measure, which would clearly have influenced the results of the multiple regression.

While Jordan (2003) did not report the mean NPI scores for his sample, the mean score in the current sample was significantly higher than that found by Hook (2007) in a sample of violent and sex offenders. Hook's sample were federally incarcerated males residing at a regional psychiatric hospital, which differs from the current sample which includes both provincial and federal inmates. This suggests that the current sample was relatively narcissistic. This is consistent with a population that has a relatively high ratio of personality disorders; for example, Hart and Hare (1997) estimate that over 50% of offenders could be diagnosed with Antisocial Personality Disorder.

Analysis of the data revealed that the sex offender sample had significantly lower narcissism scores than the other offenders. This is inconsistent with Hook's (2007) findings, which found no difference in scores on the NPI between violent and sex offenders. Similar to the rationale provided for the finding that sex offenders had lower explicit self-esteem, it may be that the participants in this sample were better aware of themselves and less defensive, thus appearing less narcissistic than the other offenders due to treatment factors.

Given recent arguments by Cooke and Michie (2001) and Gifford (2005) supporting the idea that narcissism is a "third factor" in psychopathy, it was hypothesized that narcissism scores would be correlated with psychopathy scores. The finding of a large, positive correlation between these two variables supports this hypothesis and is consistent with previous findings by Gifford (2005). Within the diagnosis of narcissism are several characteristics that represent considerable overlap with some of Hare's psychopathy criteria, including grandiose sense of self-worth, sense of entitlement, interpersonally exploitive/manipulative, lack of empathy, and arrogant behaviours and attitudes. Therefore, it is not surprising that these two variables would be strongly correlated. Given the definitional overlap between these two variables and the strength of the correlation found, the association between NPI scores and risk, as measured by the VRAG, were examined; however, an association did not emerge. While narcissism and psychopathy may overlap, it is not the narcissistic component of psychopathy that seems to lead to offending or reoffending; rather it is the constellation of other factors that appears to result in one's level of risk. Cleckley's (1979) work may illuminate these findings, since he suggests that not all psychopaths commit crime. Although the main focus on psychopathy in recent years has been within criminal populations, Babiak and Hare's (2006) recent work describing psychopaths in the workplace, "Snakes in Suits," suggests that 'successful' people can also be psychopathic and that this personality disorder/trait is not limited to criminals.

Due to the strength of the relationship between NPI and SRP-III scores, closer examination was given to the relationship between the NPI score and the subscales of the SRP-III measure. While all of the subscales showed a positive correlation with the NPI scores, the strongest correlation was with the Interpersonal Manipulation subscale, which taps into characteristics such as pathological lying, conning, and manipulation. Surprisingly the NPI's lowest correlation, although still a moderately strong correlation, was with the SRP-III's subscale labeled Callous Affect, which taps into deficiencies in affect including lack of remorse, guilt, and empathy.

The final hypothesis that offenders with discrepant self-esteem would score higher on a measure of psychopathy was primarily derived from the previous hypotheses that indicated that discrepant self-esteem would predict narcissism and that narcissism would be closely related to psychopathy. Given that only the latter part of the premise was supported by the data, it is not surprising that discrepant self-esteem was not found to predict psychopathy.

The mean SRP-III scores in this sample were significantly lower than those found in Salekin's (2008) study of juvenile offenders, as well as that found by Zagon and Jackson (1994) in a study of 149 university students. Given that the SRP-III was designed to assess psychopathy in non-clinical populations it was expected that the scores in a clinical group would be higher (Visser, 2010). This suggests that this sample, while relatively narcissistic, was low in psychopathy. It is likely that only the more prosocial, thus low in psychopathy, inmates

volunteered for this research project as there was no obvious benefit for participation.

Consistent with Williams, Paulhus, and Hare's (2007) research on the factor structure of the SRP-III, all four subscales were found to have large, positive correlations with each other and with the total SRP-III score, suggesting that all four factors tap into a common underlying construct. This study did not reveal statistically significant relationships between the SRP-III and the PCL-R scores. Although the sample in the current study was quite small, this is in stark contrast to Hare (1991) who found a large, positive correlation between SRP and PCL-R scores in a sample of 100 inmates. Considering that the SRP-III is designed to have a similar factor structure to the PCL-R, not finding a relationship is surprising. However, after testing the difference between the correlation coefficients, it was found that the difference between Hare's (1991) correlation and the correlation found in this study was not statistically significant. The appearance of the lack of significance is due to this study's small sample size, therefore there was not enough statistical power to detect a relationship.

Despite the lack of relationship and the strong research supporting the PCL-R as a predictor of recidivism (Harris et al., 1991, 2004; Serin & Amos, 1995), the total SRP-III scores were found to be have a large, positive correlation with VRAG scores, although they were not related to SORAG scores. Moreover, all four subscales of the SRP-III were also associated with the VRAG scores. These findings suggest that the SRP-III is a better predictor of violent recidivism than sexual recidivism and is consistent with published work. Salekin (2008)

examined the relationship between SRP scores and risk/recidivism by studying 130 juvenile offenders who were currently undergoing a court-ordered assessment. He found no relationship between SRP-II scores and general recidivism, although he did find a predictive relationship between SRP-II scores and violent recidivism, such that SRP-II scores accounted for 3% of the variance in recidivism.

Treatment Implications

The results of this study do not support increasing offender's self-esteem as a method of reducing risk. However, from a therapeutic point of view it may be necessary to increase self-esteem as a method of engaging the offender in treatment, as well as increasing treatment efficacy. Baumeister and colleagues (2003) suggest that "the actual effect of high self-esteem per se is to support initiative and confident action", both of which are therapeutically necessary for clients to try new behaviours. Baumeister, Tice, and Hutton found that people with low self-esteem avoid trying new behaviours (as cited in Thornton et al., 2004); conversely those high in self-esteem may be more willing to attempt novel tasks. High self-esteem also improves persistence (Baumeister et al., 2003); another quality that is important when making behavioural changes.

Low self-esteem has been found to be related to feelings of shame (Tangney, 1990), which tends to lead to denial and externalizing blame for unacceptable behaviours (Murray, Holmes, Macdonald, & Ellsworth 1998; Tangney, Miller, Flicker, & Barlow, 1996). Marshall and colleagues (2009)

theorize that low self-esteem generates shame, which blocks recognition of harm, resulting in a lack of empathy for the victim. They state that:

> [t]he primary implication is that sexual offenders low in self-esteem who feel shame should be difficult to engage in treatment unless therapeutic efforts are made to overcome these two associated problems (p. 227).

Therefore, self-esteem may prove to be a worthy treatment target, simply in order to encourage the offender's engagement in treatment.

While there are many books written on ways to improve self-esteem, the focus of these methods has traditionally been on explicit self-esteem. Baccus, Baldwin, and Packer (2004) showed that it was possible to increase implicit self-esteem using the principles of classical conditioning. They designed a computer game that repeatedly paired self-relevant information with smiling faces. Dijksterhuis (2004) conducted a similar study; by repeatedly pairing "I" words with positive trait terms implicit self-esteem was enhanced. In fact, this effect was found to be so strong that it actually made participants insensitive to negative feedback regarding their intelligence. Recalling the work of Schroder-Abe, Rudolph, and Schutz (2007) which indicated the importance of self-esteem congruence on mental health, meditation has been shown to lead to greater congruence between explicit and implicit self-esteem (Koole, Govorun, Cheng, & Gallucci, 2009).

The results of the current study suggest that in addition to self-esteem, narcissism is also not a treatment-worthy target if the goal of treatment is to

reduce risk of reoffence. Despite the relationship between narcissism and psychopathy, a concept which strongly predicts risk, narcissism itself did not predict risk. These findings suggest that treatment should therefore focus on the other aspects of psychopathy. While psychopathy has typically been viewed as "untreatable" or even more pessimistically, that treatment makes psychopathy worse (Hare et al., 2000; Hobson, Shine, & Roberts, 2000; Rice, Harris, & Cormier, 1992; Seto & Barbaree, 1999), more recently the literature suggests viewing psychopathy as a responsivity factor, with psychopaths having more criminogenic needs (Looman et al., 2005; Serin, 1995; Simourd & Hoge, 2000).

All four factors of the SRP-III - Interpersonal Manipulation, Criminal Tendencies, Erratic Lifestyle, and Callous Affect - were found to be correlated with risk of violent reoffending in the current study. These four factors are similar in nature to the "Big Four" or major criminogenic needs that Andrews and Bonta posit; history of antisocial behaviour, antisocial personality, antisocial thinking, and antisocial support. Interventions targeting these factors are more likely to reduce reoffence rates than targeting other, "minor" criminogenic needs (Morgan, Fisher, & Wolff, 2010). Therefore, treatment goals should include problem-solving skills, anger management skills, self-management skills, and coping strategies. Antisocial thinking, a form of cognitive distortions, should be challenged and changed. Association with criminal others should be discouraged, while association with prosocial others should be increased (Bonta, 1997).

Treatment approaches in correctional settings are typically cognitive-behavioural in nature, as they have been found to reduce recidivism in offenders,

including violent offenders (Howells, Tennant, Day, & Elmer, 2009; Polascheck, Wilson, Townsend, & Daly, 2005). Little, Robinson, and Burnette (1993) conducted a study using a cognitive behavioural approach; they found that the treated group of 70 male felony offenders had significantly lower recidivism rates, fewer re-arrests, and fewer days of additional sentences, than a control group of 82 male felony offenders. Henning and Freuh (1996) also found lower recidivism rates in a group of 55 male offenders treated with cognitive-behavioural therapy, as compared to 141 untreated male offenders. In fact, while the effect size for psychotherapy with forensic populations is typically small (e.g., d = .10), cognitive-behavioural treatments generally have larger effect sizes (e.g., d = .20 to .30) according to Polascheck and colleagues (2005). However, other types of therapy have also been used with offending populations. Pascual-Leone, Bierman, Arnold, and Stasiak (2011), in a study of 250 men incarcerated for intimate partner violence, found that emotion-focused group therapy produced an effect size ranging from d = .28 to .25, suggesting that emotion-focused therapy can also be an effective treatment for some types of offenders. While promising, these effect sizes are in comparison to non-forensic populations where psychotherapy has been found to have a large effect size (e.g., d = .80) when compared to no treatment (Wampold, 2001). Clearly there continues to be a need for research in effective treatment options for offenders.

Limitations

In an effort to generate generalizable results, this study used participants from a broad range of offender types (e.g., both federally and provincially

incarcerated, different levels of security, those on various types of release); however the results of this study do not apply to either sex offenders with adult victims, female offenders, or juvenile offenders. Although the original intention of this study was to include sex offenders with adult victims, due to a lack of volunteers, it was decided to not include this population. It was decided *a priori* not to include female offenders, given that research suggests that their reasons for committing offences differ substantially from males.

The inclusion of a broad range of offender types resulted in groups that were not equivalent on many variables, prior to the study. Analysis of offender characteristics revealed that the groups differed from each with respect to level of institutionalization, ethnicity, and childhood abuse histories. The sex offender group members had higher reading levels, were older, and had fewer sentencing dates than the nonviolent and violent offender groups. They also had significantly fewer youth convictions, fewer prior adult convictions, fewer prior nonviolent convictions, and fewer prior violent convictions than the nonviolent offenders. The sex offender group did have more prior sexual convictions than both the nonviolent and violent group members. Thus, it is possible that the lack of statistically significant findings is a result of the differences that existed between the groups.

Most of the other limitations of this study revolve around issues with recruitment. Only sex offenders that were in treatment were recruited; it was felt by the institutions that recruiting sex offenders who were not in treatment would draw unwanted attention to them which might result in problems within the

institutional environment. This limits the generalizability of the results to treated sex offenders and specifically sex offenders with a moderate to high level of intervention, as there were currently no "low intensity" sex offender programs running within the institutions from which participants were recruited. Furthermore, most of the sex offender participants came from one medium-security federal institution that specializes in housing/treating sex offenders.

Restrictions imposed by the Alberta Solicitor's General Office that prevented the primary investigator or her research assistants from viewing offender files, curtailed the recruitment of sex offenders within the provincial system. It should also be noted that not all of the sex offenders had "hands on" offences; that is, some were convicted of possession or distribution of child pornography. Given the difficulty with recruitment of this population, it was decided to include these offenders in the study, despite the different nature of their crime. Although some argue that users of child pornography are different from "hands on" offenders with child victims, other research suggests that they may be quite similar to "hands on"offenders (Bourke & Hernandez, 2009; Eke, Seto, & Williams, 2010; Seto & Eke, 2005; Seto, Hanson, & Babchishin, 2011; Wolak, Finkelhor, & Mitchell, 2005). More interest is needed in this area to determine if child pornography users are a different type of offender, or merely committing a different type of offence (Bourke & Hernandez, 2009).

Having the primary workers/parole or probation officers/etcetera recruit participants posed its own set of difficulties. Although this procedure was suggested by the institutions, it was more difficult in some settings to secure the

cooperation of potential participants. In addition, while it was asked that the recruiters solicit the participation of any individual fitting the criteria (e.g., minimum reading level, offence type), it is likely that the recruiters only solicited those offenders whom they thought were most likely to agree. This introduces a selection bias into the sample.

Given that there were no obvious benefits to the participants of this study, it is likely that only the more prosocial offenders volunteered. This process of self-selection may have reduced the scores on the VRAG/SORAG, NPI, and SRP-III, as it seems reasonable to conclude that the more prosocial offenders are also at a lower risk to reoffend, are less narcissistic, and less psychopathic. Many offenders admitted that they only volunteered because they knew the primary investigator was female.

In addition to influencing the types of offenders that could be recruited from the provincial system, the file restriction imposed by the Alberta Solicitor General's Office made it difficult to verify information provided by the offender during the semi-structured interview for the scoring of the VRAG. However, given the short sentences that most provincial offenders serve, there was often limited information available in their files and therefore may not have added additional relevant information to the coding process.

It is possible that any potential results of this study were obscured by the method of categorization of offenders. The offenders were classified based on their most serious index offence conviction; therefore any index sex offences resulted in a categorization of sex offender even if their index offences also

included any violent or nonviolent offences, and any index violent offence resulted in a categorization of violent offender even if their index offences included any nonviolent offences. For example, even if a participant had a long history of completely nonviolent offences, but their current conviction included a common assault, they were classified as a violent offender. With the exception of very few participants, there was no "pure" category of offenders; that is offenders were not typically just "violent" or just "nonviolent", rather they demonstrated criminal versatility. Thus the distinction made between types of offenders, particularly between nonsexual violent and nonviolent offenders, may not accurately reflect their behaviours and is one based on convenience.

A more accurate method of classification might be based on proportion of crimes. For example, if an offender had committed five nonviolent offences and two violent offences, then it might be more useful to classify them as a nonviolent offender given that they have committed more of these types of offences. This method of categorization was used to re-run several hypotheses in the post-hoc analyses; this method of categorization did not reveal any new findings either. This further supports the idea that categorizing offenders based on their offences is a tool of convenience for researchers and that true difference between offenders may only be found in "pure" types.

Despite the lack of statistically significant findings in this study, most offenders agreed with the premise of the study during debriefing. Many participants reported that they had low self-esteem at the time of the offence, but that they no longer felt the same way about themselves. They reported that they

answered the questions on self-esteem based on how they currently felt, as opposed to how they felt about themselves at the time of the offence. It is possible that this obscured potential findings. Many offenders, particularly the sex offenders who were in treatment, verbally reported feelings of increased self-esteem and self-worth due to treatment. On a theoretical level, it might be interesting to pursue the differences between self-esteem pre- and post-treatment, or even pre- and post-incarceration, in a longitudinal study, or to have participants answer the self-esteem questions with respect to how they felt about themselves at the time of the index offence, although their responses would be influenced by memory and treatment effects.

This study adds to the existing literature which suggests that self-esteem is a minor criminogenic need. The finding that sex offenders with child victims had lower explicit self-esteem than both the violent and nonviolent offenders is not new, but merely adds to the existing literature. What is new, however, are the findings that the three offender groups did not differ on implicit self-esteem, nor did these two types of self-esteem, alone or in combination, predict offence group membership or risk of reoffence. In addition, this study adds to the literature that examines explicit and implicit self-esteem's relationship with narcissism, which has not been previously explored in a forensic population. Nor has the relationship between implicit and explicit self-esteem and psychopathy been examined before. The null findings between both types of self-esteem, and risk, narcissism, and psychopathy indicates that self-esteem is not a useful treatment

target with respect to reducing crime, therefore it is unlikely that further research will be anything but academic.

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Appendix A

Self-Esteem IAT

- SELF: ME, MY, MINE, SELF, I
- OTHER: THEY, THEM, OTHER, HIM, HE
- Positive: peace, good, smile, happy, paradise
- Negative: rotten, poor, sickness, poison, bad

Appendix B

RSES

Please respond to each of the following statements by circling a rating on each scale.

1. I feel that I'm a person of worth, at least on an equal basis with others.

1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
very strongly disagree	strongly disagree	moderately disagree	slightly disagree	neutral	slightly agree	moderately agree	strongly agree	very strongly agree

2. I feel that I have a number of good qualities.

1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
very strongly disagree	strongly disagree	moderately disagree	slightly disagree	neutral	slightly agree	moderately agree	strongly agree	very strongly agree

3. All in all, I am inclined to feel that I am a failure.

1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
very strongly disagree	strongly disagree	moderately disagree	slightly disagree	neutral	slightly agree	moderately agree	strongly agree	very strongly agree

4. I am able to do things as well as most people.

1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
very strongly disagree	strongly disagree	moderately disagree	slightly disagree	neutral	slightly agree	moderately agree	strongly agree	very strongly agree

5. I feel I do not have much to be proud of.

1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
very strongly disagree	strongly disagree	moderately disagree	slightly disagree	neutral	slightly agree	moderately agree	strongly agree	very strongly agree

6. I take a positive attitude towards myself.

1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
very strongly	strongly	moderately	slightly	neutral	slightly	moderately	strongly	very strongly

disagree	disagree	disagree	disagree		agree	agree	agree	agree

7. On the whole, I am satisfied with myself.

1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
very strongly disagree	strongly disagree	moderately disagree	slightly disagree	neutral	slightly agree	moderately agree	strongly agree	very strongly agree

8. I wish I could have more respect for myself.

1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
very strongly disagree	strongly disagree	moderately disagree	slightly disagree	neutral	slightly agree	moderately agree	strongly agree	very strongly agree

9. I certainly feel useless at times.

1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
very strongly disagree	strongly disagree	moderately disagree	slightly disagree	neutral	slightly agree	moderately agree	strongly agree	very strongly agree

10. At times I think I am no good at all.

1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
very strongly disagree	strongly disagree	moderately disagree	slightly disagree	neutral	slightly agree	moderately agree	strongly agree	very strongly agree

Appendix C

NPI

Listen below are a number of statements regarding self-concept. Please indicate the extent to which you agree or disagree with each statement. Please write your response beside each statement, using the scale below.

1	**2**	**3**	**4**	**5**	**6**	**7**
Strongly disagree	Moderately disagree	Slightly disagree	Neutral	Slightly agree	Moderately agree	Strongly agree

1. I see myself as a good leader.

2. I would prefer to be a leader.

3. I really like to be the centre of attention.

4. I like having authority over other people.

5. I would be willing to describe myself as a strong person.

6. I have a natural talent for influencing people.

7. I like to be the centre of attention.

8. I am assertive.

9. People always seem to recognize my authority.

10. I like to look at my body.

11. I like to look at myself in the mirror.

12. I am an extraordinary person.

13. I like to display my body.

14. I have good taste when it comes to beauty.

15. I think I am a special person.

16. I like to be complimented.

17. I am going to be a great person.

18. I know that I am good because everyone keeps telling me so.

19. Everybody likes to hear my stories.

20. I usually dominate any conversation.

21. I can make anybody believe anything.

22. I am a born leader.

23. I can read people like a book.

24. I am apt to show off if I get the chance.

25. People can learn a great deal from me.

26. I always know what I am doing.

27. I can usually talk my way out of anything.

28. Superiority is something you are born with.

29. I would do almost anything on a dare.

30. I expect a great deal from other people.

31. I am envious of other people's good fortune.

32. I insist upon getting the respect that is due me.

33. I will never be satisfied until I get all that I deserve.

34. I have a strong will to power.

35. I get upset when people don't notice how I look when I go out in public.

36. I find it easy to manipulate people.

37. I am more capable than other people.

Appendix D

Improved Scoring Algorithm for the IAT

The table below summarizes method for computing the improved scoring algorithm that was first reported in:

Greenwald, A. G, Nosek, B. A., & Banaji, M. R. (2003). Understanding and using the Implicit Association Test: I. An improved scoring algorithm. *Journal of Personality and Social Psychology, 85,* 197-216.

The table below is from p. 92 of:

Lane, K. A., Banaji, M. R., Nosek, B. A., & Greenwald, A. G. (2007). Understanding and using the Implicit Association Test: IV. What we know (so far) (Pp. 59–102). In B. Wittenbrink & N. S. Schwarz (Eds.). *Implicit measures of attitudes: Procedures and controversies.* New York: Guilford Press.

The full Lane et al. chapter can be downloaded from:

http://faculty.washington.edu/agg/bydate.htm

SPSS syntax for computing the D measure can be found in the "Generic IAT zipfile download" at:

http://faculty.washington.edu/agg/iat_materials.htm

SAS syntax is available at:

http://projectimplicit.net/nosek/papers/scoringalgorithm.sas.txt

TABLE 3.3.

Summary of IAT Scoring Procedures Recommended by Greenwald et al. (2003).

---

1. Delete trials greater than 10,000 msec
2. Delete subjects for whom more than 10% of trials have latency less than 300 msec
3. Compute the "inclusive" standard deviation for all trials in Stages 3 and 6 and likewise for all trials in Stages 4 and 7
4. Compute the mean latency for responses for each of Stages 3, 4, 6, and 7

5. Compute the two mean differences ($Mean_{Stage\ 6} - Mean_{Stage\ 3}$) and ($Mean_{Stage\ 7} - Mean_{Stage\ 4}$)
6. Divide each difference score by its associated "inclusive" standard deviation
7. *D* = the equal-weight average of the two resulting ratios

---

Note. From Greenwald, Nosek, and Banaji (2003, Table 4). Copyright 2003 by the American Psychological Association. Adapted by permission. This computation is appropriate for designs in which subjects must correctly classify each item before the next stimulus appears. If subjects can proceed to the next stimulus following an incorrect response, the following steps may be taken between Steps 2 and 3 in the table: 10 compute mean latency of correct responses for each combined Stage (3, 4, 6, 7); 2) replace each error latency with an error penalty computed, optionally as "Stage mean + 00 msec" or Stage mean + twice the SD of correct responses for that Stage". Proceed as above from Step 3 using these error-penalty latencies. Stage numbers refer to the stages depicted in Figure 3.1. SPSS and SAS syntax for implementing the new scoring algorithm are available at faculty.washinton.edu/agg/iat_materials.htm and www.briannosek.com, respectively.

Appendix E

INFORMATION SHEET:

Exploratory Study of Self-Esteem and Possible Correlates of Offending Behaviour in a Forensic Population

Nicole Kostiuk, M.Ed., Primary Researcher – (780) 492-3748
Doctoral Candidate, University of Alberta
Faculty of Graduate Studies and Research, Counselling Psychology

Sandy Jung, Ph.D., Co-Investigator - (780) 497-4597
Faculty Member, City Centre Campus 6-362
Department of Psychology, Grant MacEwan University

Kevin Nunes, Ph.D., Co-Investigator, (613) 520-2600 ext. 1545
Assistant Professor C-574 Loeb Building
Department of Psychology, Carleton University, Ottawa

You have been invited to take part in a study being done by a team of researchers at the University of Alberta (Faculty of Graduate Studies and Research), Grant MacEwan University (Department of Psychology), and Carleton University (Department of Psychology). Your participation will aid the primary researcher, Nicole Kostiuk, in earning her doctorate degree, and may lead ultimately to an improved understanding of offending behaviour, as it relates to measures of self-esteem.

Description of the Study

The study will involve answering questions about yourself, completing a word sorting task and participating in an interview. Some of the questions you may find upsetting to answer. If any of the questions or tasks that you are asked to complete cause you to feel upset or uncomfortable, you may stop at any time. It will take approximately three hours to complete all of the tasks.

The primary researcher, Nicole Kostiuk, will also seek your permission to access your case management file, psychology file, and security file to gather additional information. This information will not be shared with anyone outside of this research study.

Your Participation is Completely Voluntary

Your decision to participate or not participate in this study is completely voluntary; that is you are completely free to decide if you want to participate or not. If you agree to take part in this study but find a question you prefer not to answer, you may skip that question and move to the next one. You are also free to stop altogether by simply not answering any more items. In this case, you can let the researcher know, and your data will be destroyed. Your decision to not participate or withdraw from the study will in no way affect your programming, treatment, or any parole/probation decisions.

Protection of Privacy

All your responses are completely confidential and anonymous; that is no one will know what your answers are and your name will not be associated with your answers. In fact, no one will even be told if you have agreed to participate or not. All of your responses, including those on the computer, will be coded with a 3-digit number rather than your name. Seven years after the project has ended, all of your responses will also be destroyed.

The data from this research will NOT be included in any personal files and no one outside of the research project will have access to your responses. However, if you share any information that indicates that you are going to harm yourself or another, share any other information that violates the safety and security of the institution, or indicate that a child or other dependent person is in danger, this information will be reported to the appropriate authorities, in accordance with Corrections Services Canada (CSC) policy.

By signing the consent form, you give permission to the study staff to access your institutional files as mentioned above.

Risks and benefits of participation

Benefits: There is no direct benefit to you. However, this research may help us understand offending behaviours better.

Risks: There are minimal risks for taking part in this study. It may be possible for some people to be uncomfortable answering some questions. Because these things can happen, please let the researcher(s) know. If you feel upset at any point, you should feel free to stop participating, and may ask to be referred to an institutional psychologist to discuss your feelings..

Contact Names and Telephone Numbers:

If you have concerns about your rights as a study participant, do not hesitate to ask the researchers before proceeding or at any time during your participation.

You may contact the primary researchers at the phone number and /or email address below:

Nicole Kostiuk
Doctoral Candidate, University of Alberta
(780) 492-3748

Dr. Sandy Jung
Faculty Member, Grant MacEwan University
(780) 497-4597 /
jungs0@macewan.ca

Also, you may contact the primary researcher's supervisor:

Dr. Derek Truscott
Associate Professor, Department of Educational Psychology
University of Alberta
(780) 492-1161 / derek.truscott@ualberta.ca

This study has been reviewed and approved by the Research Ethics Board of the Faculties of Education and Extension at the University of Alberta. For questions regarding participant rights and ethical conduct of research, I can contact the Chair of the Research Ethics Board at (780) 492-3751. Also you may contact any, or all, of the following related ethics committees who have approved the conduct of this research:

1. Dr. Ingrid Johnson
   Education, Extension, Augustana, Campus Saint Jean Research Ethics Board at the University of Alberta
   (780) 492-2261 / Ingrid.johnston@ualberta.ca

2. Dr. Rodney Schmaltz
   Research Ethics Committee at Grant MacEwan University
   (780) 633-3674 / SchmaltzR@macewan.ca

Part 1 (to be completed by the Principal Investigator):

Title of Project: **Exploratory Study of Self-Esteem and Offending**

Principal Investigator: **Nicole Kostiuk** Phone Number: **(780) 492-3748**

Co-Investigators: **Sandy Jung, Kevin Nunes**

This study has been reviewed and approved by the Research Ethics Board of the Faculties of Education and Extension at the University of Alberta. For questions regarding participant rights and ethical conduct of research, I can contact the Chair of the Research Ethics Board at (780) 492-3751.

Part 2 (to be completed by the research subject):

	Yes	No
I understand that I have been asked to be in a research study.	☐	☐
I have read and received a copy of the attached Information Sheet.	☐	☐
I understand the benefits and risks involved in taking part in this research.	☐	☐
I have had an opportunity to ask questions and discuss this study.	☐	☐
I understand that I am free to withdraw from the study at any time, without having to give a reason and without affecting my future medical/psychiatric care.	☐	☐
The issue of confidentiality been explained to me.	☐	☐
I understand who will have access to your records, including personally identifiable health information.	☐	☐

Who explained this study to you?

_____

I agree to take part in this study: YES ☐ NO ☐

Signature of Research Subject:_____

Printed Name:_____

Date:_____

Signature of Witness:_____

I believe that the person signing this form understands what is involved in the study and voluntarily agrees to participate.

Signature of Investigator or Designee:_____

Date: _____