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The Utility of Interpersonal Circumplex Theory in Research and Treatment of Sexual Offenders

by

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ABSTRACT

Despite the existence of research examining problems specific to sexual offenders on variables falling into the realm of interpersonal relationships (e.g., attachment style, intimacy deficits, and loneliness), no published studies have been found investigating the interpersonal style of sexual offenders. The purpose of the present study was to examine the features of interpersonal style particular to sexual offenders. Additionally, differences in attachment style, intimacy deficits, and loneliness were explored, and I tested a model considering the relevance of interpersonal circumplex theory in linking these constructs. The results indicated that the prototypical interpersonal style and interpersonal problems of sexual offenders differed from those of nonsexual offenders and nonoffenders; furthermore, there were differences between rapists and child molesters. Differences in the interpersonal style and interpersonal problems were also found between psychopathic offenders and nonpsychopathic offenders. When the sample was categorized according to attachment style, it was discovered that the different attachment groups had different ratings of prototypical interpersonal style and identified different problems in interpersonal interactions. Although the causal connections among the constructs of attachment style, interpersonal style, and intimacy and loneliness remain unclear, it is concluded that interpersonal circumplex theory provides a useful theoretical framework for conceptualizing the empirically demonstrated interpersonal difficulties of sexual offenders. As well, this theory provides a framework for considering our current intervention efforts and offers suggestions for clinical work with this population of offenders.

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INTRODUCTION

Cost of Sexual Offenders to Society

There is no group of offenders who provoke more fear and anger in citizens than those who have committed a sexual offense. Regardless of its cause, the consequences of sexual aggression are devastating. Included among the many potential effects on the victims of sexual offenses are loss of self-esteem (Marshall & Barrett, 1990), aggression (Bigras, Leichner, Perreault & Lavoie, 1991), substance abuse (Brady, Killeen, Saladin & Dansky, 1994), sexual dysfunction (Westerlund, 1992), eating disorders (Sloan & Leichner, 1986), and suicidal ideation (West, 1987). Sexual offenders usually offend against more than one victim (Marshall, Laws & Barbaree, 1990); therefore, successful intervention for the perpetrators can prevent much suffering.

In Canada, sexual offenders now comprise approximately twenty-two percent of incarcerated offenders (i.e., approximately 3000 offenders who are incarcerated are sexual offenders), and they comprise approximately twelve percent of the federal conditional release population (Motiuk & Belcourt, 1997). The average cost of keeping an offender incarcerated is approximately $60,000 per year, whereas the cost of supervising an offender on conditional release to the community (i.e., on parole or statutory release) is approximately $13,000 per year (Correctional Service of Canada, 2000). The number of sexual offenders who are incarcerated in Canadian federal penitentiaries has grown rapidly and disproportionately to the total offender population. One reason for this growth is that sexual offenders are considered "difficult" offenders who have complex treatment needs and fewer early

release programs to support them (Solicitor General of Canada, 1996). The average sentence of a sexual offender admitted to a federal penitentiary in 1995 was four years and three months, which is five months longer than the overall average sentence length (Motiuk & Belcourt, 1996). Furthermore, the proportion of sexual offenders is accumulating in federal institutions and declining in the community supervision population (Motiuk & Belcourt, 1997).

Although these sexual offenders will be incarcerated, on average, longer than offenders in general, it is important to keep in mind that most sexual offenders will be released into the community. In their review of violent offenders within the Canadian federal population, Motiuk and Belcourt (1997) found that violent offenders, including sexual offenders, were more likely than non-violent offenders to commit further violent offenses. Therefore, it is crucial that research into the causes of sexual offending and the strategies for effective treatment are made a priority.

Interpersonal Problems of Sexual Offenders

Several etiological theories have been advanced over the years. Marshall and Barbaree (1990) pointed to the need for integrating the varied literature on etiological factors in sexual offending and emphasized that comprehension of this behaviour could only be achieved when the "diverse processes [associated with sexual offending] are seen as functionally interdependent" (p.257). Some of the processes they reviewed included biological processes, which relate to evolutionary theory (e.g., see Quinsey & Lalumière, 1995, for an explanation of the relevance of this theory to sexual offending); childhood experiences, which lead to the development of self-esteem and empathy; social influences on the development of

attitudes that may facilitate sexual offending; and environmental factors. The consensus among researchers and clinicians is that sexual offending is a complex problem and the population of perpetrators is apparently heterogeneous with respect to many of the factors seen to be contributing to the offenses (Bard et al., 1987; Proulx et al., 1999). Furthermore, no single factor has been unequivocally demonstrated as a necessary or sufficient condition in the onset of sexual offending behaviour.

The crime itself can be understood in terms of interpersonal aggressive behaviour. Sexual assault occurs within some sort of context, and involves an interaction between the perpetrator(s) and victim(s). In their review of literature outlining offense characteristics, Cleveland, Koss and Lyons (1999) described the connection between tactics used by sexual offenders to coerce victims and the context in which these events take place. They highlighted the role of the relationship between the perpetrator and the victim, stating that the context of that relationship influences the tactics used by the perpetrator as well as whether certain tactics are viewed (by both men and women studied) as more or less "acceptable". In their own study of tactics used by perpetrators of sexual offenses, they found that perpetrators were generally less likely to use force, weapons, isolation, or demand for silence (termed by the authors "power" tactics) the closer the relationship was between the victim and offender (although they noted the exception of ex-husbands to this finding). These findings are similar to those of a previous study (Koss, Dinero, Seibel & Cox, 1988), which demonstrated that physical force, weapons, and threats of injury were more likely to be used by offenders who were unknown to the

victims.

Certainly, the interpersonal difficulties of sexual offenders have received much attention in the literature. Sexual offenders commonly cite anger as one motivating factor underlying their offending behaviour (Pithers, Beal, Armstrong & Petty, 1989; Rada, 1978). Although the anger may be directed toward a specific person who is victimized, the anger may also be toward another person, or about another situation altogether, but the offender displaces the anger toward an unsuspecting, and often unknown, victim (Cohen, Garofalo, Boucher & Seghorn, 1971; Scully & Marolla, 1985). There is empirical support for considering negative emotional states such as anger as an acute dynamic risk factor (i.e., a risk factor that occurs close to the timing of the offense; Hanson & Harris, 2000).

Furthermore, there is support for a relationship among interpersonal difficulties, negative emotions, and deviant sexual behaviours that might be precursors to sexual offending. Proulx, McKibben and Lusignan (1996) found that for rapists, conflicts provoked feelings of anger, humiliation, and loneliness. Conflicts were associated with deviant sexual fantasies and with masturbatory activity during these fantasies. Similarly, the heterosexual and homosexual pedophiles in their study reported that interpersonal conflicts were related to deviant sexual fantasies. For the heterosexual pedophiles, such interpersonal conflicts provoked feelings of humiliation and loneliness, whereas the homosexual pedophiles most frequently reported feelings of loneliness related to interpersonal conflicts.

Another interpersonal problem of sexual offenders that has received much attention is their apparent lack of empathy, where empathy is generally defined as

the ability to identify with another person's perspective (Cronbach, 1955) and the capacity to experience the same emotions as another person (Clore & Jeffrey, 1972). It is assumed that sexual offenders have little empathy for their victims because they either do not understand the harm caused to their victims, or they simply do not care (Monto, Zgourides & Harris, 1998). Some research has shown, for example, that rapists misread cues from women (Lipton, McDonel & McFall, 1987) and are poor at distinguishing different facial expressions depicting emotions (Hudson, Marshall, Wales, McDonald, Bakker & McLean, 1993). Although empirical support for the notion that sexual offenders demonstrate empathy deficits is equivocal (Marshall, Hudson, Jones & Fernandez, 1995; Monto et al., 1998), many treatment programs for sexual offenders include as an objective empathy enhancement with the rationale that offenders must learn to understand the impact of their offenses on their victims. Schwarz and Canfield (1998) consider empathy a "crucial component of all interpersonal relations" (p. 240), and believe that an understanding of the harm caused by the offending behaviour of their clients can help to motivate those clients to engage in the process of therapy.

The relationship difficulties of sexual offenders are well documented. Both rapists and child molesters report problems with sexual and social relationships (Fagan & Wexler, 1988). Child molesters have a lack of confidence in their ability to establish relationships with similar aged peers and this is thought to be one of the reasons they turn their attention toward children (Marshall, 1989). Children are less likely to reject them and therefore relationships with them are less threatening. Some researchers have found that child molesters attribute their motivation to offend

to a need for affection and intimacy (Finklehor, 1986; Ward, Hudson & France, 1993). Rapists, on the other hand, while also experiencing problems in relationships with women, are not likely to avoid them and turn to children. Rather, they seek to establish dominance over them. They are threatened by women and intimacy so they attempt to control that which threatens them (Lisak & Roth, 1988; Scully & Marolla, 1985).

Another obstacle to establishing intimate relationships is a lack of communication skills. Turning back to the studies by Proulx and his colleagues (McKibben, Proulx & Lusignan, 1994; Proulx et al., 1996), it is reasonable to conclude that the conflicts experienced by the sexual offenders in their samples resulted in the negative emotional states due to their lack of ability to resolve the conflicts through the use of appropriate communication skills. And Marshall noted over thirty years ago (Marshall, 1971) that therapists must aim to do more than modify sexual preferences of child molesters in order to achieve enduring changes in their targets for sexual interaction. Simply modifying sexual preferences of the offenders did not result in their ability to meet the needs of adult partners, and in order to achieve that goal, their communication skills, and particularly communication skills in the context of an intimate relationship, required work as well.

It is important to attempt to link together observed phenomena in sexual offenders and their crimes with the different theories explaining such phenomena. Recently, Ward and Hudson (1998) have bemoaned the "piecemeal approach" (p. 62) to research on sexual offending. They noted the importance of examining other researchers' and theorists' work to avoid overlapping theories, and increase the

ability to integrate our knowledge rather than continuing to engage in "fragmented theory construction" (p. 62). One possible theory for integrating the research on interpersonal difficulties in sexual offenders is Interpersonal Circumplex Theory. In the following sections, this theory is described along with some empirical research to validate it. It is suggested that this theory has relevance in understanding the interpersonal and social difficulties of sexual offenders, and that the theory is useful for integrating past research on some of the factors associated with sexual offending.

Interpersonal Circumplex Theory

Interpersonal Theory as a Framework for Understanding Sexual offenders

It is proposed that sexual assault can be understood as an interpersonal behaviour. In his classic work, *Interpersonal Diagnosis of Personality*, Leary (1957) offered the following definition of interpersonal behaviour:

> Behavior which is related overtly, consciously, ethically, or symbolically to another human being (real, collective, or imagined) is interpersonal. (p. 4)

Sexual assault certainly is a behaviour that is overt and willful, and related to another human being. Furthermore, sexual offenders exhibit a range of interpersonal difficulties, and these problems have been suggested as motivating factors of the behaviour. These problems, as previously noted, include lack of communications skills, under-assertiveness, problematic relationships, difficulties empathizing with another person, and problems expressing anger and other negative emotions in an adaptive manner. Yet these interpersonal difficulties are not unique to sexual offenders. In fact, most of us experience some or all of these

problems in certain situations or at certain times of our lives.

Leary (1957) promoted the notion of viewing psychopathology or abnormality as maladjustment, and that this maladjustment is quantitatively, not qualitatively, different from what is considered normal. He cited Erich Fromm to illustrate his point:

> The phenomena which we observe in the neurotic person are in principle not different from those we find in the normal. They are only more accentuated, clear-cut, and frequently more accessible to the awareness of the neurotic person than they are in the normal who is not aware of any personal problem which warrants study (Fromm, as cited in Leary, p. 13, 1957).

The above point has been applied to the study of and intervention with sexual offenders. Marshall (1996), in his address to the Association for the Treatment of Sexual Abusers, noted the tendency to view those who sexually offend as monsters. Indeed, their behaviour is so abhorrent and hurtful that it is difficult to imagine these men (and sometimes women) as similar in breed to those of us who do not engage in such behaviour.

> There can be no dispute that monsters live among us. The only question is what to do with them once they become known to us.
>
> The death penalty is not a response...Though it is effective—the killer will not strike again—the death penalty is limited to murderers; it will not protect us from rapists and child molesters who are virtually assured of release and who are almost certain to commit their crimes again (Vachss, 1993).

Marshall went on to examine an alternative, contradictory position; that is, that men who sexually offend ought to be considered victims. It is true that men who sexually offend tend to have suffered abuse at the hands of others (Spaccarelli, Bowden, Coatsworth & Kim, 1997), and some studies have found that adult male sexual offenders more frequently report having been sexually abused than nonsexual offenders (Dhawan & Marshall, 1996). Nonetheless, past abuse history is

neither a necessary nor sufficient condition of sexual abuse: not all sexual offenders have been sexually, physically and/or emotionally abused in their past, and not everyone who has suffered abuse eventually perpetrates sexual abuse. Marshall (1996) proposed, therefore, that sexual offenders are more similar than dissimilar to other psychotherapy clients. He contrasted the therapeutic styles of treatment providers who are overly confrontational to that of therapists who exhibit unconditional positive regard, and concluded that neither approach, or style, is helpful in changing the offending behaviour of the clients. He suggested that the therapeutic process that would be most likely to effect change is one that reflects the stance that sexual offenders are neither monsters nor victims, and went on to discuss the implications of such an approach. Marshall's discussion of effective therapeutic approaches focused on the interpersonal aspects of psychotherapy with sexual offenders, thus illuminating the importance of the interpersonal interaction between the client and therapist in bringing about change in the offenders.

When Leary (1957) discussed important concerns for therapists, he declared that interpersonal behaviour was the most crucial consideration for the clinician. He outlined the lengthy development and maturation process of humans, and contended that personality originates through the interpersonal interactions between the mother and child. He argued the ongoing importance of interpersonal interaction at maturity and throughout one's life: "the key to human life lies in the adequacy of social interaction" (p. 14). In viewing the behaviour of sexual offenders, and the many factors contributing to that behaviour, it appears relevant to examine the adequacy of their social interaction and the interpersonal tendencies that develop

and maintain patterns of social interaction.

Interpersonal Circumplex Model

Leary (1957) was the first researcher to summarize extensive work by himself and his colleagues (e.g., Freedman, Leary, Ossorio & Coffey, 1951; LaForge, Leary Naboisek, Coffey & Freedman, 1954; LaForge & Suczek, 1955) on the Interpersonal Circle. This model depicts a method of classifying interpersonal behaviours in a circular structure where the orthogonal axes represent dimensions of control and affiliation. According to interpersonal circumplex theory, all interpersonal behaviour can be understood as some combination of control and affiliation (Kiesler, 1996).

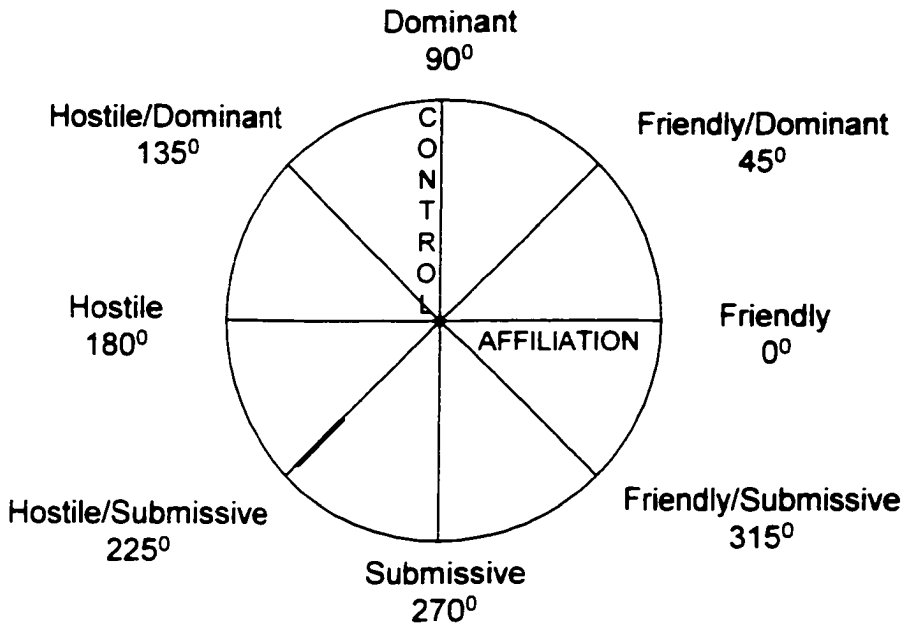
Circumplex models outline a pattern of systematically increasing and decreasing correlations of variables such that adjacent variables are highly positively correlated and variables on the opposite side of the circle are highly negatively correlated (McCrae & Costa, 1989). The interpersonal circumplex is a conceptual illustration of interpersonal behaviour that represents interpersonal variables, or communication styles, in a two-dimensional circular space formed by the orthogonal vectors (or theoretically uncorrelated dimensions) of control and affiliation (e.g., Kiesler, 1983; Leary, 1957; Wiggins, 1979). Each of these dimensions has as its anchors bipolar adjectives descriptive of the extremes of these concepts: the control dimension is characterized by dominance or submission, and the affiliative dimension is characterized by friendliness or hostility. These four interpersonal styles comprise the following quadrants of the Interpersonal Circle: hostile-dominant, hostile-submissive, friendly-dominant, and friendly-submissive. Within each of these quadrants are more specific interpersonal styles, and these styles are seen as

extensions of vectors emanating from the origin of the two axes (or dimensions) in the same way as spokes extend from the centre to the outer rim of a wheel (see Figure 1). Thus the following list represents a more specific breakdown of the categories (i.e., the octants) of interpersonal style represented by the model and their respective vector locations: friendly (0°), friendly-dominant (45°), dominant (90°), hostile-dominant (135°), hostile (180°), hostile-submissive (225°), submissive (270°), and friendly-submissive (315°) [see Figure 1].

Whereas the specific vector of the Interpersonal Circle, created by the angle from the origin, is a representation of one's interpersonal style, the distance from the origin is representative of the extent to which that person exhibits that interpersonal style. Therefore, there are different levels along a continuum of interpersonal behaviour, which are represented in the model. The more extreme the manifested behaviour, the more rigid the individual is said to be in his or her interpersonal style. Extreme rigidity is associated with severe interpersonal difficulties and psychopathology (Wiggins, Phillips & Trapnell, 1989). For example, an individual may display interpersonal behaviour that is mapped along the vector halfway between dominant and hostile; this behaviour would be classified as "mistrusting" (Kiesler, 1983). However, the second, more extreme, level of this behaviour is labelled "suspicious-resentful", which would be represented as a point along the same vector but farther from the origin than the less extreme (or rigid) level of that behaviour. The most extreme level of this dominant-hostile type of behaviour (and hence the level most associated with psychopathological disturbance) is "paranoid-vindictive" (Kiesler, 1983), which would be represented as a point on the same vector as "mistrusting" and "suspicious-resentful", but as it is to a

Figure 1.

Interpersonal Circle



greater extreme, this behaviour would be mapped as the point most distant from the origin of the circumplex.

Leary (1957) conceptualized interpersonal behaviour as a kind of reflex. The main idea of his theory is that certain behaviour, or certain modes of communication, will elicit certain interpersonal behaviour from its recipient in the interaction. That is, certain types of responses are more likely than others to elicit another certain subclass of responses. Therefore, if one would like to invoke certain responses in another, he or she may engage in specific behaviours that could predictably draw the desired responses from the other person.

Kiesler (1983) and Wiggins (1979) have generated more comprehensive circumplex models of interpersonal behaviour similar to that of Leary (1957), but akin to Leary's reasoning, Kiesler (1983) posited that certain behaviours beget certain other complementary behaviours. Specifically, with regard to the dimensions, complementarity occurs on the basis of reciprocity along the Control dimension and correspondence along the Affiliation dimension. Therefore, hostility begets hostility, friendliness begets friendliness, dominance begets submissiveness, and submissiveness begets dominance (Strong, Hills, Kilmartin, DeVries, Lanier, Nelson, Strickland & Meyer, 1988). Moreover, the more extreme one behaves along a particular continuum, the stronger one pulls for the complementary behaviour from the recipient.

This circumplex representation of interpersonal styles is interesting because it offers a theoretical framework for conceptualizing psychological phenomena. One particular use of the circumplex model of interpersonal behaviour is in the

interpretation of psychological disorders in interpersonal terms. Kiesler, van Denburg, Sikes-Nova, Larus, and Goldston (1990) videotaped interviews with various psychiatric patients who had different personality disorders. Clinical trainees and undergraduates provided objective ratings of the patients' interpersonal behaviour. The patterns of overt interpersonal behaviour were found to be different for patients exhibiting different disorders. Also, Wiggins et al. (1989) conducted studies that found support for diagnostic classifications within the predicted segments of the model. Furthermore, they found that vector length representing the rigidity of interpersonal behaviour was associated with psychopathology and interpersonal problems.

As previously stated, the more extreme one's behaviour is along a particular continuum within the Interpersonal Circle, the more rigid he or she is in his or her interpersonal style. Kiesler (1983) stated that when an individual displays such rigid behaviour, he or she is more likely to be maladjusted and less likely to display the predicted complementary response expected when interacting with another (except, of course, when the behaviour of the other person is the complement of his or her rigid style). If interpersonal behaviours beget their complementary styles, it becomes clear how maladjusted interactional patterns are perpetuated: one behaviour consistently pulls for another, which, in turn, further encourages the first behaviour.

It is possible that sexual offenders' ongoing problems in their interpersonal relationships may be a function of their own levels of control and affiliation in the behaviour they display in social interactions. Therefore, studying the interpersonal

style and interpersonal problems of sexual offenders could provide insight into the underlying aspects of dynamic risk factors, such as the inability to form and/or sustain intimate relationships.

Relevance of Attachment, Intimacy, and Loneliness

Adult Attachment

Bowlby (1973) described his theory of emotional bond between a child and his/her primary caregiver. He noted that early in life, children exhibit behaviours that indicate a strong attachment to the caregiver, and it is during this time that a child will begin to explore his or her environment under certain conditions. This development of attachment in childhood serves as the individual's template for development of relationships later in life. Further to this point, Hazan and Shaver (1987) examined attachment styles in adults to determine whether the three attachment patterns (i.e., secure, avoidant, and anxious/ambivalent) described by Ainsworth, Blehar, Waters, and Wall (1978) in infants could be observed in adults with regard to their romantic relationships. They devised a self-report measure and found that the distribution of their adult sample on the three attachment styles was proportionate to that observed in Ainsworth et al's study of infant attachment.

Extending this work, Bartholomew and her colleagues (Bartholomew, 1990; Bartholomew & Horowitz, 1991; Griffin & Bartholomew, 1994) have suggested four categories of adult attachment style: secure, preoccupied, fearful, and dismissive. They postulate that underlying each attachment style are views of oneself and views of others. An individual with a secure attachment style has positive views of

him/herself and positive views of others. Those who are described as having a preoccupied attachment style have negative views of themselves and positive views of others. Fearful individuals, on the other hand, have negative views of themselves as well as negative views of others, whereas dismissive people hold positive views of themselves but negative views of others.

Each attachment style, with its associated views of self and others, is also suggested to predict behaviours in relationships and levels of intimacy achieved in romantic relationships. Thus an individual with a secure attachment style tends to openly give and receive affection and is able to achieve high levels of intimacy in his/her romantic relationships. A preoccupied attachment style is characterized by a desire to seek out relationships, accompanied by a subsequent withdrawal from the relationship due to a fear of rejection. Therefore, an individual with a preoccupied attachment style may achieve fluctuating levels of intimacy in his/her relationships, but because of a fear of becoming too close, such intimate relationships are not likely to endure. People with fearful attachment styles will avoid closeness with other individuals because they do not view themselves as lovable and see other people as rejecting. Although they may become involved in romantic relationships, these relationships are likely to remain superficial and hence such individuals do not achieve deep levels of intimacy. Finally, dismissive individuals may also become involved in romantic relationships, but because of their negative views of others, they will tend to seek out such relationships for self-gratification and exploit their partners. These relationships are usually one-sided such that true emotional intimacy does not develop.

Attachment, Intimacy, and Loneliness in Sexual Offenders

Some of the interpersonal problems of sexual offenders have been linked to the offenders' attachment styles. For example, Marshall (1993) suggested that there is an element of vulnerability among sexual offenders. This vulnerability stems from poor quality attachment bonds in the offender's childhood, resulting in low self-confidence, empathy deficits, and poor social skills. These difficulties, in turn, lead to low levels of intimacy in adult relationships and experiences of loneliness.

In support of the hypothesis, some of the research has demonstrated that sexual offenders endorse statements indicating insecure attachment patterns. Ward, Hudson, and Marshall (1996) found that most of the sexual offenders in their sample indicated an insecure adult attachment style. They also found differences between type of victim (adult vs. child) and the type of insecure attachment pattern endorsed by the offenders. Similarly, Jamieson and Marshall (2000) found differences in attachment style among extrafamilial child molesters, incest offenders, and two comparison groups (nonsexual offenders and a group of men from the community). In their study, extrafamilial child molesters were far more likely to endorse statements indicating a fearful attachment style than their community counterparts, whereas the incest offenders did not differ from either of the comparison groups.

Mulloy (1999) compared a group of rapists to a group of men in the community and found that rapists were more likely to endorse statements indicating an insecure attachment style than were the community group. On the other hand, when Cortoni (1998) compared groups of rapists, child molesters, and nonsexual

violent offenders, she did not find differences in attachment styles among these groups; therefore, it is possible that when sexual offenders are compared to a group of nonsexual offenders, attachment patterns may not be a specific problem of sexual offenders per se, but may be a problem for incarcerated offenders in general.

Nonetheless, sexual offenders have indicated problems in their interpersonal relationships. Firestone, Bradford, Greenberg, Larose, and Curry (1998) found that groups of child molesters in their study were far less likely to report having ever been married than is true for the national average for men in their age group. It is possible that the interpersonal difficulties of sexual offenders are due to deficiencies in skills that are necessary to cultivate romantic relationships. Seidman, Marshall, Hudson, and Robertson (1994) compared four groups of sexual offenders (rapists, incest offenders, nonfamilial child molesters, and exhibitionists) to a group of spousal abusers, and 2 groups of nonoffender males: one group from the general community and one group of university students. None of the participants was incarcerated. They found that sexual offenders scored lower on a measure of intimacy and higher on a measure of loneliness than did any of the comparison groups (including the spousal abusers). In a second study, the authors investigated differences in groups of incarcerated offenders. Their participants were classified into groups of child molesters, rapists, violent nonsexual offenders, and nonviolent, nonsexual offenders. Again they found that the sexual offenders scored higher on a measure of loneliness than the other two offender groups, and on their measure of intimacy, the nonviolent nonsexual offenders scored higher than the other three groups. Their overall conclusion was that sexual offenders exhibit greater degrees of difficulty with respect

to loneliness and intimacy than do other offender groups, regardless of whether they are incarcerated or not.

The results from a study by Garlick, Marshall, and Thornton (1996) concurred with the findings of the studies described above. When they compared groups of incarcerated offenders (rapists, child molesters and nonsexual offenders) on measures of intimacy and loneliness, they found that child molesters exhibited the highest levels of loneliness and were most lacking in intimacy. The rapists were also lonelier than the nonsexual offenders and were more likely to lack intimacy (although the latter result did not reach the level of statistical significance). Bumby and Hansen (1997) expanded on previous work by examining intimacy across different types of relationships (male friends, female friends, family members, and romantic partner). They also examined fear of intimacy by using a scale that permitted such an examination regardless of whether the offender was actually involved in a relationship. Regarding intimacy levels, rapists and child molesters reported lower levels of intimacy with male friends, female friends, and in their overall levels of intimacy in relationships. In addition, rapists reported lower levels of intimacy with family members than any of the other three groups. And although the differences were not statistically significant, the sexual offenders reported lower levels of intimacy with spouse/significant other than did the two comparison groups. Furthermore, child molesters indicated a greater fear of intimacy than any of the other three groups. Finally, on measures of loneliness, Bumby and Hansen found that the sex offender groups reported higher levels of overall loneliness, emotional loneliness, and social loneliness than either of the comparison groups.

These difficulties in interpersonal relationships have been linked to their social deficits. When Garlick et al. (1996) conducted their study of intimacy and loneliness in sexual offenders, they also examined attribution of blame for the breakdown in a relationship. The found that the sexual offender groups attributed more blame to the woman than did the comparison group for the scenario depicting a breakdown in a relationship. The participants also responded to a series of incomplete sentences, and these responses were classified as internal or external attributions of blame. For this part of the study, the results indicated that rapists used external attributions more than child molesters or nonsexual offenders, although there were no differences between the latter two groups.

In a similar study, Marshall, Barbaree, and Fernandez (1995) compared sexual offender groups (rapists and nonfamilial child molesters) to two groups of nonoffenders (men from the community and university students) on measures of social competence and in their judgments of actors in social situations. The researchers found that the child molesters had lower self-confidence, were more socially anxious, and were less assertive than rapists or students, but were similar on these measures to the community controls. However, the child molesters rated the unassertive actor in the videotaped segments to be the most appropriate respondent. The rapists rated the aggressive respondent as the most appropriate, whereas the students rated the appropriately assertive respondent as most appropriate. The community subjects appeared to rate each respondent as equally appropriate. The authors concluded that the model of social functioning accepted by sexual offenders was different from prosocial expectations, and they highlighted the

need to address social functioning in research and treatment of sexual offenders.

This brief review demonstrates that studies of sexual offenders have linked attachment style to intimacy and loneliness, and these studies have also underscored the importance of social functioning and interpersonal variables in examining intimacy deficits and loneliness in sexual offenders.

Attachment and Interpersonal Theory

Horowitz, Rosenberg and Bartholomew (1993) suggested that each attachment style implies different types of interpersonal orientations, and therefore, each attachment style may be associated with its own unique set of interpersonal problems. They examined the relationship between attachment style and interpersonal problems in university students. Participants classified in the secure category of attachment style reported problems associated with the friendly, or warm, hemisphere of the interpersonal circumplex (i.e., the hemisphere corresponding to the positive side of the affiliation axis). Participants classified as dismissive, on the other hand, reported problems associated with hostility, or coldness. Preoccupied individuals rated their interpersonal problems as falling into the friendly-dominant categories, and fearful individuals described their interpersonal problems as primarily related to under-assertiveness. Thus the findings of Horowitz et al. confirm a connection between attachment styles and interpersonal problems, such that people with certain attachment styles tend to experience certain sets of interpersonal problems to a greater extent than those with other attachment styles.

Although the concepts of adult attachment style and interpersonal style may sound like similar constructs, there are some important conceptual differences.

Attachment styles are defined as a combination of one's view of the self and his or her view of others, whereas interpersonal style, according to interpersonal circumplex theory, has as its underlying dimensions the control and affiliation displayed in social/interpersonal interactions. Interpersonal style has been defined as "regularities in the way that a person manages interactions across many social encounters and relationships" (Blackburn, 1998, p. 156). Blackburn (1998) also noted that it is beliefs about the self and others regarding social motives of power and affiliation that are the foundation for the differences in interpersonal style. This point suggests a link between attachment theory and interpersonal circumplex theory, even though they are not the same construct.

When Eher et al. (1999) investigated interpersonal problems of sexual offenders, they discovered some interesting differences among different types of sexual offenders and a volunteer group of men from the community. Eher et al. found that child molesters reported themselves to be overly nurturant more often than did rapists, and rapists were the least likely to consider themselves exploitable. Also, rapists were least likely of all groups to endorse items indicating a fear of negative evaluation by others. Eher et al. did not investigate attachment styles in these groups. It is possible that the low rating of fear of negative opinions of others in rapists reflects little concern for the opinions of others, which could be a reflection of a negative view of others. Furthermore, their tendency to deny seeing themselves as exploitable may reflect a relatively positive view of themselves. Together, these self-reports might be a reflection of a dismissive adult attachment style among the rapists.

As well as being connected to attachment style, interpersonal circumplex theory has been related to the development of loneliness. Horowitz, Dryer and Krasnoperova (1997) opined that people do not learn simple isolated responses to particular situations, but rather that they develop social scripts. They used the example of a child who is overly scolded by a caregiver at every provocation, and suggested how this child begins to learn the sequence of interpersonal behaviours and thus develops a capacity to perform the other role in the sequence as well. Because of this capacity, such a child may reproduce the script or pattern in subsequent relationships by either finding other people who will scold him or her, or this person will find new people to take on the role of the person receiving the scolding in order that he or she can initiate the sequence instead of reacting to it. In relating this discussion to the development of loneliness, Horowitz et al. (1997) suggested that the poor social performance of lonely people is due to their expectations of this performance and the likely result, and therefore they continue their pattern of inadequate social responses, repeating the interpersonal interactions that sustain their loneliness. In other words, their loneliness is the result of social skills deficits, which are the result of the development of faulty social scripts resulting from their inadequate learning experiences. Another point worth noting from the position of Horowitz et al. (1997) is that the discussion went back to early learning experiences from a child's primary caregiver, thus indicating the importance of the role of attachments.

Interpersonal Circumplex and Forensic Populations

Interpersonal Observations of Criminal Populations

Despite the connections between interpersonal circumplex theory, attachment theory, and intimacy and loneliness, and the relevance of attachment theory and intimacy deficits in sexual offenders, there are no published studies examining the relevance of interpersonal circumplex theory to the sexual offender population. However, minimal research examining interpersonal circumplex theory in the general forensic population has been undertaken by Blackburn and his colleagues.

Blackburn (1998a) examined the relationship between criminality and interpersonal behaviour as mapped onto the interpersonal circle in a sample of mentally disordered offenders in England. The sample was divided into two groups: mentally ill offenders, and nonmentally ill offenders, who had a diagnosis of Psychopathic Disorder. Blackburn noted that the clinical difference between the two groups concerned the presence of major mental disorder, and not the presence of personality disorder, as some men in the mentally ill group were also diagnosed with Psychopathic Disorder. Blackburn used a scale developed by himself, the Chart of Interpersonal Reactions in Closed Living Environments (Blackburn & Renwick, 1996) to assess interpersonal style. This scale was completed by observers of the offenders' behaviour, and the scores provide octant scale scores producing a profile of interpersonal behaviour. As well, their scores on the two axes of control and affiliation provide the individual's customary or prototypical interpersonal style.

Blackburn found that the nonmentally ill group was more dominant than the mentally ill group, and within the groups, dominance was associated with criminality.

Also, he found a negative correlation between most offense types and the positive pole on the affiliation axis ("love", or nurturance). One notable exception to that finding is with regard to sexual assault: he found that sexual assault was associated with a more nurturant style (the "love" pole on the affiliation axis) in the mentally ill group, but not in the nonmentally ill group. Although Blackburn's sample did contain offenders who had committed sexual offenses (23% had sexual offenses in their criminal histories), he did not compare the sexual offenders within each group (mentally ill or psychopathic group) with the nonsexual offenders. Also, he did not separate the sexual offenders into those with child victims and those with adult victims. As well, the difference in sexual assaults between those high in criminality and those low in criminality was not significant in either of the two original groups (mentally ill and nonmentally ill). Thus while Blackburn's study does demonstrate an association between interpersonal style and criminality in mentally disordered offenders, it does not give much information specific to sexual offenders.

Blackburn (1998b) also investigated the relationship between observer ratings of interpersonal style and scores on the personality disorder scales of the Millon Clinical Multiaxial Inventory in another sample of male forensic psychiatric patients. He found that personality disorders did not conform to circumplex structure within the interpersonal circle space as the main source of variation was found in the control axis but less so in the affiliation axis. However, he did find that the vector length (which indicates rigidity of interpersonal style) of most of the personality disorder scales suggested an interpersonal manifestation of these disorders.

Psychopathy and Interpersonal Theory

One aspect of personality worth examining in the forensic population is the criminal personality, or psychopathy. Psychopathy is a theoretical personality construct. Hare (1993) defined it as a syndrome that is comprised of both personality traits and socially deviant behaviours. It has also been described as being manifested in a pattern of interpersonal, affective, and behavioural symptoms (Hare, 1996). The interpersonal facet of psychopathy is described using the following terms: glib and superficial, grandiose, deceitful, manipulative, dominant, and callous. Affective symptoms are shallow emotions, lack of empathy, and lack of remorse. Behavioural symptoms include impulsivity, lack of accepting responsibility, early criminal behaviour and versatility in criminal behaviour, lack of inhibitory control over behaviour, and need for excitement.

From the descriptive terms above, the importance of psychopathy in criminal populations may seem evident. Adding further evidence are the results of empirical investigations. The proportion of psychopaths in prison populations is much higher than their proportion of the general population: Hare (1993) stated that approximately 20 percent of prison inmates are psychopaths, and that psychopaths are responsible for more than half of the serious crimes committed. Psychopaths tend to use more violence in their crimes (Kosson, Smith & Newman, 1990; Serin, 1991), and the use of violence in their crimes appears to have different motivating factors from the violence committed in crimes of nonpsychopaths. Specifically, whereas nonpsychopaths are more likely to commit violent crimes during times of emotional turmoil, psychopaths are more likely to commit violent crimes impulsively,

or for purposes of revenge (Williamson, Hare & Wong, 1987). Additionally, psychopaths are more likely to commit violent crimes against strangers than are nonpsychopaths (Williamson et al., 1987).

Psychopathy also appears to be associated with risk levels in sexual offenders. Prentky and Knight (1991) estimated that as much as half of the serial rapists are psychopaths. And psychopathic sexual offenders appear to be more difficult to treat with programs, as evidenced by studies of recidivism (Rice, Harris & Quinsey, 1990). Seto and Barbaree (1999) followed up a sample of sexual offenders released to the community after completing a cognitive-behavioural program during their incarceration. Scores on a measure of psychopathy were associated with higher reoffense rates. Serin, Mailloux, and Malcolm (2001) corroborated the findings of Rice et al. (1990): their results indicated that sexual offenders who scored higher on a measure of psychopathy and displayed deviant sexual arousal not only recidivated at higher rates, but they also reoffended more quickly.

Some interpersonal aspects of psychopathy have already been outlined. To elaborate further on these characteristics, Hare (1993) described the observable behaviours relating to the interpersonal dimension of the construct. The glibness, or superficiality, is demonstrated by individuals who are often entertaining conversationalists. They will tell stories and make efforts to present themselves well. They may appear to be charming and witty, but when the behaviour is taken to the more extreme ends that Hare (1993) described, they will appear insincere, and efforts to appear extremely knowledgeable and/or likable become evident. The

egocentricity, or grandiose sense of self, may be manifested in domineering behaviour and arrogance. They may view their abilities as unrealistically high and are not likely to value the opinions of others. Their manipulative nature is evident by exploitive behaviour in relationships and by efforts to dupe others. They often tell many lies, and are unconcerned by people finding out about their lies Also relevant to interpersonal behaviour are some of the symptoms identified as affective symptoms. For example, their lack of empathy and callousness is usually demonstrated by their behaviour toward others within an interpersonal context (e.g., relationships with romantic partners). Clearly, this construct of psychopathy is linked to interpersonal behaviour, and its ties to criminal behaviour are evident, particularly when people are directly victimized (as in violent and sexual offenses).

Leary (1957) recognized the importance of psychopathy in the interpersonal realm. He declared that psychopaths avoid dependent feelings and that they have "punitive relations with others" (p. 347). He added that they misperceive the interpersonal behaviour of other people, tending to see others' behaviour as hostile. They often do not enter into therapy, but if they do, they are poorly motivated. Although Leary interchangeably used the terms "psychopathic" and "sadistic", his description of the interpersonal problems of psychopaths and their prognosis in therapy was consistent with current literature.

Apart from Leary's work, there have been more recent empirical studies of the relationship between psychopathy and the interpersonal circumplex. Blackburn and Maybury (1985) examined nurses' ratings of patients detained at a maximum-security psychiatric hospital. Using nurses' ratings of Cleckley's criteria of

psychopathy and their ratings of patients' sociability and aggression, together with patients' self-reports on measures of personality, the authors found that the relationship among measures corresponded to the interpersonal circle. The criteria of psychopathy fell into the octant category of hostility. This is the area onto which Leary (1957) proposed that the psychopathic personality would be mapped.

Harpur, Hare, and Hakistan (1989) found that the interpersonal factor of psychopathy was positively correlated with hostility and dominance, and the factor related to antisocial lifestyle was more strongly associated with hostility. When they examined correlations between ratings of psychopathy and observer ratings of interpersonal behaviour, they found the overall rating of psychopathy was more strongly and consistently associated with hostility and dominance.

Foreman (1989) examined self and other ratings of incarcerated offenders on a measure of the interpersonal circumplex, the Revised Interpersonal Adjective Scales (Wiggins, Phillips & Trapnell, 1989; Wiggins, Trapnell & Phillips, 1988). Some of the men in this sample were classified as psychopaths, according to their ratings on a measure of psychopathy (Hare, 1991). Foreman hypothesized that staff ratings would result in the psychopaths' interpersonal style being mapped in the hostile-dominant quadrant of the interpersonal circle. Overall, the self-description of the offenders' interpersonal style placed them within the arrogant/calculating and the coldhearted octants of the circumplex. The ratings by staff were relatively consistent with the offenders' self-ratings. This congruence between self and staff ratings was evident for the psychopaths in particular, with psychopaths and staff rating the typical interpersonal style of psychopaths in the hostile-dominant quadrant; however,

staff perceived the behaviour of the psychopaths as more hostile than did the psychopaths perceive themselves.

Purpose of Current Investigation and Hypotheses

Overall Purpose

In studies of the interpersonal problems of sexual offenders, there has not been a systematic investigation of the differences in interpersonal styles among different types of sexual offenders. The interpersonal circumplex model can provide a framework to integrate both empirical findings and clinical observations. Although the interpersonal circumplex has been used in a few studies of general forensic populations, there has not been an attempt to classify offender types and investigate differences among these groups. As well, there has not been much attention to sexual offenders in particular with respect to how their behaviour might be mapped onto the interpersonal circumplex.

The overall purpose of the current study is to examine the utility of applying the interpersonal circumplex model to the sexual offender population. It is proposed that interpersonal circumplex theory can be used as a framework to tie together the empirical research and clinical observations that point to relationship difficulties in this population of offenders. Furthermore, the use of such a model incorporates the construct of psychopathy, which is highlighted as a risk factor for further sexual reoffense as well as a risk factor for treatment failure (Rice et al., 1990; Serin et al., 2001).

Hypotheses - Section 1: Classifying Offenders According to Interpersonal Style

Because research has demonstrated differences between different types of sexual offenders on constructs related to interpersonal relationships (e.g., Garlick, Marshall & Thornton, 1996; Seidman et al., 1994), it follows that different types of sexual offenders would also exhibit different interpersonal styles. Given past research into the social skills and social competence of sexual offenders, as well as clinical observations, it is expected that rapists will exhibit more dominant interpersonal styles, whereas child molesters will tend to be more interpersonally submissive. Additionally, it is expected that rapists will be more hostile than child molesters. A control group of nonoffenders are expected to have more adaptive social skills, manifested as a more assertive and friendly interpersonal style. Thus the following hypotheses are made with respect to the orthogonal axes of affiliation (friendliness vs. hostility) and control (dominance vs. submission):

1. Rapists will be more hostile than child molesters.
2. Rapists and violent offenders will be more dominant than the child molesters and nonoffenders.
3. Child molesters will be more submissive than rapists.
4. Nonoffenders will be friendlier than the offender groups.

Using the interpersonal circumplex model to explore more specifically the different categories of interpersonal style (formed by the angular locations of the vectors on the profiles), the following predictions stem from the hypotheses:

1. The interpersonal style of rapists will be more likely than that of the other

groups to map onto the hostile-dominant quadrant of the interpersonal circle.

2. Rapists will have higher ratings on the octants on the hostile half of the circumplex (i.e., Arrogant-Calculating, Coldhearted, and Aloof-Introverted on the Interpersonal Adjective Scales; and Competitive, Cold, and Socially Avoidant on the Inventory of Interpersonal Problems) than the child molesters, and lower scores on the octants on the friendly half of the circumplex (Gregarious-Extraverted, Warm-Agreeable, and Unassuming-Ingenuous) than the child molesters.
3. Child molesters will have higher scores than the other groups on the most purely submissive octant of the interpersonal circumplex (i.e., Unassured-Submissive on the Interpersonal Adjective Scales, and Nonassertive on the Inventory of Interpersonal Problems).
4. Rapists will score higher than child molesters on the purely dominant octant (i.e., Assured-Dominant octant on the Interpersonal Adjective Scales and the Domineering-Autocratic octant on the Inventory of Interpersonal Problems). Child molesters will be more likely than other groups to exhibit interpersonal styles contained in the lower half of the interpersonal circle (i.e., in the hostile-submissive and friendly-submissive quadrants).
5. Nonoffenders, used as a comparison group, will have higher scores on the friendly-dominant octant (i.e., Gregarious-Extraverted on the Interpersonal Adjective Scales, and Overly-Expressive on the Inventory of Interpersonal Problems).
6. Finally, with respect to rigidity of interpersonal style, it is expected that the

offender groups will display more rigidity than the nonoffenders.

Hypotheses - Section 2: Association between Attachment and Interpersonal Style

Sexual offenders, Attachment, and Interpersonal Style

Attachment theory and adult attachment style has been investigated in samples of sexual offenders, and previous research has noted that different types of sexual offenders (i.e., child molesters and rapists) exhibit different attachment styles (e.g., Cortoni, 1998; Ward, Hudson & Marshall, 1996). The incorporation of attachment style into this project is not only because of its importance in the study of sexual offenders, but also because of its links to interpersonal circumplex theory, as demonstrated by previous research (Horowitz, Rosenberg, & Bartholomew, 1993). Because adult attachment style is regarded as deriving from a combination of views toward oneself and views toward others, there are implications for how attachment style translates into interpersonal behaviour toward others. In this section, it is expected that previous findings of differences in attachment style among different types of offenders will be found, and the following hypotheses outline these expectations:

1. Sexual offenders will be more likely than nonsexual offenders and nonoffenders to endorse items reflecting insecure attachment styles (i.e., dismissive, fearful, and preoccupied).
2. Child molesters will be more likely than any other group to be categorized as having fearful and preoccupied attachment styles.
3. Rapists will be more likely than child molesters and nonoffenders to be

categorized as having a dismissive attachment style.

The second set of hypotheses examines these differences in attachment style and how they relate to the different interpersonal styles. This set of hypotheses will examine the possibility that views of oneself and views of other people, comprising the various styles of adult attachment, are related to mappings on the interpersonal circumplex because views of oneself and views of others imply certain interpersonal behaviours on the control and affiliation axis. These hypotheses reflect the theoretical differences in views of others and self according to adult attachment theory. These hypotheses indicate that the combination of views of others and views of self should result in an analogous combination of affiliation and control, and this should be reflected by the angular locations of the vectors on the interpersonal profiles for each attachment group.

Therefore, the first section of hypotheses (i.e., "Classifying offenders according to interpersonal style") examines differences between offender types on interpersonal behaviour; the second section of hypotheses (i.e., Association between attachment and interpersonal style") examines first the differences between offender types on attachment, and the next part of hypotheses for this second section reflects the expectation that the different attachment types will also reflect different interpersonal styles, regardless of offender type. These hypotheses somewhat reflect findings of limited previous research (Horowitz, Rosenberg and Bartholomew, 1993):

1. Those participants with positive views of themselves (i.e., those in the secure and dismissive attachment style categories) will reflect greater

dominance and less submissiveness in interpersonal style.

2. The corollary to the above is that those participants with negative views of themselves (i.e., in the fearful and preoccupied groups) will report interpersonal styles and problems related to submissiveness.
3. Those participants with positive views of others will report behaviour and interpersonal problems related to the friendly side of the affiliation axis.
4. Those participants with negative views of others will report behaviour and interpersonal problems related to the hostile side of the affiliation axis.
5. Finally, those participants who report insecure attachment will exhibit greater rigidity in their interpersonal styles than those who report a secure attachment style.

Hypotheses - Section 3: Psychopathy, Attachment, and Interpersonal Style

Psychopathy and Attachment Style

In discussing the problematic interpersonal style of offender groups, the construct of psychopathy is important to consider. As previously outlined, psychopathy is comprised of both personality traits and socially deviant behaviours, but the way in which one assesses the presence or absence of psychopathy is based largely on observations of interpersonal behaviours. In fact, the manual for administering and scoring the Hare Psychopathy Checklist-Revised (PCL-R) emphasizes the need for an interview with the subject in order to observe his/her interpersonal behaviour, and recommends against a highly structured interview in order to allow a natural interpersonal interaction to take place.

The interpersonal nature of psychopaths also suggests some possible links to

attachment style. Certainly the description of some of the symptoms of psychopathy implies that views of oneself and views of others may underlie these symptoms. For example, psychopaths may present with a grandiose sense of self-worth, described as an inflated view of his or her own abilities and "inflated ego" (Hare, 1991, p.18). Another symptom of psychopathy is callousness, described as being marked by a "contempt and lack of concern for others", and viewing others "as objects to be manipulated" (Hare, 1991, p. 22). It is reasonable, therefore, to assume that psychopathy is a crucial construct to consider in this project because of its importance in the interpersonal behaviour of the forensic population and of sexual offenders in particular, as well as its potential links to adult attachment style.

The studies described in the *Introduction* suggest that psychopaths will be more likely to exhibit particular types of attachment style. The following prediction stems from this hypothesis:

1. Offenders scoring high in psychopathy will most frequently endorse items reflecting a dismissive attachment style.

Psychopathy and Interpersonal Style

Based on previous research of psychopaths and interpersonal style (e.g., Blackburn, 1988a; Foreman, 1989), psychopaths are expected to endorse statements reflecting certain positioning on the interpersonal circle. Also, because research of personality disorders suggests that individuals with disordered personality exhibit more rigidity in their interpersonal behaviour, it is expected that psychopaths will also present this problem. The following predictions reflect these expectations:

1. Offenders scoring high on psychopathy will exhibit a hostile interpersonal style.
2. Psychopaths will exhibit greater rigidity of interpersonal style than nonpsychopaths.

One final point to be mentioned with respect to psychopathy is the apparent lack of concern that psychopaths seem to have with their behavioural and interpersonal difficulties. Hare (1991) noted that psychopaths "readily violate social norms" (p. 3) and that in their behaviour is the obvious willingness to commit crimes against others and failure to fulfill responsibilities to other people. It is therefore assumed that psychopaths are not as likely to view their interpersonal style as necessarily problematic. The following prediction is made from this rationale:

3. Interpersonal style will not be as strongly associated with self-reports of interpersonal problems in offenders scoring high in psychopathy compared to those scoring low in psychopathy.

Hypotheses - Section 4: Relationships among Interpersonal Style, Attachment, Intimacy, and Loneliness

Having previously made the conceptual distinctions between adult attachment style and interpersonal style, it is expected that these concepts will be inter-related to the development of intimacy deficits and loneliness. In the sexual offender population, prior research has established a link between attachment styles, intimacy deficits, and loneliness (Cortoni, 1998). However, the mechanism by which attachment style exerts its influence on the development of intimacy (or the lack thereof) has not been empirically demonstrated. The previous discussions of a

relationship between attachment style and interpersonal style, and the discussion of interpersonal style as it is linked to the development of relationships, suggest that interpersonal style might also factor into the relationship between attachment style and intimacy deficits and loneliness. It is proposed that adult attachment style exerts its effect on intimacy and loneliness via interpersonal style. In other words, attachment style, which stems from early childhood experiences (Bartholomew, 1990; Bowlby, 1977), is expected to influence interpersonal style, and interpersonal style, in turn, is expected to lead to intimacy (or deficits in intimacy, as the case may be) and loneliness (or its absence). The following predictions stem from these hypotheses:

1. Sexual offenders will be more likely to report intimacy deficits and greater loneliness than the other groups.
2. Insecure attachment styles will be positively associated with intimacy deficits.
3. Insecure attachment styles will be positively associated with loneliness.
4. Interpersonal style will act as a mediator between attachment style and intimacy deficits.
5. Interpersonal style will mediate the relationship between attachment style and loneliness.

METHOD

Participants

The participants in this study were male volunteers recruited from both the community and from federal penitentiaries in the Ontario region. The sample consisted of 159 men: 37 community volunteers, 39 men with sexual offenses against adults (rapists), 42 men with sexual offenses against children (child molesters), and 41 violent offenders (men convicted of violent nonsexual offenses). The central focus of the study is sexual offenders. The child molester group contains mainly offenders with offenses against extrafamilial victims. However, there were also seven participants who had victims only within the family (there were an additional two participants with offenses against extended family members). Because this group comprised such a small proportion, they were not considered as a separate group of child molesters. Also, when the scores on the various measures of the extrafamilial child molesters were compared to those of the intrafamilial child molesters, no differences were noted that would have altered the results of the study. The two comparison groups were chosen for the following reasons: a) the violent offenders were chosen to control for the violent and victim features of sexual offenders; b) the community participants were chosen to control for the possible effects of incarceration.

The criminal histories of the offender participants were screened to ensure that no rapist had ever committed sexual offenses against child victims, no child molester had ever committed sexual offenses against adult victims, and no violent offender had committed a sexual offense. In addition to the numbers reported

above, one rapist was excluded from the study because he had previously participated in a treatment program. Another rapist was excluded because he gave the same response to every item of each questionnaire (including the reverse-scored items). Twelve community volunteers were excluded due to self-reports of violent or sexual offense convictions, or self-reported sexual offenses (regardless of whether they had ever been charged).

Incarcerated participants were recruited from the following penitentiaries: Bath Institution, Joyceville Institution, Warkworth Institution, Kingston Penitentiary, and the Regional Treatment Centre (Ontario). These institutions range from medium to maximum-security levels, therefore representing a range of living conditions and current surroundings.

The mean age for each group of participants (with standard deviations in parentheses) was 34.6 years (9.6) for the community volunteers, 35.9 years (8.6) for the rapists, 43.6 years (12.4) for the child molesters, and 35.7 (10.9) years for the violent offenders. With an alpha level of .05, the difference among mean ages was significant, $F(3,155)=6.35$, $p<.001$. The Scheffe test revealed that the mean age for the child molesters was significantly higher than that of all other groups. The finding that child molesters are older than other offender groups (including rapist groups) is not unusual for studies of sexual offenders (e.g., Abracen, Looman & Anderson, 2000; Cortoni & Marshall, 2001; Wilson, 1999). One possibility for this concerns the fact that there is no statute of limitations on prosecuting sexual offenses in Canada and many child molesters are prosecuted several years after their offenses were committed and after their victims have become adults; therefore, any sample of child

molesters will be more likely to be older than other inmates by the time they are convicted.

The number and percentages of participants in each group that fall into different categories of educational level, occupation, and marital status are shown in Table 1. As can be seen from the table, the community participants were overall better educated than the incarcerated participants, with the majority of them (89%) having completed secondary school or some level of post-secondary education. Also worth noting is the breakdown of marital status for the rapists: the vast majority of them (74%) were single, and a chi square analysis revealed this difference in marital status among groups was significant, $\chi^2(9,N=148)=22.07$, $p<.01$.

Table 1.

Education, Occupation, and Marital Status by Group

	Community n (%)	Rapists n (%)	Child Molesters n (%)	Violent Offenders n (%)
Education				
Grade 8 or less	0 (0.0%)	8 (20.5%)	6 (14.3%)	1 (2.4%)
Some high school	4 (10.8%)	16 (41.0%)	21 (50.0%)	18 (43.9%)
Completed high school	10 (27.0%)	9 (23.1%)	10 (23.8%)	8 (19.5%)
Post-secondary/Trade school	22 (59.5%)	5 (12.8%)	5 (11.9%)	14 (34.1%)
Graduate degree	1 (2.7%)	1 (2.6%)	0 (0.0%)	0 (0.0%)
Occupation[a]				
Unemployed	5 (13.5%)	17 (43.6%)	8 (19.0%)	12 (29.3%)
General labourer	8 (21.6%)	12 (30.8%)	21 (50.0%)	10 (24.4%)
Skilled labourer	7 (18.9%)	3 (7.7%)	8 (19.0%)	6 (14.6%)
Office worker/Sales	5 (13.5%)	2 (5.1%)	2 (4.8%)	4 (9.8%)
Professional/Self-employed	7 (18.9%)	2 (5.1%)	1 (2.4%)	8 (19.5%)
Student	4 (10.8%)	2 (5.1%)	0 (0.0%)	1 (2.4%)
Military	0 (0.0%)	1 (2.6%)	0 (0.0%)	0 (0.0%)
Pensioner or Retired	1 (2.7%)	0 (0.0%)	2 (4.8%)	0 (0.0%)
Marital Status[bc]				
Single	11 (29.7%)	29 (74.4%)	19 (45.2%)	19 (46.3%)
Separated/Divorced	2 (5.4%)	8 (20.5%)	8 (19.0%)	6 (14.6%)
Married/Common-law	13 (35.1%)	2 (5.1%)	13 (31.0%)	14 (34.1%)
Widowed	0 (0.0%)	0 (0.0%)	2 (4.8%)	2 (4.9%)

Note: Numbers and percentages shown are total number and percentage within that group.
[a]Occupation prior to incarceration for offender groups
[b]Current marital status
[c]Incomplete information for Community group

Measures

The data for this study were gathered mainly through the use of self-report paper-and-pencil questionnaires. The community participants completed a screening questionnaire (Appendix I) and all participants completed a brief demographic form (Appendix II). Community participants verbally provided the demographic information not included in the form (marital status), and institutional files were used to provide demographic information and criminal history information for the incarcerated participants to ensure accuracy of information.

Interpersonal Style

Interpersonal style was assessed using both a measure of self-reported traits (Revised Interpersonal Adjective Scales) and a measure of self-perceived difficulties in interpersonal behaviour (Inventory of Interpersonal Problems).

Revised Interpersonal Adjective Scales (IAS-R; Wiggins, Trapnell & Phillips, 1988; Appendix III).

This measure is a 64-item version of the original 128-item version of the Interpersonal Adjective Scales. The IAS-R measures two dimensions of interpersonal interaction: *dominance*, or control, ranging from "assured-dominant" to "unassured-submissive"; and *nurturance*, or affiliation, ranging from "cold-hearted" to "warm-agreeable". The inventory requires respondents to rate themselves according to the descriptive accuracy of each adjective on an 8-point Likert scale, ranging from "Extremely inaccurate" (zero) to "Extremely accurate" (8). These responses generate scores on the following eight interpersonal variables that are

some combination of dominance and nurturance: assured-dominant, gregarious-extraverted, warm-agreeable, unassuming-ingenuous, unassured-submissive, aloof-introverted, cold-hearted, and arrogant-calculating.

Individuals with assured-dominant styles tend to endorse adjectives reflecting power, and tend not to lean strongly in the direction of either friendliness or hostility, so their style reflects one that is more purely dominant. Other styles in the dominant hemisphere of the circumplex are arrogant-calculating, which leans toward the hostile end of the affiliation axis, and gregarious-extraverted, which leans toward the friendly end of the affiliation axis. Individuals with unassured-submissive styles tend to be timid in social interactions, but they do not typically lean strongly toward either the hostile or friendly end of the affiliation axis, thus their style reflects one more purely submissive. Other styles in the submissive hemisphere are aloof-introverted, which leans toward the hostile end of the affiliation axis, and unassuming-ingenuous, which leans toward the friendly end of the affiliation axis. The styles at each end of the affiliation axis, and not reflective of consistent strength toward either end of the control axis, are cold-hearted (at the hostile end of the affiliation axis) and warm-agreeable (at the friendly end of the affiliation axis).

The revised scale was based on responses to items on the original IAS from 1161 undergraduate students (9 sample sets in total). In their study to reduce the number of items on the original IAS, Wiggins et al. (1988) found the internal consistency values for the subscales of the shorter version (i.e., the IAS-R) ranged from .75 to .86. The circumplex structure for the IAS-R was found to be as good or better than that of the IAS in all of their nine sample sets. The IAS-R is one of the

best-researched interpersonal circle measures and is regarded as one of the best measures with regard to fit to the circumplex model and psychometric criteria (Foreman, 1989; D. Kiesler, personal communication, May 11, 1999).

The IAS-R has previously been used to study offender populations (Foreman, 1989). In his study, Foreman noted that the average reading level of incarcerated men presents some difficulty in using the IAS-R with this population of research participants. Following his protocol, and the suggestion of Wiggins (1995), the glossary (Appendix IV) was given to all research participants in the current study, and the research assistant was present during the administration of the measure to answer questions.

Inventory of Interpersonal Problems – Circumplex Version (IIP-C; Alden, Wiggins & Pincus, 1990; Appendix V).

This 64-item scale was derived from the 127-item Inventory of Interpersonal Problems (Horowitz, Rosenberg, Baer, Ureno & Villasenor, 1988). The original Inventory of Interpersonal Problems (Horowitz et al., 1988) was created to help identify interpersonal sources of distress for clients in psychotherapy. Factor analysis yielded six subscales to this measure: Assertive, Sociable, Intimate, Submissive, Responsible, and Controlling. Internal consistency for these subscales was high (values of alpha ranged between .82 and .93), and the test-retest correlation coefficients over a 10-week period ranged from r=.80 to r=.90. After correlating the subscale scores, a principal-components factor analysis revealed two factors: a hostile-friendly dimension and a submissive-dominant dimension. Mulloy (1999) used the original Inventory of Interpersonal Problems on a sample of

community volunteers and incarcerated rapists. As well as Horowitz et al. (1988), she found the level of internal consistency to be high in her sample (alpha values ranged from .78 for the Controlling subscale to .92 for the Assertive and Sociable subscales).

The original measure was used to create the Inventory of Interpersonal Problems-Circumplex version (Alden et al., 1990). This circumplex version of the Inventory of Interpersonal Problems resulted in eight, 8-item subscales: Domineering/Autocratic, Vindictive/Competitive, Cold, Socially Avoidant/Introverted, Nonassertive, Exploitable, Overly Nurturant, and Intrusive/Overly Expressive.

Those who score highly on the domineering subscale, which is more purely dominant and not extremely hostile or friendly, report problems related to controlling behaviour in social interactions. Those scoring highly on the vindictive subscale report problems related to trust, and a lack of caring about others' needs. The vindictive subscale is located in the dominant-hostile quadrant of the circumplex. People scoring highly on the cold subscale, which reflects more extreme responses at the hostile end of the affiliation axis of the circumplex while not leaning strongly toward either end of the control axis, report an inability to feel love toward others. High scorers on the socially avoidant subscale, located in the hostile-submissive quadrant of the circumplex, have difficulty expressing feelings to others and socializing with others. Nonassertive individuals, who report problems mapping onto the circumplex at the submissive end of the control axis without much consistency toward the friendly or hostile end of the affiliation axis, have difficulty being firm with others and making their needs known. High scorers on the exploitable subscale,

which is located in the friendly-submissive quadrant of the circumplex, feel they are gullible. Those who describe themselves as overly nurturant report problems related to the friendly side of the affiliation axis and do not typically feel their problems are related to the issue of control. They tend to report that they try to please others and may be too generous. Individuals who score highly on the intrusive subscale, located in the friendly-dominant quadrant of the circumplex, see themselves as attention-seeking and have difficulty spending time alone.

The Inventory of Interpersonal Problems-Circumplex version was used with a clinical sample (patients referred to a treatment centre for personality disorders), and the results demonstrated convergence between the theoretical and empirical placement of the octant scales, indicating that the Inventory of Interpersonal Problems-Circumplex version has circumplex properties within a clinical sample (Soldz, Budman, Demby & Merry, 1993).

In a study of interpersonal problems presented in psychotherapy, Gurtman (1996) found that ratings on a short form of the Inventory of Interpersonal Problems provided a valid measure of these problems in the psychotherapy context, and that patient self-ratings of interpersonal problems converged with therapist ratings of patient functioning. Further to its use in psychotherapy settings, Alden and Capreol (1993) found that the Inventory of Interpersonal Problems-Circumplex version produced various profiles that were differentially associated with outcome in psychotherapy using different therapeutic strategies. Supporting these findings, Muran, Segal, Samstag, and Crawford (1994) found that certain profiles, as assessed by the Inventory of Interpersonal Problems-Circumplex version, were

positively associated with measures of therapeutic alliance while other profiles were not.

Attachment

Relationship Questionnaire (Bartholomew & Horowitz, 1991; Appendix VI).

All subjects were given the same version of this self-report measure of adult attachment. This questionnaire consists of paragraph descriptions of each of the four adult attachment patterns: Secure, Fearful, Preoccupied, and Dismissive. Respondents are first asked to determine which paragraph best describes them. Then they are required to rate on a 7-point Likert scale, ranging from "Not at all like me" to "Very much like me", the similarity of each pattern to themselves. This measure was chosen because of its prior use with sexual offender populations (e.g., Cortoni, 1998; Mulloy, 1999; Ward, Hudson & Marshall, 1996). However, this instrument has been criticized for its categorical classification of attachment style, and the imposition of a categorical model has been blamed for a lack of precision in the measurement (Fraley, Waller & Brennan, 2000). Yet the Relationship Questionnaire has been demonstrated to distinguish between sexual offenders and nonoffenders in attachment style (Mulloy, 1999), and different types of offenders have been found to exhibit different attachment styles as assessed by this measure (Ward et al., 1996).

Relationship Scales Questionnaire (Griffin & Bartholomew, 1994; Appendix VII).

An abbreviated version of the Relationship Scales Questionnaire was added to the study due to some of the criticisms underlying the Relationship Questionnaire. The Relationship Scales Questionnaire consists of 30 sentences that describe an

individual's feelings about close relationships. The respondent rates the extent to which each sentence describes his/her feelings on a 5-point scale ranging from "not at all like me" to "very much like me". Of the 30 items in the original version, four items contribute to the score for the preoccupied pattern, and four contribute to the score for the fearful pattern. Five items contribute to the score for the secure pattern, and five contribute to the score for the dismissing pattern. In this study, only the items that contribute to the scores for each of the patterns were used. Higher scores on each pattern, or subscale, indicate greater strength of the respondent's endorsement of that particular adult attachment style.

Griffin and Bartholomew (1994) admit that the internal consistencies for the scales (different attachment patterns) are variable and sometimes low. Mulloy (1999) also found that the internal consistencies were low (alpha values ranged from .49 for the Secure style to .75 for the Fearful Style). Griffin and Bartholomew (1994) explain the low reliability by stating that the self-model and other-model attachment dimensions are being combined (e.g., the item "I find it difficult to depend on other people" taps the other-model dimension whereas the item "I worry about being alone" taps the self-model dimension). Nonetheless, Griffin and Bartholomew (1994) pointed out the good convergent validity of the pattern scores on the Relationship Scales Questionnaire.

Intimacy

Social Intimacy Scale (Miller & Lefcourt, 1982; Appendix VIII).

This measure consists of 17 items requiring respondents to indicate the frequency or intensity with which they engage in activities with their current partner.

The instructions for the measure have been reworded to change "girlfriend/wife" to "partner", and an additional line to prompt those not currently in a relationship to answer the questions with respect to their last significant dating or marital relationship. Higher scores on this measure indicate higher levels of intimacy. Miller and Lefcourt's data revealed high test-retest reliability (r=.96) and demonstrated the test's validity as a measure of social intimacy. High internal consistency of the scale was demonstrated by Downs and Hillje (1991) in their sample of undergraduate students: Cronbach's alpha coefficient values ranged from .87 to .95 for various administrations of the scale for nonspousal same and mixed-sex dyads.

This measure has also been used with offender populations. Cortoni and Marshall (2001) found that the Social Intimacy Scale distinguished sexual offenders from nonsexual offenders. As well, Seidman et al. (1994) demonstrated differences between sexual offenders and wife batterers on this measure, and furthermore, they found differences in average scores on this measure between different types of sexual offenders. Marshall, Champagne, Sturgeon, and Bryce (1997) found that the Social Intimacy Scale is sensitive to treatment changes: in their sample of child molesters, the average score on the Social Intimacy Scale increased significantly following treatment procedures designed to increase self-esteem in the social realm and reduce intimacy deficits.

Fear of Intimacy Scale (Descutner & Thelen, 1991; Appendix IX).

Because some participants may not ever have been in a close relationship, as described by the Social Intimacy Scale, this measure was used to determine the participants' anxieties about close relationships. Descutner and Thelen (1991)

generated items based on their definition of fear of intimacy as an individual's inhibited capacity to exchange personally significant thoughts and feelings with another highly valued individual. The measure's 35 items are rated on a 5-point scale, where 1 indicates "not at all characteristic of me" and 5 indicates "extremely characteristic of me". Fifteen of the items are reverse-scored, and higher scores indicate a greater fear of intimacy. Descutner and Thelen (1991) demonstrated high internal consistency in their first sample of subjects participating in the test construction phase (alpha coefficient value was .93), and replicated this finding in a second sample (again, alpha coefficient value was .93). The authors also reported high test-retest reliability (r=.89), and demonstrated the construct validity of the test by correlating the scores on the Fear of Intimacy Scale with scores on measures expected to be related to the construct of fear of intimacy, as well as with scores on measures expected to have no relation to the construct. Doi and Thelen (1993) reaffirmed the high internal consistency of the scale and found evidence of its construct validity with a sample of middle-aged participants.

The Fear of Intimacy Scale has also been used with sexual offenders. Bumby and Hansen (1997) found that the Fear of Intimacy Scale distinguished between different types of sexual offenders, and between certain sexual offenders and nonsexual offenders. The authors noted the unique nature of the scale in that it may be used to assess the construct regardless of a respondent's current involvement in an intimate relationship. This benefit, combined with the previous demonstration of the scale's psychometric properties on a middle-aged sample (Doi & Thelen, 1993), highlights the potential utility of the scale with the sample used for

this study.

Loneliness

Revised UCLA Loneliness Scale (Russell, Peplau & Cutrona, 1980; Appendix X).

This questionnaire is a unidimensional measure of loneliness consisting of 20 items. Respondents indicate on a 4-point Likert scale how often (ranging from "Never" to "Often") they feel the way that is described by each statement. Higher scores indicate greater loneliness.

Russel et al. (1980) revised the original UCLA Loneliness Scale because the original was comprised of items worded all in the same direction. The revision has half of the items positively worded and half negatively worded. In their first sample of university students, Russel et al. found high internal consistency for the revised measure (alpha=.94), which they replicated with a second sample. They found the correlation between the scores on the original measure and the revised scale was r=.91. Finally, Russel et al. demonstrated the scale's concurrent validity by comparing scores on it to other indices of loneliness (reports of social activities and relationships).

The Revised UCLA Loneliness Scale has also been used to measure loneliness in offender populations. Cortoni and Marshall (2001) found significant differences in the average scores of sexual offenders and general offenders on this measure, indicating that the sexual offenders reported more loneliness. The findings from Garlick et al.'s (1996) study demonstrated significant differences in the average scores on the revised UCLA Loneliness Scale between child molesters and rapists, and between both types of sexual offenders and nonsexual offenders. Seidman et

al. (1994) used the Revised UCLA Loneliness Scale and found differences in reported loneliness between sexual offenders and wife batterers. While Bumby and Hansen (1997) did not find differences in reported loneliness, using this measure, between rapists and child molesters, they did find that the sexual offenders scored significantly higher on this measure than did nonsexual offenders and nonoffenders. However, differences between sexual offenders and nonsexual offenders are not always found in average scores on the revised UCLA Loneliness Scale (Marshall, Champagne, Brown & Miller, 1997). Nonetheless, Marshall and his colleagues (Marshall, Champagne, Sturgeon &Bryce, 1997; Marshall, Bryce, Hudson, Ward & Moth, 1996) have demonstrated that the Revised UCLA Loneliness Scale is sensitive to treatment changes, finding that sexual offenders who complete treatment procedures designed to enhance intimacy and reduce feelings of loneliness do score lower, on average, than they did before treatment.

Additional Measures: Social Desirability

Balanced Inventory of Desirable Responding (BIDR; Paulhus, 1991; Appendix XI).

Because the above variables are assessed using self-report data, an inventory to measure the tendency to present oneself in a favourable light was included. The BIDR is a 40-item questionnaire assessing the tendency to give socially desirable responses on self-report measures. This inventory is comprised of two subscales: Self-Deceptive Enhancement, which assesses the tendency to give honest, but inflated, self-descriptions; and Impression Management, which assesses the tendency to give inflated self-descriptions in public settings. Respondents rate, on a 7-point scale (ranging from "Not True" to "Very True") the extent to which each

statement describes him or her. Higher scores on the inventory indicate a greater tendency to present oneself in a socially desirable manner. Half of the items are reverse-scored, but the items are recoded such that one point is awarded for each response of "6"or "7" (i.e., the extreme responses) and zero points are awarded for responses of 5 and lower. This is so that high scores are obtained only by those who give an exaggerated view of themselves on this construct (Paulhus, 1991).

The internal consistency alphas for the scale ranged from .83 to .85 for the entire scale, and from .70 to .82 for the self-deceptive enhancement scale and from .80 to .86 for the impression management scale (Paulhus, 1991). The test-retest correlations were r=.69 for the Self-Deceptive Enhancement scale and r=.65 for the Impression Management scale. Paulhus (1991) also summarized studies demonstrating the validity of the BIDR as a measure of social desirability.

The BIDR has also been demonstrated to be a useful measure of socially desirable responding with offenders. Kroner and Weekes (1996) found the test to be a valid measure of the construct of social desirability in an offender population. They also found a three-factor solution for the BIDR, consisting of Impression Management, Denial of the Negative (an unwillingness to admit to undesirable traits), and Over Confident Rigidity (perception of one's own infallibility). The internal consistency alpha values for each of these three subscales was .84 for the Impression Management factor, .73 for the Denial of the Negative factor, and .58 for the Over Confident Rigidity factor. Kroner and Weekes suggested that the lower alpha coefficient for the Over Confident Rigidity Scale was attributable to fewer items comprising this scale (9 items, as compared to 11 items for the Denial of the

Negative scale and 17 items for the Impression Management scale).

The BIDR has been used specifically in sexual offender populations. Looman, Abracen, Maillet, and DiFazio (1998) examined responding on phallometric assessments (an assessment of sexual deviance) in sexual offenders. They concluded that the Impression Management scale of the BIDR was negatively associated with sexual arousal responses to violence against females (i.e., those who scored higher on the Impression Management scale were less likely to respond to those deviant phallometric stimuli). Cortoni and Marshall (2001) found that both the Self-Deceptive Enhancement and Impression Management scales were correlated with other psychometric measures used in their study with sexual offenders, and thus found the BIDR useful to partial out the variance accounted for by socially desirable presentations.

Additional Measures: Psychopathy

Hare Psychopathy Checklist-Revised (PCL-R; Hare, 1991).

The PCL-R is a rating scale to assess psychopathy in male forensic populations. The raters use a combination of interview with the offender and collateral information from the offender's file. The PCL-R is comprised of items designed to rate behaviours and inferred personality traits, and it yields a score that represents the extent to which an individual is deemed to match the "prototypical psychopath" (Hare, 1991). A clinical cutoff of 30 (with scores ranging from 0 to 40) is recommended for the diagnosis of psychopath (Hare, 1991). The measure is considered to comprise two factors: selfish, callous, and remorseless use of others; and chronically unstable and antisocial lifestyle. The first version of the PCL

appeared in 1980 and since then, the scale has been used extensively in clinical and research settings. Numerous studies supporting its internal consistency, interrater reliability, and validity are described in the manual (Hare, 1991).

The scores on the measure were taken from the file review; hence the assessments were obtained from other professionals (psychologists and psychiatrists) who were blind to the hypotheses of the current study. The measure is available from the publisher: Multi-Health Systems Inc.

Procedure

Incarcerated Participants

After obtaining approval from the relevant ethics committees (Queen's University and Correctional Service of Canada), lists of incarcerated individuals were generated from the national database (Offender Management System; OMS) for each institution in Ontario that was targeted for the study: Kingston Penitentiary, Regional Treatment Centre, Bath Institution, Joyceville Institution, Warkworth Institution, and Pittsburgh Institution. These institutions were chosen because each has programs for sexual offenders, and therefore large proportions of sexual offenders are residing at those institutions, enabling the collection of a sample of the variety of offender types required for this study.

These lists were cross-referenced with lists provided by sex offender treatment programs at each institution. On these lists was information regarding what sexual offenders were currently participating, or had previously participated, in treatment, and who was still awaiting treatment. Offenders who were currently participating, or had previously participated, in treatment were excluded from the study and the remainders were added to the list of offenders to be approached for participation (unless they were deemed at risk to sexually assault staff). The remaining offenders on the institutional lists (i.e., the nonsexual offenders) were screened for possible inclusion in the study. If an examination of their OMS files revealed any of the following information, they were excluded from the list of possible participants: a) previous sexual offenses or sexual overtones to a violent

offense; b) not currently in the institution (e.g., listed as absconded, or out to court, etc.); c) in the segregation unit; d) in the institutional hospital; or e) deemed a risk for any assault against staff or forcible confinement of staff. It should be noted that offenders who were deemed to be a risk to staff were only found in the maximum security institutions, and these men were not approached in order that the safety of the research assistant was not jeopardized.

Once a list of potential participants was identified, the principal investigator and the research assistant visited the institution to discuss institutional procedures for data collection. Additionally, security procedures were discussed at each institution to ensure complete compliance with institutional rules. The research assistant then made appointment memos or call-up lists as required, and returned to the institution to describe the procedures and collect the data.

The participants were called in groups. Once they arrived, the research assistant introduced herself and described the purpose and procedures of the study. The participants who decided to stay were given an information and consent form describing the study (Appendix XII). The research assistant answered all questions prior to the signing of consent forms. The questionnaires in each package were counter-balanced so that certain inventories did not consistently precede or follow certain other inventories. Confidentiality was ensured by coding each questionnaire and matching it to a number on a separate envelope for each participant. The participants were asked to not identify themselves other than on the consent form. The coding ensured that participant data could be destroyed if anyone so wished. The consent forms were then separated from the data. After completing the

questionnaires, one participant stated that he wished his material to be destroyed, and his forms were shredded. All data were placed in the envelopes and removed from the institution after each day of collection, and no data was provided to the institution or placed on the participant's institutional files, and no information was given regarding his participation in the study. At the end of the study, participants were provided with a debriefing form (Appendix XIII) that included directions for further questions or complaints about the study or the procedures.

Community Volunteers

Community participants responded to advertisements at a local employment agency by telephoning the principal investigator. Calls were returned by the principal investigator or the research assistant and the purpose and procedure of the study were explained. The men who agreed to participate scheduled an appointment. The men completed the measures in groups of 6 to 8 at the office location of the academic supervisor. The procedures were essentially the same as they were for the incarcerated volunteers, with the exception of the location of the data collection and with the exception of remuneration: community volunteers were paid for their participation, but institutional rules prohibit paying money to offenders or providing them with gifts in return for their participation. These participants were also provided a debriefing form at the conclusion of their participation (Appendix XIV). This form for the community volunteers differs from that provided to the participants from the penitentiaries only in that it does not include the option of addressing concerns to the warden of the penitentiary.

RESULTS

Offender Criminal History

Offense Convictions

General and Violent Offenses

For this study, offenses defined as general offense convictions exclude convictions for violent and sexual offenses. Offenses defined as violent offense convictions exclude sexual offenses. As mentioned, violent offenders were pre-selected such that they would not have any index or previous sexual offenses.

The means and standard deviations for general, violent, and sexual offense conviction histories are displayed in Table 2. The group differences were significant for both prior general convictions, $F(2,119)=4.15$, $p<.02$, and prior violent convictions, $F(2,119)=4.03$, $p<.03$. A Scheffe post hoc test revealed that child molesters had, on average, significantly fewer prior general offense convictions than did the violent offenders, and child molesters had, on average, significantly fewer prior violent offense convictions than did the rapists. The differences in mean prior violent offense convictions and mean prior general offense convictions were not significant between rapists and violent offenders.

Index offenses are the offense convictions for which the offenders are currently serving sentences. Often, the offenders will be convicted for more than one offense at a time. The group differences were significant for both index general convictions, $F(2,119)=4.83$, $p<.02$, and index violent convictions, $F(2,119)=4.51$, $p<.02$. A Scheffe post hoc test revealed that child molesters had, on average,

Table 2

Mean Number of Convictions by Offender Group

	Rapists Mean (SD)	**Child Molesters** Mean (SD)	**Violent Offenders** Mean (SD)
General Offenses			
Prior Convictions*	8.26 (10.59)	3.55 (6.85)	10.15 (13.75)
Current Convictions*	1.82 (3.56)	0.83 (2.05)	4.00 (7.11)
Violent Offenses			
Prior Convictions*	2.08 (3.50)	0.55 (1.04)	1.61 (2.41)
Current Convictions*	1.67 (2.49)	0.71 (1.29)	1.80 (1.44)
Sexual Offenses			
Prior Convictions*	0.85 (1.09)	2.26 (4.08)	0.00 (0.00)[a]
Current Convictions**	1.49 (1.99)	4.52 (4.98)	0.00 (0.00)[a]

Notes: [a]Violent Offenders were pre-selected on the basis that they had no prior or current sexual offenses.
*$p<.05$
**$p<.01$

significantly fewer index general offense convictions and index violent offense convictions than did the violent offenders. The differences in mean index violent offense convictions and mean index general offense convictions were not significant between the child molesters and the rapists.

Sexual Offenses

As seen in Table 2, the child molesters had a higher average number of prior sexual offense convictions than did the rapists, and this difference was statistically significant, $F(1.,9)=4.39$, $p<.04$. The child molesters also had, on average, significantly more index sexual offense convictions than the rapists, $F(1,79)=12.63$, $p<.002$.

Sentences

An indefinite sentence is defined as a sentence for which there is no warrant expiry date. In other words, the offender remains under the jurisdiction of the Correctional Service of Canada for the remainder of his life (although he may or may not be incarcerated for the rest of his life). Definite sentences, on the other hand, do have a warrant expiry date, which means that at the end of the sentence, the offender is no longer under the jurisdiction of the Correctional Service of Canada, and this agency can no longer impose restrictions on the offender.

The proportion of offenders in each group serving definite and indefinite sentences is presented in Figure 2. Although a greater proportion of rapists were serving indefinite sentences than the proportion of child molesters and violent offenders serving indefinite sentences, the chi-square value was nonsignificant, $\chi^2(2, N=122)=4.65$, ns.

Figure 2.

Sentence Types for Offender Groups

The average sentence length for those serving definite sentences in each group is presented in Figure 3. The difference among group means was significant, $F(2,73)=4.93$, $p<.02$, and a Scheffe post hoc analysis revealed that the rapists were serving longer sentences than either of the other two groups (the difference in mean sentence length between the child molesters and violent offenders was nonsignificant).

Social Desirability

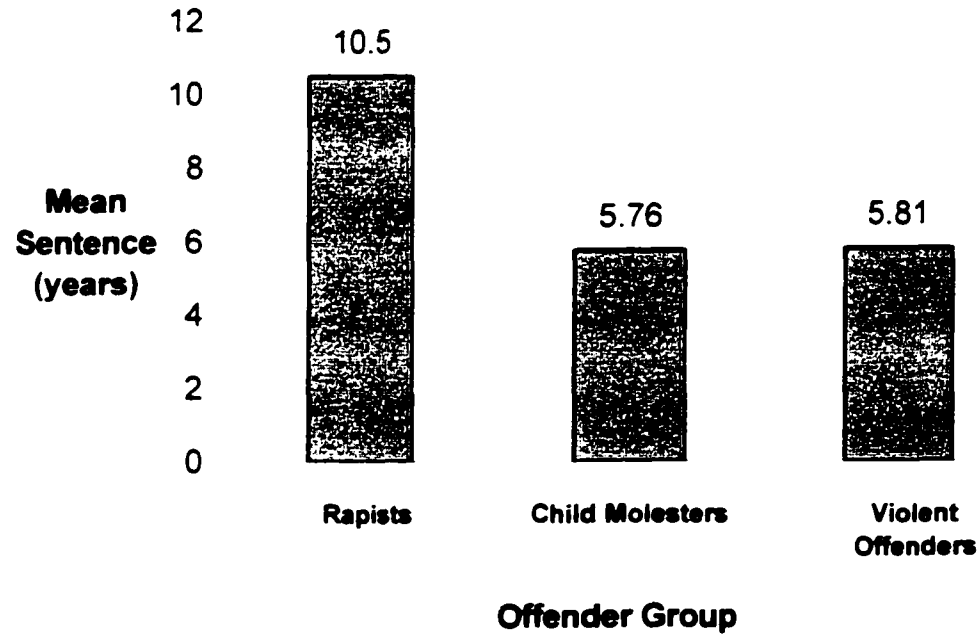
The inclusion of the Balanced Inventory of Desirable Responding (BIDR) was to identify potential differences among groups in the tendency to present themselves in a favourable manner. The community participant group's mean total score was 141.94 (SD=25.26), the rapist group's mean total score was 141.71 (SD=26.71), the child molester group's mean total score was 148.12 (SD=21.72), and the mean total score for the violent offenders was 155.95 (SD=29.83). An analysis of variance revealed no significant differences among the groups on average total scores, $F(3,140)=2.40$, ns. The subscales of the BIDR, Self-deceptive Enhancement and Impression Management, were also examined. The following mean scores were obtained for each group on Self-deceptive Enhancement (with standard deviations in parentheses): 5.86 (3.61) for the community group; 6.50 (3.16) for the rapists; 6.18 (3.06) for the child molesters; and 7.89 (3.24) for the violent offenders. An analysis of variance revealed a significant difference among the mean scores, $F(3,140)=2.76$, $p<.05$. Scheffe post hoc tests did not reveal significant differences between any two groups, but the difference between violent offenders and the community group approached significance, $p<.08$. The following mean scores were obtained for each

group on Impression Management: 5.51 (3.19) for the community group; 4.76 (3.77) for the rapists; 6.05 (3.82) for the child molesters; and 6.54 (4.02) for the violent offenders. An analysis of variance revealed no significant differences among the mean scores for this subscale, $F(3,146)=1.52$, ns. Because of the significant difference among groups on the Self-deceptive Enhancement subscale, this was entered as a covariate when examining group differences.

In addition, the subscales of the BIDR correlated significantly with a number of the dependent measures to be used in the analyses. Self-deceptive Enhancement correlated significantly with the following measures: the control axis of the Interpersonal Adjective Scales ($r=.32$); the Fearful and Preoccupied ratings on the Relationship Questionnaire ($r=-.25$ and $-.34$, respectively); the Secure and Fearful mean scores on the Relationship Scales Questionnaire ($r=.28$, $-.25$, respectively); the Secure, Fearful, and Preoccupied Composite Attachment Scores (i.e., the combination of scores on those subscales for the Relationship Questionnaire and the Relationship Scales Questionnaire; $r=.22$, $-.28$, and $-.25$, respectively); the score on the Fear of Intimacy Scale ($r=-.24$); and the score on the Revised UCLA Loneliness Scale ($r=-.22$). Impression Management correlated significantly with the following measures: the affiliation axis of the Interpersonal Adjective Scales ($r=.40$); the control and affiliation axes of the Inventory of Interpersonal Problems ($r=-.19$ and $.23$, respectively); the Fearful and Preoccupied ratings on the Relationship Questionnaire ($r=-.21$ for both); the Fearful mean score on the Relationship Scales Questionnaire ($r=-.18$); the Fearful and Preoccupied Composite Attachment Scores ($r=-.22$ and $-.18$, respectively); the score on the

Figure 3.

Mean Definite Sentence Length for Offender Groups



Social Intimacy Scale (r=.20); the score on the Fear of Intimacy Scale (r=-.29); and the score on the Revised UCLA Loneliness Scale (r=-.17). Therefore, when the results of these scales were analysed, the subscale(s) that correlated with those scales was (were) entered as a covariate(s). These results will be reported only where entering the covariate made a difference in the overall significance of analyses; otherwise, the results without the covariate will be reported.

Dependent Measures

Calculations of scores for each measure and its subscales (where applicable) were computed according to the instructions provided by the authors. For the Interpersonal Adjective Scales and Inventory of Interpersonal Problems, standardized scores for each octant category and for values on each of the affiliation and control axes were computed, as per the authors' instructions, but for this study, the sample means and standard deviations were used instead of the college student norms. The rationale was to examine subjects' placement on the circumplex relative to each other, rather than relative to the college students. This practice has been used by other researchers conducting investigations of the interpersonal circumplex theory in clinical populations (e.g., Horowitz et al., 1993).

Checks for Violations of Assumptions

The univariate and multivariate analyses employed to test the hypotheses are subject to various assumptions. The steps taken to examine the data prior to the analyses are outlined by Tabachnick and Fidell (2001). For this study, the first check was for missing data. Recommendations for handling missing data are

provided by the manual for the Interpersonal Adjective Scales (Wiggins, 1995), and these recommendations were followed. The recommendations are that scores can be prorated where at least 6 out of 8 items for an octant were answered and no more than 5 items in total were missing from the inventory. The calculation for the octant score is determined by dividing the total by 6 or 7 instead of 8, depending on how many items were missing. Because this has the same effect as mean scale substitution, that method was applied for the remaining inventories. There were no scales where too many items were missing to render this method questionable. However, one subject's data were excluded because he answered all questionnaires with the same numbered response (the middle of the scale for that inventory). Also, 2 community subjects had not completed the Interpersonal Adjective Scales. This was not a high enough proportion of that group to question the results of the study. There was no discernable pattern among the missing items of any other inventories.

Normality distributions were examined by means of normal probability plots. All of the data appeared sufficiently normally distributed, given the size of the sample (Tabachnick & Fidell, 2001). Also, guidelines regarding distributions of measured variables for maximum likelihood procedures were followed (West, Finch & Curran, as cited in Fabrigar, Wegener, MacCallum & Strahan, 1999), and the skew and kurtosis of the distributions of these variables did not indicate severe nonnormality. Because some of the data were already transformed into standardized scores (axes scores on the Interpersonal Adjective Scales and the Inventory of Interpersonal Problems, and Composite Attachment scores – see below), no further transformations were completed. Where outliers were identified, the analyses were

run with and without those data, and the results without the outliers are reported where the exclusion of the outliers affected the significance of results; otherwise, the results with all data are reported. Finally, Levene's test (as cited in Howell, 1992) was used to check for homogeneity of variance, and where the assumption was violated, the Games-Howell procedure (as cited in Howell, 1992) was used for post hoc multiple comparisons.

Internal Consistency

The values for Cronbach alpha for each scale total, and subscales where applicable, are presented in Table 3. All of the measures have reasonably high internal consistency in the current sample. One exception to this finding, however, is the Relationship Scales Questionnaire (RSQ). This finding is not surprising, as it appears to be in line with previous literature (Griffin & Bartholomew, 1994; Mulloy, 1999). Mulloy (1999) explained a procedure for enhancing the reliability of the measurement of attachment when both the RSQ and the Relationship Questionnaire (RQ) are used. This procedure involves the calculation of z-scores for each of the four attachment patterns on each scale, and combining these scores to form one "composite attachment" score for each attachment pattern. The Cronbach alpha values for these composite attachment patterns are presented in Table 4. The alpha values for the RSQ were lower than .50 for three of the four attachment styles measured; however, the composite attachment scores are above .60 for all four styles. Therefore, although these values remained lower than the internal consistency indices for the other scales, the composite attachment scores appear to be a more reliable method of assessing attachment than the use of the subscale

Table 3.

Inter-item Consistency for Measures

Questionnaire	Alpha
Revised Interpersonal Adjective Scales	
Total Scale	.78
PA: Assured-Dominant	.79
BC: Arrogant-Calculating	.89
DE: Coldhearted	.88
FG: Aloof-Introverted	.88
HI: Unassured-Submissive	.75
JK: Unassuming-Ingenuous	.83
LM: Warm-Agreeable	.93
NO: Gregarious-Extraverted	.90
Inventory of Interpersonal Problems	
Total Scale	.95
PA: Domineering/Autocratic	.77
BC: Vindictive/Competitive	.79
DE: Cold	.88
FG: Socially Avoidant/Introverted	.85
HI: Nonassertive	.87
JK: Exploitable	.83
LM: Overly-Nurturant	.81
NO: Intrusive/Overly-Expressive	.75
Relationship Questionnaire	n/a
Relationship Scales Questionnaire	
Total Scale	.73
Secure	.40
Fearful	.76
Preoccupied	.38
Dismissive	.49
Social Intimacy Scale	.94
Fear of Intimacy Scale	.94
UCLA Loneliness Scale	.90

Table 4.

Inter-item Consistency for Composite Attachment Scales

Composite Attachment Scale	Alpha
Secure	.68
Fearful	.69
Preoccupied	.65
Dismissive	.61

scores on the RSQ alone. As well, because the RQ consists of only one item to assess each attachment pattern, and previous research has noted difficulties with this procedure (e.g., Cortoni, 1998), the combination of the scales seems to be the best approach.

Between Groups Comparisons of Interpersonal Styles

Control and Affiliation

Participants' responses to the Revised Interpersonal Adjective Scales and the Inventory of Interpersonal Problems-Circumplex Version were computed according to instructions provided by the authors. The scores for the two dimensions of interpersonal style, control and affiliation, are calculated as linear combinations of standardized octant scores. The norms provided by the original authors are based largely or solely on university student samples, but such a group is not normally viewed as an appropriate comparison in studies of offender populations. Therefore, scores for this study were expressed as z-scores using the mean and standard deviation for the entire study sample for each octant, consistent with previous research (e.g., Horowitz et al., 1993). The use of z-scores is recommended when dealing with a large sample from a specialized population (K. Trobst, personal communication, January 18, 2002). The means and standard deviations of raw scores are presented in Appendix XVI.

The first set of hypotheses concerned the differences among groups on the interpersonal dimensions of affiliation and control. Differences in average scores on these dimensions would quantify the way in which the various groups differed from each other on the underlying dimensions of interpersonal style and thus highlight

whether one particular dimension distinguished the groups better than another. Between-group comparisons on these dimensions were also performed to illuminate whether the types of sex offenders would differ from each other, or whether they would appear homogeneous relative to the other groups, or whether the offender groups in general would appear different from the community group. As noted, the subscales on the social desirability measure were entered as a covariate when examining the differences among groups on each dimension of each interpersonal measure, but the inclusion of social desirability as a covariate made no difference to the significance of results. An analysis of variance on the scores on the affiliation dimension of the Interpersonal Adjective Scales revealed an overall difference between groups, $F(3,153)=2.77$, $p<.05$. Rapists were predicted to be more hostile than child molesters, and nonoffenders were predicted to be friendlier than the offender groups. Therefore, linear contrasts were run to test these specific hypotheses. The first hypothesis was supported, $t(153)=2.79$, $p<.01$; however, the second hypothesis was not supported. Thus rapists do appear to be more hostile than child molesters, according to their own descriptions of their interpersonal style, but nonoffenders are not more likely to describe their interpersonal style different from offenders on the affiliation dimension. Similar analyses were also run for differences on the affiliation dimension of the Inventory of Interpersonal Problems. However, an analysis of variance revealed no significant differences between groups.

An analysis of variance revealed no significant differences between groups on the control dimension of the Interpersonal Adjective Scales. The inclusion of both

subscales of the Balanced Inventory of Desirable Responding as covariates in the analysis of variance for the control dimension of the Inventory of Interpersonal Problems resulted in nonsignificant group differences.

Overall, the analyses on the broad underlying dimensions of interpersonal style reveal only that rapists score lower on the affiliation dimension of the Interpersonal Adjective Scales, thus indicating that they describe their interpersonal style as either less friendly or more hostile than the child molesters. The next set of hypotheses is relevant to more specific differences on the various combinations of the dimensions of interpersonal style.

Differences on Quadrant and Octants of Interpersonal Circumplex

The following quadrant locations of the circumplex model reflect combinations of the underlying dimensions of affiliation and control: friendly-dominant, hostile-dominant, hostile-submissive, and friendly-submissive. The octant locations of the circumplex model also reflect combinations of affiliation and control, but illustrate more specifically the relative contribution of each dimension. For example, the "dominant" octant reflects more pure dominance (i.e., toward the positive end of control and neutral on affiliation) while the "extraverted" octant applies to a style that is dominant but also friendly (i.e., toward the positive end of control and toward the positive end of affiliation).

Appendix XVI contains scatter plots reflecting the polar co-ordinates (location on x-axis determined by standardized score on affiliation axis, and location on y-axis determined by standardized score on control axis) for each group on each circumplex measure. To test hypotheses related to quadrant location on the

circumplex, a chi square analysis was computed after coding quadrant location for each participant according to the angle of the vector (i.e., angle location between 0 and 90 degrees placed the participant in the friendly-dominant quadrant, angle location greater than 90 degrees up to 180 degrees placed the participant in the hostile-dominant quadrant, angle location greater than 180 degrees up to 270 degrees placed the participant in the hostile-submissive quadrant, and an angle location greater than 270 degrees up to 360 degrees placed him in the friendly-submissive quadrant). The chi square analysis revealed no significant differences between observed and expected frequencies for quadrant locations on either interpersonal circumplex measure. Similarly, chi square analyses were conducted to determine whether groups were likely to be concentrated within certain octant categories. The analyses revealed no significant results. Therefore, it appears that the numbers of participants in each group were not differentially distributed into the quadrant locations of the circumplex.

Interpersonal profiles for the participant groups are presented in Figures 4 to 11. These profiles were created for each interpersonal circumplex measure according to the authors' guidelines. The profiles represent the mean standardized scores for each group on each octant of the interpersonal circumplex measure. For ease of plotting, these standardized scores are transformed to T-scores (such that all values to be plotted are greater than zero). The angular location of the vector represents that group's prototypical interpersonal style. As shown by the vector locations in Figures 4 to 7, the scores on the Interpersonal Adjective Scales indicate that the community group rated its typical interpersonal style as Warm-Agreeable,

Figure 4.

Interpersonal Profile for Community Group: Revised Interpersonal Adjective Scales

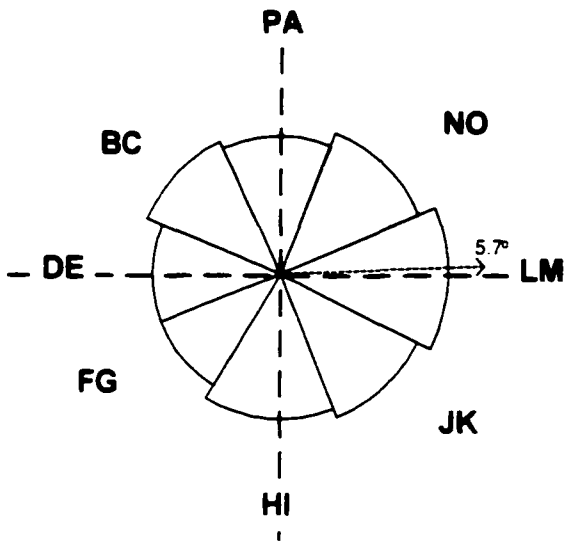
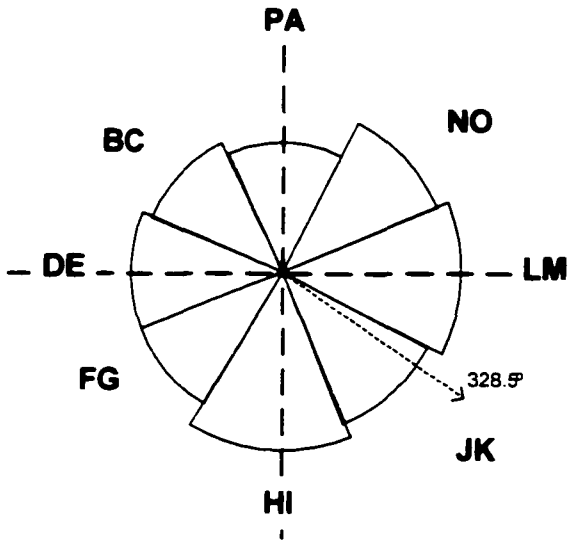


Figure 5.

Interpersonal Profile for Child Molesters: Revised Interpersonal Adjective Scales



Note: PA=Assured-Dominant; BC=Arrogant-Calculating; DE=Coldhearted; FG=Aloof-Introverted; HI=Unassured-Submissive; JK=Unassuming-Ingenuous; LM=Warm-Agreeable; NO=Gregarious-Extraverted.

Figure 6.

Interpersonal Profile for Rapists: Revised Interpersonal Adjective Scales

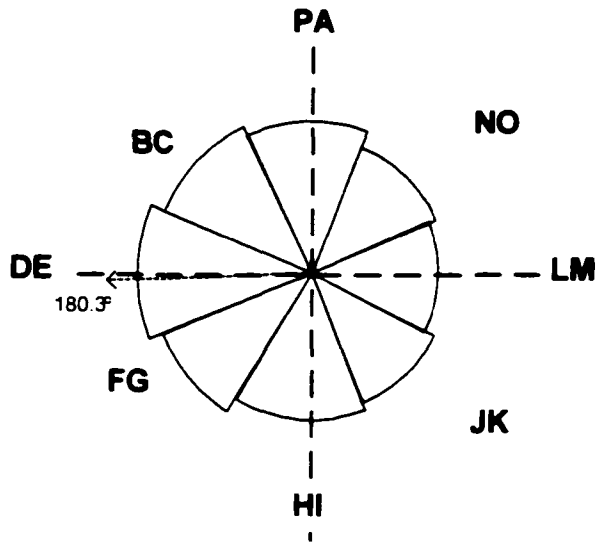
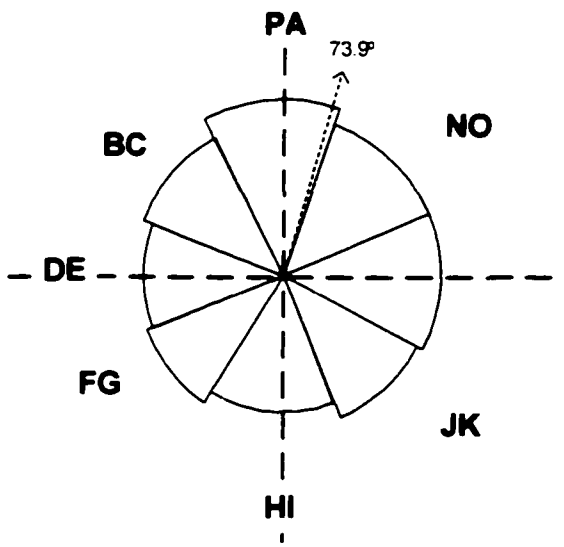


Figure 7.

Interpersonal Profile for Violent Offenders: Revised Interpersonal Adjective Scales



Note: PA=Assured-Dominant; BC=Arrogant-Calculating; DE=Coldhearted; FG=Aloof-Introverted; HI=Unassured-Submissive; JK=Unassuming-Ingenuous; LM=Warm-Agreeable; NO=Gregarious-Extraverted.

Figure 8.

Interpersonal Profile for Community Group: Inventory of Interpersonal Problems-Circumplex Version

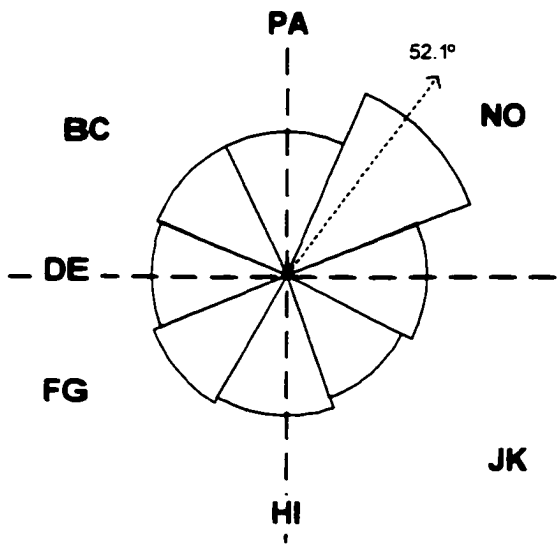
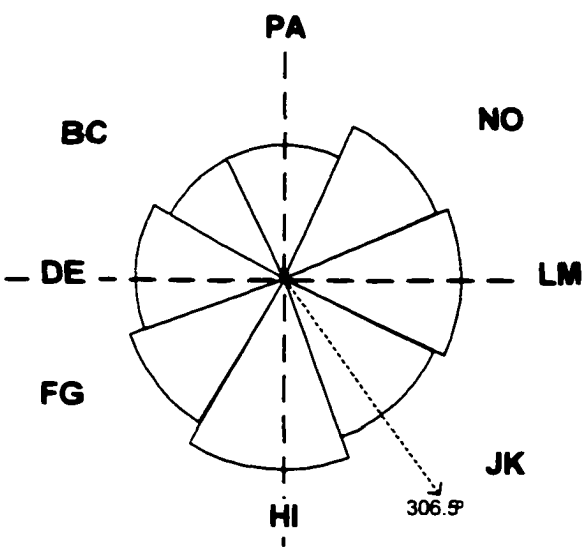


Figure 9.

Interpersonal Profile for Child Molesters: Inventory of Interpersonal Problems-Circumplex Version



Note: PA=Domineering/Autocratic; BC=Vindictive/Competitive; DE=Cold; FG=Socially Avoidant/Introverted; HI=Nonassertive; JK=Exploitable; LM=Overly-Nurturant; NO=Intrusive/Overly-Expressive.

Figure 10.

Interpersonal Profile for Rapists: Inventory of Interpersonal Problems-Circumplex Version

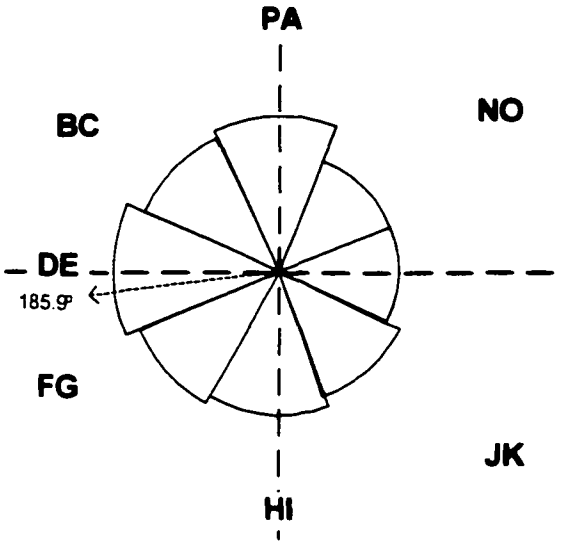
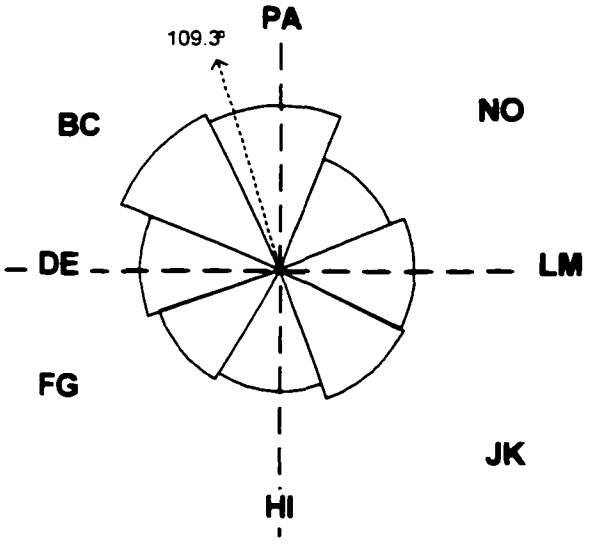


Figure 11.

Interpersonal Profile for Violent Offenders: Inventory of Interpersonal Problems-Circumplex Version



Note: PA=Domineering/Autocratic; BC=Vindictive/Competitive; DE=Cold; FG=Socially Avoidant/Introverted; HI=Nonassertive; JK=Exploitable; LM=Overly-Nurturant; NO=Intrusive/Overly-Expressive.

whereas the child molesters rated themselves in the Unassuming-Ingenuous region, the rapists rated themselves as cold-hearted, and the violent offenders viewed their interpersonal style as Assured-Dominant. As a comparison, Figures 8 to 11 indicate each group's perceptions of their overall interpersonal problems. It can be seen in the figures that both the Interpersonal Adjective Scales (IAS-R) and the Inventory of Interpersonal Problems (IIP) use the same 2-letter labels for the octant categories, indicating a common interpersonal theme where one measure assesses interpersonal dispositions (IAS-R) and the other (IIP) assesses problems associated with that disposition (Alden et al., 1990).

The community group's profile on the Inventory of Interpersonal Problems, as indicated by the angular location of the vector, illustrates that they viewed their interpersonal problems relating to the friendly-dominant area, which is described as intrusive or overly-expressive. The profiles for the scores on the Inventory of Interpersonal Problems for the offender groups corresponded to their profiles for the Interpersonal Adjective Scales: the child molesters endorsed items describing overall interpersonal problems related to the friendly-submissive area of the circumplex, described as exploitable; the rapists described their typical interpersonal problems related to being cold or hostile; and the violent offenders expressed problems in the area of dominance.

Multivariate analyses of variance were used to examine the differences among mean octant scores. The subscales of the BIDR, Self-deceptive Enhancement and Impression Management, were included as covariates. The multivariate test did not reveal statistically significant group differences among mean

octant scores on the Interpersonal Adjective Scales, although the univariate F-values were significant for the Coldhearted octant, $F(3, 134)=3.20$, $p<.03$, where the rapists had the highest mean score (3.30, sd=1.79), followed by violent offenders (2.46, sd=1.15), child molesters (2.45, sd=1.11), and community participants (2.34, sd=1.14).

The multivariate test also did not reveal a significant overall difference between subjects for octant scores on the Inventory of Interpersonal Problems, although it approached significance: using Wilks' criterion, $F(24,375)=1.44$, $p<.09$. None of the univariate F-values was significant.

The results in this section reveal that while the distributions of numbers of each group into quadrant locations and the mean scores on each octant by themselves do not indicate between-groups differences, the patterns of mean scores, revealed by the interpersonal profiles, indicate differences in the typical interpersonal style of each group.

Rigidity of Interpersonal Style

The final hypothesis of this section stated that offenders would exhibit greater rigidity in their interpersonal styles than the nonoffenders. When offender groups were collapsed and compared to the community participants, the difference in mean vector length was not significant. When the four groups were compared, an analysis of variance revealed a significant difference among vector lengths on the Interpersonal Adjective Scales, $F(3,153)=2.71$, $p<.05$. Scheffe post hoc tests revealed that the difference in vector lengths between rapists and violent offenders (with average vector length of rapists exceeding that of violent offenders)

approached significance ($p<.07$). There were no significant differences for vector lengths on the Inventory of Interpersonal Problems.

Between Groups Comparison of Attachment and Interpersonal Style

Attachment Styles of Participant Groups

Attachment style was viewed as an important construct as it may underlie differences in interpersonal style. Previous studies have investigated the importance of attachment style in sexual offenders, and the first set of hypotheses in this study concerned expected differences between various participant groups (i.e., community volunteers, rapists, child molesters, and violent offenders) on attachment style. It was expected that findings of differences in attachment style in sex offenders and comparison groups would replicate previous research findings. Differences in distribution across attachment categories were evaluated using chi square tests on attachment categories as determined by the one item on the Relationship Questionnaire and the highest scoring Composite Attachment pattern (as described earlier in this section, the Composite Attachment score was derived from both the Relationship Questionnaire score and Relationship Scales Questionnaire score to improve the internal consistency values for the four attachment patterns). Proportions of participant groups in each attachment category on each measure are shown in Tables 5 and 6. Chi square tests were nonsignificant. Multivariate analysis of variance of between subject differences on mean composite attachment scores for secure, fearful, preoccupied, and dismissive was significant using the subscales of the BIDR as covariates and removing the outlier composite attachment scores: using Wilks' criterion, $F(12, 336)=2.13$, $p<.02$. The univariate test of

Table 5.

Proportion of Attachment Styles by Participant Group: Prototypical Pattern Identified on Relationship Questionnaire

	Secure	Fearful	Preoccupied	Dismissive
Community	35.1%	18.9%	24.3%	21.6%
Rapists	35.9%	25.6%	7.7%	30.8%
Child Molesters	35.7%	35.7%	11.9%	16.7%
Violent Offenders	36.6%	34.1%	2.4%	26.8%

Note: Percentages represent the proportion of the participant group in each attachment category.

Table 6.

Proportion of Attachment Styles by Participant Group: Highest Composite Attachment Scale Score

	Secure	Fearful	Preoccupied	Dismissive
Community	27.0%	21.6%	27.0%	24.3%
Rapists	30.8%	25.6%	12.8%	30.8%
Child Molesters	31.0%	26.2%	26.2%	16.7%
Violent Offenders	31.7%	29.3%	17.1%	22.0%

Note: Percentages represent the proportion of the participant group in each attachment category.

differences on each attachment score revealed that the groups were different on the preoccupied style, $F(3,130)=3.25$, $p<.03$. Scheffe post hoc tests indicated that the community group, who had the highest mean composite attachment score for the preoccupied style, had a significantly higher mean score than the rapists ($p<.04$) and the violent offenders ($p<.02$). Thus overall, the sex offender groups did not appear dissimilar in attachment style from the comparison groups as hypothesised.

Comparison of Attachment Groups on Interpersonal Style

Attachment style was thought to be related to interpersonal style due to the theoretically underlying dimensions of each construct. Views of self and others that underlie attachment style were considered to influence the dimensions of affiliation and control that comprise interpersonal behaviour. The numbers and percentages for each attachment group in each octant category of the interpersonal circumplex (for each of the Interpersonal Adjective Scales and Inventory of Interpersonal Problems) are shown in Table 7. As seen in the section for the results on the Interpersonal Adjective Scales, over half of the men in the secure group were categorized with the typical interpersonal style described as either Warm-Agreeable or Gregarious-Extraverted. Also remarkable are the proportions of both the fearful and dismissive groups who are categorized with a typical interpersonal style described as Coldhearted (i.e., approximately one-third of each of these two attachment groups). Approximately one-fifth of the preoccupied group also fell into the Coldhearted category of interpersonal style, whereas less than one-tenth of the secure group fell into this category. The proportions of the preoccupied group in each interpersonal style were somewhat more dispersed, although the majority of

Table 7.

Numbers (and Percentages) of Each Attachment Group within each Main Octant Category on Interpersonal Measures

	Attachment Style			
	Secure	**Fearful**	**Preoccupied**	**Dismissive**
Revised Interpersonal Adjective Scales				
PA: Assured-Dominant	7 (14.9%)	2 (5.0%)	3 (9.1%)	3 (8.1%)
BC: Arrogant-Calculating	1 (2.1%)	2 (5.0%)	2 (6.1%)	4 (10.8%)
DE: Coldhearted	4 (8.5%)	13 (32.5%)	7 (21.2%)	11 (29.7%)
FG: Aloof-Introverted	2 (4.3%)	8 (20.0%)	0 (0.0%)	2 (5.4%)
HI: Unassured-Submissive	2 (4.3%)	6 (15.0%)	5 (15.2%)	3 (8.1%)
JK: Unassuming-Ingenuous	6 (12.8%)	4 (10.0%)	7 (21.2%)	3 (8.1%)
LM: Warm-Agreeable	12 (25.5%)	3 (7.5%)	4 (12.1%)	5 (13.5%)
NO: Gregarious-Extraverted	13 (27.7%)	2 (5.0%)	5 (15.2%)	6 (16.2%)
Inventory of Interpersonal Problems				
PA: Domineering/Autocratic	5 (10.4%)	4 (9.8%)	3 (9.1%)	6 (16.2%)
BC: Vindictive/Competitive	2 (4.2%)	8 (19.5%)	3 (9.1%)	9 (24.3%)
DE: Cold	4 (8.3%)	10 (24.4%)	3 (9.1%)	5 (13.5%)
FG: Socially Avoidant/Introverted	3 (6.3%)	7 (17.1%)	5 (15.2%)	3 (8.1%)
HI: Nonassertive	1 (2.1%)	5 (12.2%)	8 (24.2%)	4 (10.8%)
JK: Exploitable	12 (25.0%)	2 (4.9%)	9 (27.3%)	4 (10.8%)
LM: Overly-Nurturant	13 (27.1%)	0 (0.0%)	0 (0.0%)	3 (8.1%)
NO: Intrusive/Overly-Expressive	8 (16.7%)	5 (12.2%)	2 (6.1%)	3 (8.1%)

Notes: Attachment Style determined by highest Composite Attachment scale score; Octant categories determined by angular location on each interpersonal measure.

them were described by interpersonal styles on the positive side of the affiliation axis (i.e., the right half of the circumplex, toward the "friendly" end, as opposed to the "hostile" end). The chi square test (likelihood ratio) of the association between the octant categories of interpersonal style and attachment style categories was significant, $\chi^2(21, N=157)=43.12$, $p<.005$.

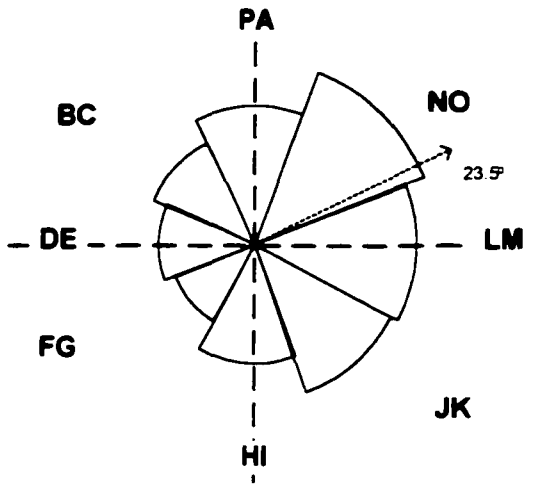
With respect to how each attachment group classified their own interpersonal problems (i.e., on the Inventory of Interpersonal Problems), it can be seen in Table 7 that each group's typical interpersonal problems were clustered around different areas of the circumplex. Close to 70% of the secure group classified their problems in the following categories: Exploitable, Overly Nurturant, and Intrusive/Overly-Expressive - all in the "friendly" half of the circumplex. The majority of the fearful group's interpersonal problems were clustered in octants in the "hostile" half of the circumplex: Vindictive/Competitive, Cold, and Socially Avoidant/Introverted. Most of the preoccupied group classified their typical interpersonal problems mainly in the "submissive" half of the circumplex: Socially Avoidant/Introverted, Nonassertive, and Exploitable. Finally, the largest proportions of the dismissive group categorized their interpersonal problems in the octant categories falling into the "dominant-hostile" region of the circumplex: Domineering/Autocratic, Vindictive/Competitive, and Cold. The chi square test (likelihood ratio) of the association between the octant categories of interpersonal problems and attachment style categories was significant, $\chi^2(21, N=159)=62.19$, $p<.001$. These distributions on the octant categories support the notion that attachment style is related to interpersonal style, and the pattern of the distributions suggests that the relationship between the

constructs was in the form that was hypothesised.

The interpersonal profiles for each attachment style group (according to the highest Composite Attachment scale score) are shown in Figures 12 to 19. Rather than a representation of the proportions of each attachment group, the interpersonal profiles represent the overall interpersonal tendency, or prototypical interpersonal style, for each of the four attachment groups. The angular locations of the vectors were similar for each group on each interpersonal measure. The securely attached group rated their overall interpersonal style on the Interpersonal Adjective Scales, between the areas of warm-agreeable and gregarious-extraverted (Figure 12). Adjectives corresponding to this angular location are "cheerful" and "friendly" (Wiggins, 1995). This group viewed its overall interpersonal problems falling into the overly-nurturant category (Figure 13). The fearful attachment group, in contrast, rated its prototypical interpersonal style between the areas of cold and aloof-introverted (Figure 14). Adjectives corresponding to this angular location are "uncheery", "unneighbourly", and "distant" (Wiggins, 1995). The fearful group viewed its overall interpersonal problems related to being cold or hostile (Figure 15). The preoccupied attachment group rated its overall interpersonal style as unassuming-ingenuous (Figure 16), while this group viewed its interpersonal problems to be related to nonassertiveness (Figure 17). Finally, the angular location of the profile for the dismissive attachment group for the Interpersonal Adjective Scales indicates that these men see their typical interpersonal style in between the styles described as arrogant-calculating and cold-hearted (Figure 18). Adjectives corresponding to this angular location are "sly" and "ruthless" (Wiggins, 1995). This

Figure 12.

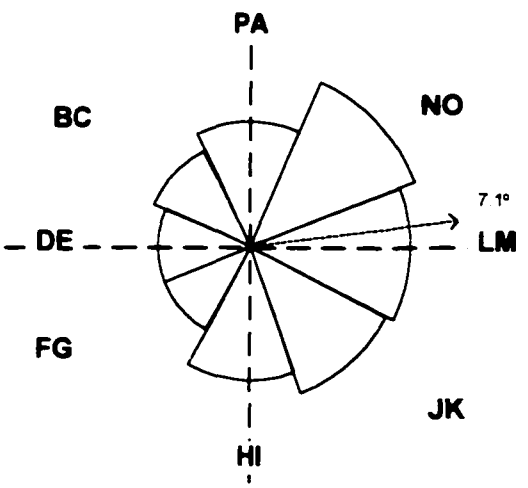
Interpersonal Profile for Secure Attachment Group: Revised Interpersonal Adjective Scales



Note: PA=Assured-Dominant; BC=Arrogant-Calculating; DE=Coldhearted; FG=Aloof-Introverted; HI=Unassured-Submissive; JK=Unassuming-Ingenuous; LM=Warm-Agreeable; NO=Gregarious-Extraverted.

Figure 13.

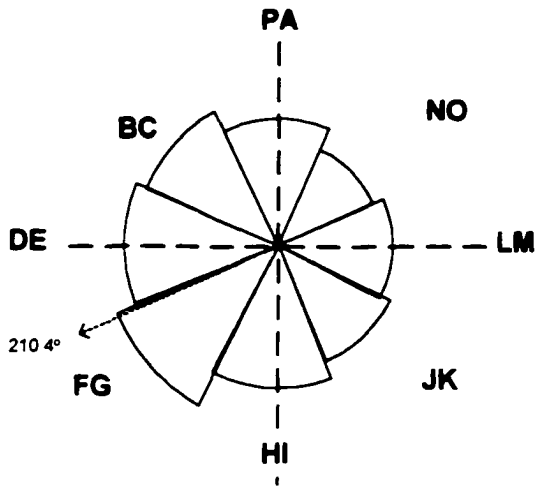
Interpersonal Profile for Secure Attachment Group: Inventory of Interpersonal Problems-Circumplex Version



Note: PA=Domineering/Autocratic; BC=Vindictive/Competitive; DE=Cold; FG=Socially Avoidant/Introverted; HI=Nonassertive; JK=Exploitable; LM=Overly-Nurturant; NO=Intrusive/Overly-Expressive.

Figure 14.

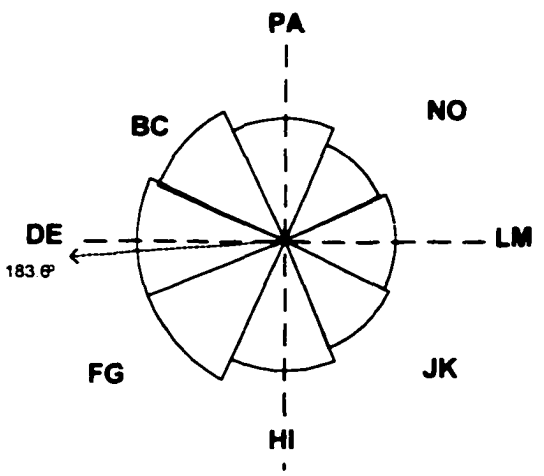
Interpersonal Profile for Fearful Attachment Group: Revised Interpersonal Adjective Scales



Note: PA=Assured-Dominant; BC=Arrogant-Calculating; DE=Coldhearted; FG=Aloof-Introverted; HI=Unassured-Submissive; JK=Unassuming-Ingenuous; LM=Warm-Agreeable; NO=Gregarious-Extraverted.

Figure 15.

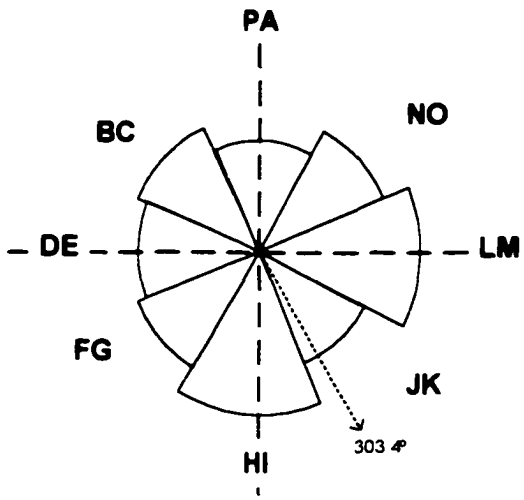
Interpersonal Profile for Fearful Attachment Group: Inventory of Interpersonal Problems-Circumplex Version



Note: PA=Domineering/Autocratic; BC=Vindictive/Competitive; DE=Cold; FG=Socially Avoidant/Introverted; HI=Nonassertive; JK=Exploitable; LM=Overly-Nurturant; NO=Intrusive/Overly-Expressive.

Figure 16.

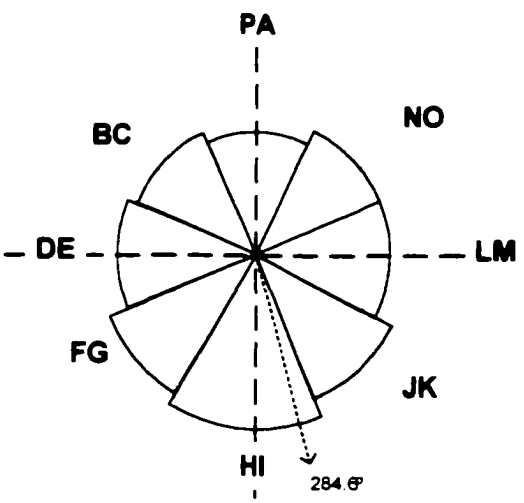
Interpersonal Profile for Preoccupied Attachment Group: Revised Interpersonal Adjective Scales



Note: PA=Assured-Dominant; BC=Arrogant-Calculating; DE=Coldhearted; FG=Aloof-Introverted; HI=Unassured-Submissive; JK=Unassuming-Ingenuous; LM=Warm-Agreeable; NO=Gregarious-Extraverted.

Figure 17.

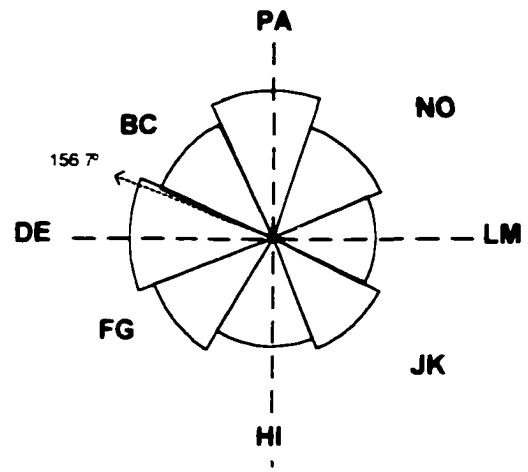
Interpersonal Profile for Preoccupied Attachment Group: Inventory of Interpersonal Problems-Circumplex Version



Note: PA=Domineering/Autocratic; BC=Vindictive/Competitive; DE=Cold; FG=Socially Avoidant/Introverted; HI=Nonassertive; JK=Exploitable; LM=Overly-Nurturant; NO=Intrusive/Overly-Expressive.

Figure 18.

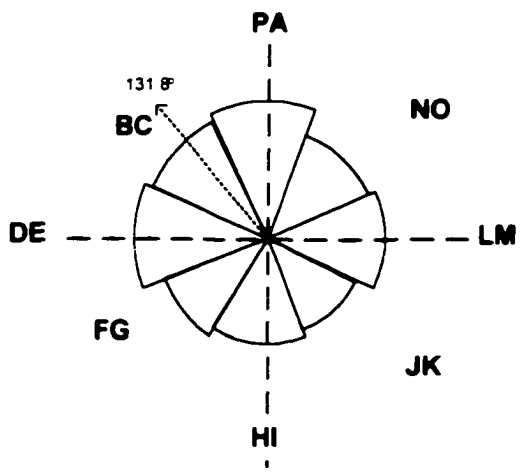
Interpersonal Profile for Dismissive Attachment Group: Revised Interpersonal Adjective Scales



Note: PA=Assured-Dominant; BC=Arrogant-Calculating; DE=Coldhearted; FG=Aloof-Introverted; HI=Unassured-Submissive; JK=Unassuming-Ingenuous; LM=Warm-Agreeable; NO=Gregarious-Extraverted.

Figure 19.

Interpersonal Profile for Dismissive Attachment Group: Inventory of Interpersonal Problems-Circumplex Version



Note: PA=Domineering/Autocratic; BC=Vindictive/Competitive; DE=Cold; FG=Socially Avoidant/Introverted; HI=Nonassertive; JK=Exploitable; LM=Overly-Nurturant; NO=Intrusive/Overly-Expressive.

group viewed its interpersonal problems related to being vindictive and competitive (Figure 19).

However, contrary to the prediction, insecurely attached participants were no more likely to exhibit rigidity in interpersonal style than securely attached participants: the analysis of variance examining differences in mean vector length among groups was nonsignificant. This test remained nonsignificant even when the insecurely attached participant groups were collapsed and compared to the secure group.

Despite the lack of differences in rigidity of interpersonal style, the profiles described above for both interpersonal measures indicate that the typical interpersonal style of each attachment group is what was expected, taking into consideration the views of self and views of others that form one's adult attachment style, and relating these views to the control and affiliation dimensions of interpersonal style.

Psychopathy, Interpersonal Style, and Attachment

Psychopathy

Psychopathy was included as it is considered a personality construct that is highly relevant to the criminal population in general, and to the sex offender population in particular. Because it is measured largely by observations of interpersonal behaviour, it was expected to be related to the interpersonal circumplex model. Also, because the criteria for the clinical diagnosis appear to reflect notions about other people and beliefs about oneself, it was expected that psychopathy would be associated with attachment style.

There were scores of the Revised Psychopathy Checklist on file for a total of 77 offenders (28 rapists, 22 child molesters, and 27 violent offenders). The mean PCL-R score for the rapists was 24.12 (SD=7.91); for the child molesters, the mean score was 22.3 (SD=7.72), and the mean score for the violent offenders was 20.0 (SD=8.82). An analysis of variance revealed that the difference between groups was nonsignificant.

For the purposes of the tests below, the psychopathy groups were divided into 3 categories: high (scores of 30 or more), moderate (scores of 20 to 29), and low (scores of less than 20). The cutoffs chosen to divide the groups are based on Hare's recommendation for a clinical diagnosis of psychopathy, and the moderate and low categories are based on both percentile ranks of the normative samples in each range of scores as well as guidelines used in forensic risk assessments. This led to a division into 30 men classified as "low" on PCL-R scores (8 rapists, 9 child molesters, and 13 violent offenders); 30 men classified as "moderate" (12 rapists, 9 child molesters, and 9 violent offenders), and 17 men classified as "high" (8 rapists, 4 child molesters, and 5 violent offenders). A chi square analysis examining the association between offender types and PCL-R categories was nonsignificant.

Comparison of Psychopathy Groups on Attachment Style

The proportion of each of the three psychopathy groups characterized by each of the four prototypical attachment styles (according to the highest Composite Attachment score) is presented in Table 8. Worth noting is the relatively higher proportion of those scoring high on the PCL-R in the dismissive attachment category (35.3%, as opposed to 20% of low PCL-R scorers and 10% of moderate PCL-R

Table 8.

Proportion of Attachment Styles by Psychopathy Group: Highest Composite Attachment Scale Score

	Secure	Fearful	Preoccupied	Dismissive
Low (PCL-R[a]<20)	40.0%	20.0%	20.0%	20.0%
Moderate (PCL-R[a]=20-29)	33.3%	30.0%	26.7%	10.0%
High (PCL-R[a]=30+)	29.4%	29.4%	5.9%	35.3%

Note: Percentages represent the proportion of the psychopathy group in each attachment category.
[a]PCL-R: Score on Revised Psychopathy Checklist.

scorers). Nonetheless, the chi square test was nonsignificant.

Comparison of Psychopathy Groups on Interpersonal Style

Interpersonal profiles for each of the three psychopathy groups on each interpersonal circumplex measure are presented in Figures 20 to 25. The three profiles on each measure indicate different profiles, or patterns, for the psychopathy groups. The self-ratings of interpersonal style according to the Interpersonal Adjective Scales (Figures 20 to 22) indicate that nonpsychopaths (i.e., those with scores in the low to moderate categories) rate their interpersonal styles more similar to each other and dissimilar to the psychopaths (according to Hare's clinical cutoff score of 30). The angular location on the profile of those with low psychopathy scores indicates that these men rated their prototypical interpersonal style in the Unassuming-Ingenuous category. According to Wiggins (1995), people classifying their styles in this category see themselves as "deferent, obliging, modest..."(p. 25). The angular location on the profile of those with moderate psychopathy scores indicates that these men rated their prototypical interpersonal style as Warm-Agreeable, described by adjectives such as sympathetic, kind, and forgiving (Wiggins, 1995). In contrast, the psychopaths described their interpersonal style as "Arrogant-Calculating", indicated by adjectives such as "egotistical, arrogant, cunning, and exploitative" (Wiggins, 1995; p. 24).

The profiles on the Inventory of Interpersonal Problems (Figures 23 to 25) suggest that the low and moderate psychopathy groups rated their typical interpersonal problems in different categories from how they rated their prototypical style (on the Interpersonal Adjective Scales). The low psychopathy group rated its

Figure 20.

Interpersonal Profile for Low Psychopathy Group (PCL-R<20): Revised Interpersonal Adjective Scales

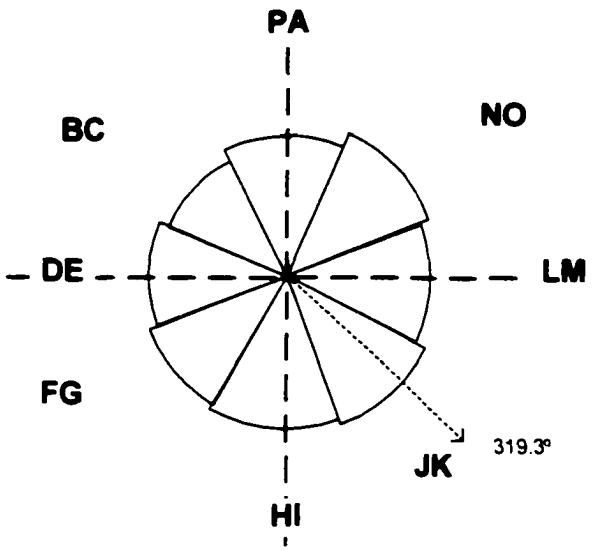
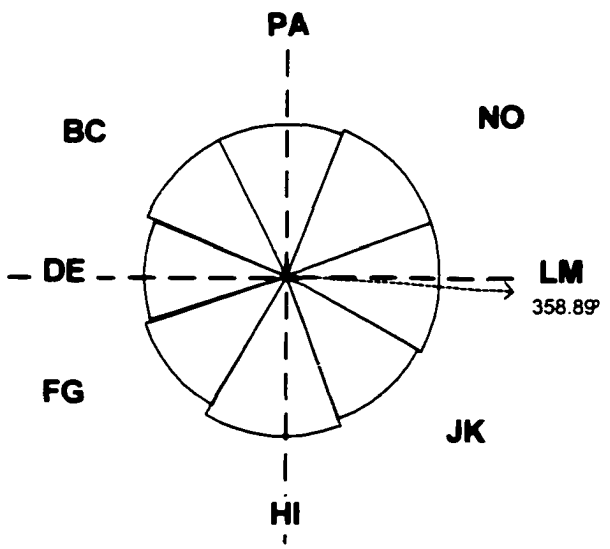


Figure 21.

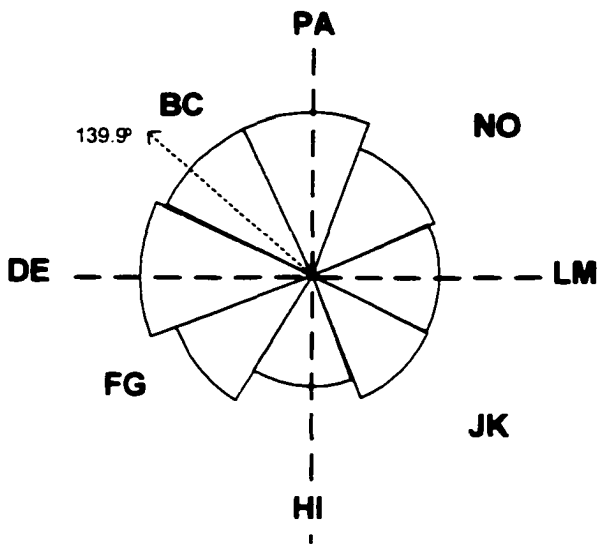
Interpersonal Profile for Moderate Psychopathy Group (PCL-R=20-29): Revised Interpersonal Adjective Scales



Note: PA=Assured-Dominant; BC=Arrogant-Calculating; DE=Coldhearted; FG=Aloof-Introverted; HI=Unassured-Submissive; JK=Unassuming-Ingenuous; LM=Warm-Agreeable; NO=Gregarious-Extraverted.

Figure 22.

Interpersonal Profile for High Psychopathy Group (PCL-R=30+): Revised Interpersonal Adjective Scales



Note: PA=Assured-Dominant; BC=Arrogant-Calculating; DE=Coldhearted; FG=Aloof-Introverted; HI=Unassured-Submissive; JK=Unassuming-Ingenuous; LM=Warm-Agreeable; NO=Gregarious-Extraverted.

Figure 23.

Interpersonal Profile for Low Psychopathy Group (PCL-R<20): Inventory of Interpersonal Problems-Circumplex Version

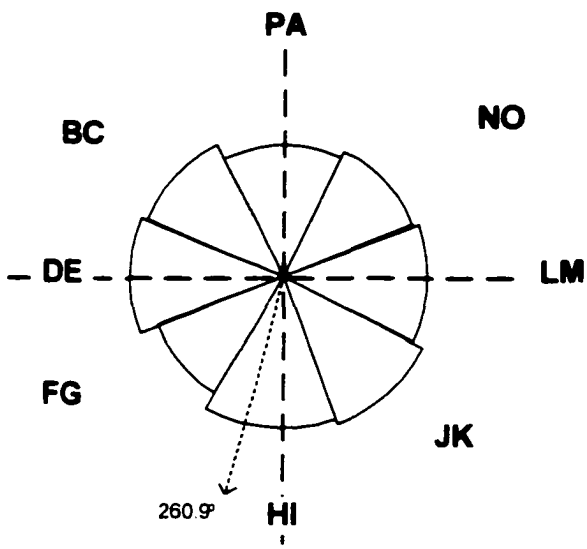
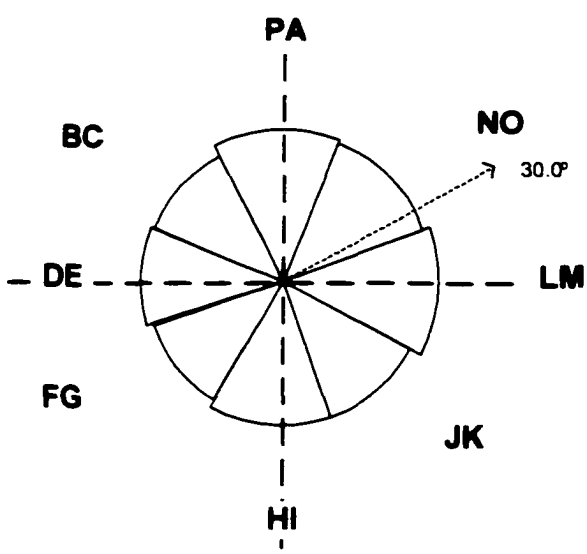


Figure 24.

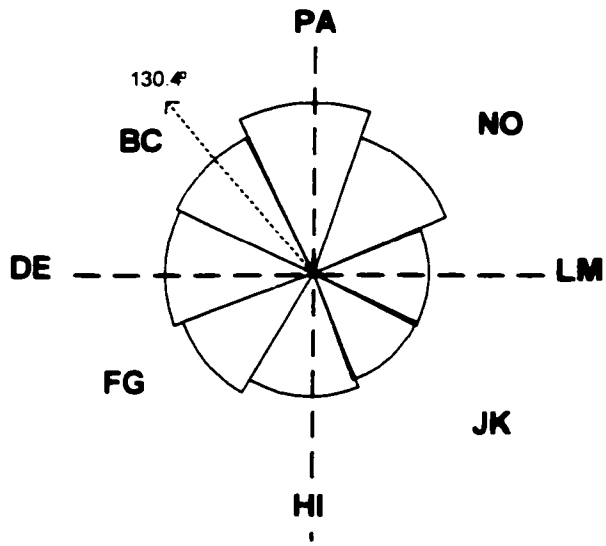
Interpersonal Profile for Moderate Psychopathy Group (PCL-R=20-29): Inventory of Interpersonal Problems-Circumplex Version



Note: PA=Domineering/Autocratic; BC=Vindictive/Competitive; DE=Cold; FG=Socially Avoidant/Introverted; HI=Nonassertive; JK=Exploitable; LM=Overly-Nurturant; NO=Intrusive/Overly-Expressive.

Figure 25.

Interpersonal Profile for High Psychopathy Group (PCL-R=30+): Inventory of Interpersonal Problems-Circumplex Version



Note: PA=Domineering/Autocratic; BC=Vindictive/Competitive; DE=Cold; FG=Socially Avoidant/Introverted; HI=Nonassertive; JK=Exploitable; LM=Overly-Nurturant; NO=Intrusive/Overly-Expressive.

interpersonal problems in the area of nonassertiveness, whereas the moderate psychopathy group rated its interpersonal problems in the area of intrusiveness, or a tendency to be overly-expressive. However, the psychopaths rated their interpersonal problems in the same octant category as their prototypical interpersonal style, as indicated by the similarity of the angular location in each profile. These problems of the psychopaths are in the category of vindictiveness, or competitiveness.

The means and standard deviations of the scores on the control and affiliation axes, and on the octant categories for each measure, are presented in Table 9. Although the high psychopathy group had a higher average standardized score on the control axis (indicating higher dominance) and a lower average standardized score on the affiliation axis (indicating greater hostility) than did the other two psychopathy groups, the differences among mean scores for these axes were nonsignificant for both interpersonal circumplex measures. As well, a multivariate analysis of variance comparing mean octant scores of the three psychopathy groups was nonsignificant (for both interpersonal circumplex measures). Finally, a chi square analysis of the proportion of each psychopathy group's ratings of typical interpersonal style and problems (as determined by angular location on the circumplex) was nonsignificant.

As well, it was expected that psychopaths would display more rigidity in interpersonal style and in their interpersonal problems. To test this hypothesis, an analysis of variance was computed to determine whether the length of the vectors in each group's profile were significantly different. Although the psychopaths had

Table 9.

Psychopathy Group Ratings for Interpersonal Circumplex Measures

	Psychopathy Group		
	Low (PCL-R<20)	***Moderate (PCL-R=20-29)***	***High (PCL-R=30+)***
Revised Interpersonal Adjective Scales[a]	**Mean (sd)**	**Mean (sd)**	**Mean (sd)**
PA: Assured-Dominant	4.63 (1.17)	4.85 (0.75)	5.29 (1.17)
BC: Arrogant-Calculating	2.82 (1.09)	3.33 (1.52)	3.87 (1.93)
DE: Coldhearted	2.38 (1.06)	2.48 (1.52)	3.46 (1.95)
FG: Aloof-Introverted	2.96 (1.29)	3.10 (1.42)	3.49 (1.38)
HI: Unassured-Submissive	3.73 (0.99)	4.01 (1.11)	3.11 (1.36)
JK: Unassuming-Ingenuous	4.82 (1.01)	4.89 (1.40)	4.48 (1.73)
LM: Warm-Agreeable	6.00 (1.23)	6.24 (1.39)	5.76 (1.81)
NO: Gregarious-Extraverted	5.72 (1.10)	5.96 (1.38)	5.79 (1.30)
Control Axis (z-score)	-.07 (.57)	-.001 (.61)	.41 (.83)
Affiliation Axis (z-score)	.08 (.97)	.06 (1.21)	-.48 (1.43)
Inventory of Interpersonal Problems[b]			
PA: Domineering/Autocratic	6.27 (4.53)	8.90 (6.00)	11.00 (8.32)
BC: Vindictive/Competitive	7.43 (4.92)	9.03 (6.90)	10.76 (8.34)
DE: Cold	9.43 (7.29)	10.30 (8.06)	11.06 (9.04)
FG: Socially Avoidant/Introverted	8.87 (6.47)	10.80 (6.01)	11.35 (7.61)
HI: Nonassertive	9.80 (6.73)	11.50 (7.57)	11.53 (9.41)
JK: Exploitable	10.10 (7.14)	11.10 (7.13)	10.30 (8.66)
LM: Overly-Nurturant	11.07 (6.36)	13.80 (5.89)	11.30 (7.39)
NO: Intrusive/Overly-Expressive	6.77 (5.69)	8.50 (5.37)	9.29 (7.30)
Control Axis (z-score)	-.02 (.89)	.06 (.79)	.36 (.77)
Affiliation Axis (z-score)	-.004 (1.01)	.10 (1.01)	-.31 (1.13)

[a]Possible range: 1 to 8.
[b]Possible range: 0 to 32.

longer vectors for each measure (indicating greater rigidity), the analysis of variance was nonsignificant for each measure. The difference approached significance for vector lengths as determined by the Interpersonal Adjective Scales, $F(2,74)=2.66$, $p<.08$.

Overall, while the proportion of each group and the scores on each octant do not distinguish the psychopaths from the nonpsychopaths, the interpersonal profiles that show the pattern of mean scores and where the interpersonal styles converge to form the prototypical style of each group suggest that the psychopaths do differ in interpersonal style from the nonpsychopaths.

Attachment Style, Interpersonal Style, Intimacy, and Loneliness

Between Groups Comparison of Intimacy Deficits and Loneliness

The final section of the hypotheses involved bringing together the constructs of attachment style and interpersonal style to attempt to integrate previous research findings that link attachment style to observed deficits in intimacy and loneliness that sex offenders frequently report experiencing. Means and standard deviations of scores for each subject group on the Social Intimacy Scale, Fear of Intimacy Scale, and UCLA Loneliness Scale are presented in Table 10, and the means and standard deviations of scores for subjects in each attachment group for the intimacy and loneliness measures are presented in Table 11.

Firstly, it was expected that sex offenders would differ from the comparison groups on measures of intimacy deficits and loneliness, replicating findings from previous research. Notably, the sex offender groups had lower scores than the

Table 10.

Scores on Intimacy and Loneliness Measures by Participant Group

	Social Intimacy Scale[a]	Fear of Intimacy Scale[b]	UCLA Loneliness Scale[c]
	Mean (sd)	**Mean (sd)**	**Mean (sd)**
Community Group	133.19 (24.44)	80.79 (22.24)	40.56 (9.89)
Rapists	129.34 (31.89)	92.73 (31.46)	48.03 (11.63)
Child Molesters	126.90 (28.09)	93.45 (22.18)	44.29 (11.20)
Violent Offenders	141.83 (18.54)	75.46 (22.44)	42.36 (9.69)

[a]Possible Range: 17 to 170; mean of unmarried males in normative sample: 134.9
[b]Possible Range: 35 to 175; mean of males in normative sample: 81.90
[c]Possible Range: 20 to 80; mean of males in normative sample: 36.23

Table 11.

Scores on Intimacy and Loneliness Measures by Attachment Group

	Social Intimacy Scale[a]	Fear of Intimacy Scale[b]	UCLA Loneliness Scale[c]
	Mean (sd)	**Mean (sd)**	**Mean (sd)**
Secure	143.98 (16.95)	69.56 (17.23)	35.48 (8.05)
Fearful	124.85 (22.74)	103.50 (24.38)	51.13 (8.74)
Preoccupied	134.57 (26.52)	85.46 (18.51)	44.90 (12.03)
Dismissive	121.37 (37.26)	90.98 (26.70)	44.45 (9.67)

[a]Possible Range: 17 to 170; mean of unmarried males in normative sample: 134.9
[b]Possible Range: 35 to 175; mean of males in normative sample: 81.90
[c]Possible Range: 20 to 80; mean of males in normative sample: 36.23

community group and violent offenders on the Social Intimacy Scale, and higher scores on the Fear of Intimacy Scale. A multivariate analysis of variance conducted to compare means for the intimacy measures revealed a significant difference between groups: using Wilks' criterion, $F(6,248)=2.24$, $p<.05$. The univariate F indicated that the between groups difference was significant for the Fear of Intimacy Scale, $F(3,148)=4.17$, $p<.01$, and approached significance for the Social Intimacy Scale ($p<.09$). Scheffe post hoc tests for the Fear of Intimacy scale showed that the child molesters' mean score was significantly higher than that of the violent offenders ($p<.03$). No other significant differences were found.

Table 10 shows that the sex offender groups had higher scores on the UCLA Loneliness Scale, and an analysis of variance revealed significant differences between groups, $F(3,154)=3.46$, $p<.02$. Scheffe post hoc tests showed that the mean score of the rapists was significantly higher than that of the community group ($p<.03$). No other significant differences were found.

Overall, the sex offenders did report greater intimacy deficits and greater loneliness than did the comparison groups, as expected. The differences, however, did not reach significance for each sex offender group for each analysis.

Next, it was expected that the various attachment groups would differ on measures of intimacy deficits and loneliness, with insecure attachment groups reporting greater intimacy deficits and greater loneliness than the secure group. Means and standard deviations of scores for each attachment group on the Social Intimacy Scale, Fear of Intimacy Scale, and UCLA Loneliness Scale are presented in Table 11. The secure group did have the lowest scores on the UCLA Loneliness

Scale and the Fear of Intimacy Scale, and the highest score on the Social Intimacy Scale. A multivariate analysis of variance conducted to compare means for the intimacy measures revealed a significant difference between groups: using Wilks' criterion, $F(6,294)=9.24$, $p<.001$. The univariate F indicated that the between groups difference was significant for the Social Intimacy Scale, $F(3,148)=6.18$, $p<.01$, and for the Fear of Intimacy Scale, $F(3,148)=16.11$, $p<.001$. Games-Howell post hoc tests for the Social Intimacy Scale revealed that the Secure attachment group differed significantly from the Fearful and Dismissive attachment groups ($p<.05$ and $p<.01$, respectively), and on the Fear of Intimacy Scale, the Secure group differed significantly for all three of the insecure groups: $p<.001$ for the difference from the Fearful group, $p<.01$ for the difference from the Preoccupied group, and $p<.01$ for the difference from the Dismissive group.

Table 11 shows that the Secure group had the lowest average score on the UCLA Loneliness Scale, and an analysis of variance revealed significant differences between groups, $F(3,154)=19.52$, $p<.001$. Scheffe post hoc tests showed that the mean score of the Secure group was significantly higher than that of the other three groups ($p<.001$ for each of the three insecure attachment groups). Overall, the secure attachment group did report lower intimacy deficits and lower loneliness than did the three insecure attachment groups, as expected.

Relationship among Constructs of Interpersonal Style, Attachment, and Intimacy

This hypothesis involved testing the relationship among the constructs, and the general hypothesis was that interpersonal style would act as a mediating variable between attachment style and intimacy. Because interpersonal style is

composed of two, theoretically uncorrelated factors, both of these were used in the model (i.e., control and affiliation). Also, adult attachment style is theoretically comprised of views toward self and views toward others, and the different combinations of these two views make up four different attachment styles (i.e., secure, fearful, preoccupied, and dismissive). Therefore, the proposed relationship includes all four attachment styles, the two dimensions of interpersonal style, plus intimacy deficits. If the hypothesis of complete mediation is correct, then the statistical relationship between each attachment style and intimacy deficits should be nonsignificant after accounting for the influence of the two dimensions of interpersonal style on intimacy deficits.[1]

The standardized solution for the structural model is presented in Figure 26. (Because the factor loadings were set to 1 and the error variances were set to 0, only the structural model is presented in the diagram). Figure 26 shows the attachment styles on the left and the three directional arrows from each attachment style lead to each of Control, Affiliation, and Intimacy Deficits, representing the statistically causal relationship between each attachment style and each of those three variables. The arrow between each attachment style and intimacy deficits represents the causal relationship between those variables after controlling for the

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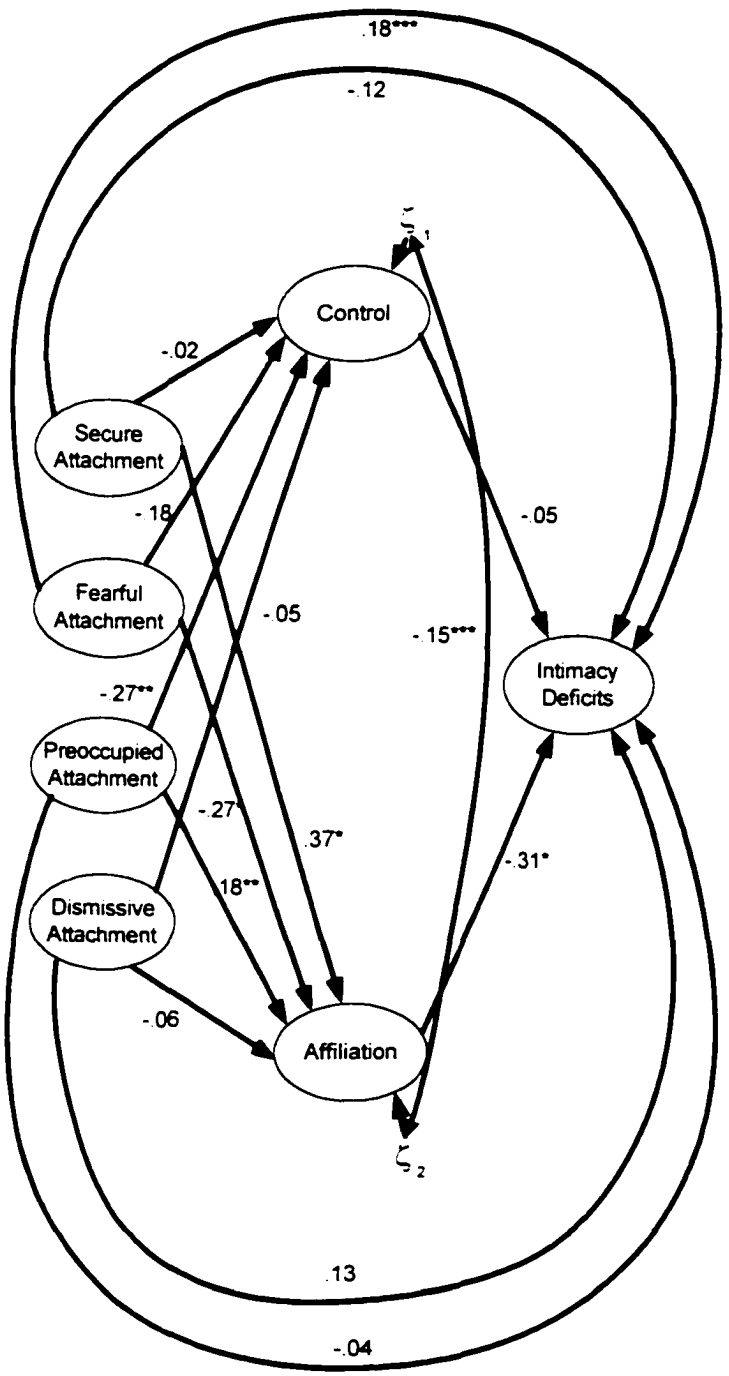
[1] Ideally, in a structural equation model it is useful to specify latent variables that are indicated by, or related to, measured variables. The purpose of the structural equation model is to examine the relationships among these constructs, or latent variables, having removed the influence of random error. However, these are complex models that require large sample sizes to test them. The sample size in the present study was too modest for such a test; therefore, the simpler model in which each measure has been specified as a perfect indicator of the construct was tested. The analyses are thus viewed as exploratory. The more complex model remains a direction for future research.

Figure 26.

Relationship Among Attachment Styles, Interpersonal Dimensions, and Intimacy Deficits



Note: Scores for 2 measures of each construct were equally weighted and combined; factor loadings were set to 1, error variance was set to 0.
***p<.05; **p<.01; *p<.001.

effects of the interpersonal dimension variables. Also shown in Figure 26 are directional arrows leading from the interpersonal dimension variables, control and affiliation, to intimacy deficits.

The model was constructed with the directional arrows leading from and to the variables mentioned because it was viewed as theoretically plausible that adult attachment style, which is proposed to be associated with childhood attachment style (Bartholomew & Horowitz, 1991), would occur first. This attachment style was seen as translating into a particular interpersonal style as views of the self were seen as related to control in interpersonal interactions, and views of others were seen as related to affiliation in interpersonal interactions. The resulting problems in relationships with others, indicated by intimacy deficits in this model, were seen to result from the individual's interpersonal interactions and the problems inherent in that individual's style. Finally, despite the theoretically uncorrelated relationship between the dimensions of affiliation and control, this model allowed for shared variance by suggesting the common predictors of attachment style, and the error terms were permitted to correlate to allow for the possibility that there may be some shared variance not accounted for by attachment style.

The values above each arrow in the model represent the standardized parameter estimates. As indicated in Figure 26, secure attachment style does not significantly predict the control dimension of interpersonal style, but it is a significant and positive predictor of affiliation ($p<.001$). Affiliation is, in turn, a significant and negative predictor of intimacy deficits. The correlation between the secure attachment style and intimacy deficits is nonsignificant. From the figure, it appears

that the affiliation dimension, but not the control dimension, mediates the relationship between secure attachment style and intimacy deficits. Fearful attachment style is a significant and negative predictor of affiliation ($p<.001$), and it approaches significance as a negative predictor of control ($p<.10$). Yet the correlation between fearful attachment and intimacy deficits remained significant ($p<.05$); therefore, the interpersonal dimensions do not completely mediate the relationship between fearful attachment style and intimacy deficits. Preoccupied attachment style is a significant negative predictor of control ($p<.01$), and an almost significant positive predictor of affiliation ($p<.06$), and the correlation between preoccupied attachment style and intimacy deficits is nonsignificant. Yet because the relationship between preoccupied attachment and affiliation (which is a significant negative predictor of intimacy deficits) is not statistically significant, there is insufficient evidence to suggest mediation between preoccupied attachment and intimacy deficits. Finally, dismissive attachment style is not a significant predictor of either dimension of interpersonal style; therefore there is no evidence that either dimension of interpersonal style acts as a mediating variable between dismissive attachment and intimacy deficits.

Although the above analyses determine that the relationship between fearful attachment style and intimacy deficits are significantly different from zero, they do not indicate whether this relationship is significantly different from that between the dismissive attachment style and intimacy deficits, which approached significance ($p<.10$). To determine whether the fearful attachment style is a significantly better predictor of intimacy deficits than the dismissive attachment style, the model was re-

specified by constraining the parameter estimates for each of these relationships to be equal. If there is a significant difference between the magnitudes of values of the parameter estimates, then constraining them to be equal should result in a worse fitting model. To determine if the model fit worse, the chi square value from the first model was subtracted from the chi-square value of the second model (after fearful attachment was reverse-scaled to load in the same direction as dismissive attachment). The result was significant: $\chi^2(1)=7.68$, $p<.01$; therefore, fearful attachment style as a predictor of intimacy deficits was statistically different from dismissive attachment style as a predictor of intimacy deficits.

One final interesting point is that the residuals of the dimensions of control and affiliation were significantly negatively correlated ($p<.05$). This finding runs contrary to interpersonal circumplex theory, which assumes the dimensions to be orthogonal and thus uncorrelated. The present finding indicates the variance not accounted for by attachment style remaining in these constructs is not independent.

Relationship among Constructs of Interpersonal Style, Attachment, and Loneliness

As with the previous section, the purpose of this analysis was to test the hypothesis that interpersonal style acts as a mediating variable, this time between attachment style and loneliness. Structural equation modelling was used to test this hypothesis for the same reasons listed above. If the hypothesis of complete mediation is correct, then the statistical relationship between each attachment style and loneliness should be nonsignificant after accounting for the influence of control and affiliation on loneliness. The model is identical to the previous one, and the same measures were used, with one exception: the variable, intimacy deficits, is

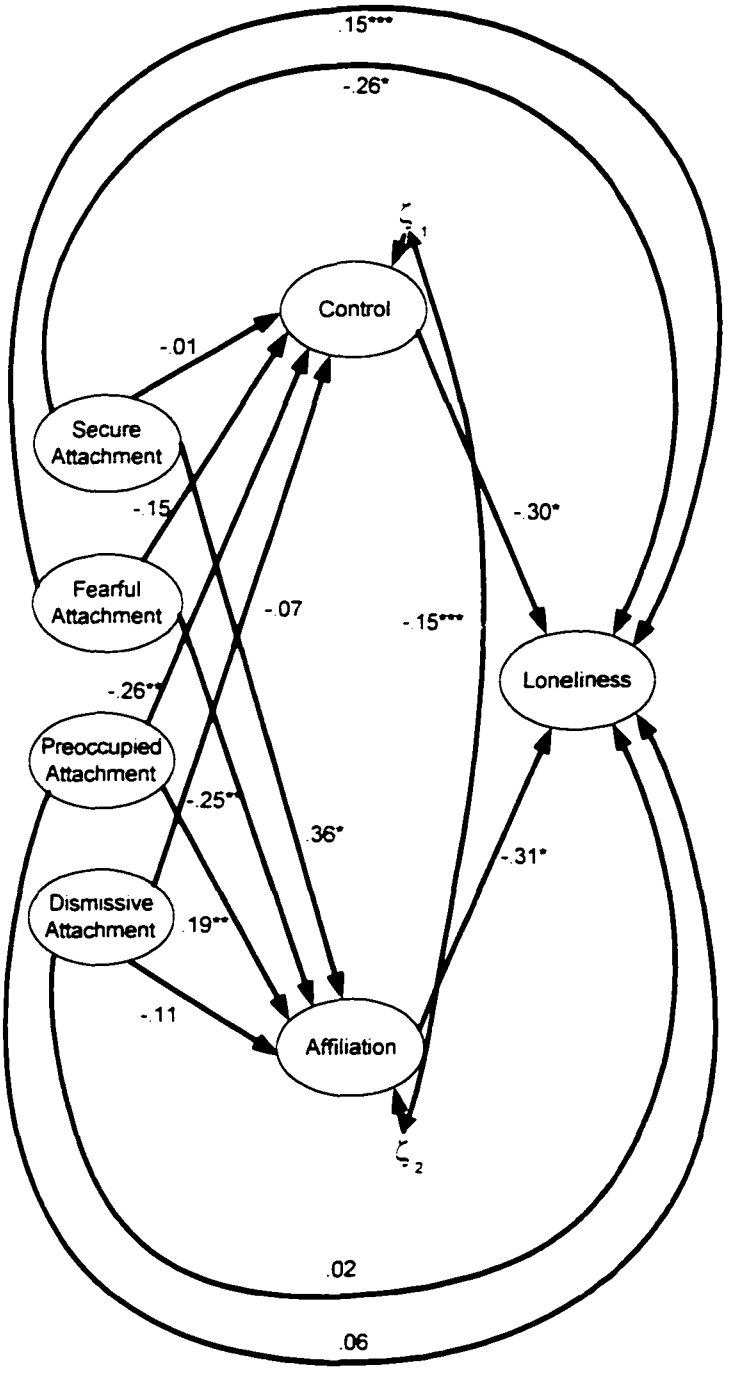
replaced by loneliness, which is measured by the total score on the UCLA Loneliness Scale.

The resulting solution is presented in Figure 27 (as with the previous solution, only the structural model is shown). Attachment styles are shown on the left and the three directional arrows from each attachment style lead to each of Control, Affiliation, and Loneliness, representing the statistically causal relationship between each attachment style and each of those three variables. The arrows between each attachment style and loneliness represent the causal relationship between those variables after controlling for the effects of the interpersonal dimension variables. Also shown in Figure 27 are directional arrows leading from the interpersonal dimension variables, control and affiliation, to loneliness. The model was constructed with the directional arrows leading from and to the variables in this order for the reasons mentioned in the section above.

The values above each arrow in the model represent the standardized parameter estimates. As indicated in Figure 27, and similar to the previous model, secure attachment style does not significantly predict the control dimension of interpersonal style, but it is a significant and positive predictor of affiliation ($p<.001$). Affiliation is, in turn, a significant negative predictor of loneliness. However, unlike the previous model, the correlation between secure attachment style and loneliness remained significant; thus affiliation is not completely mediating the relationship between secure attachment and loneliness. Also, because the control dimension is significantly and negatively related to loneliness, but secure attachment style does not predict control, there is no evidence of mediation between secure attachment

Figure 27.

Converged Model: Relationship Among Attachment Styles, Interpersonal Dimensions, and Loneliness



Note: Scores for 2 measures of each construct were equally weighted and combined; factor loadings were set to 1, error variance was set to 0.
***p<.05; **p<.01; *p<.001.

and loneliness via the control dimension. Fearful attachment style is a significant and negative predictor of affiliation ($p<.001$), and it approaches significance as a negative predictor of control ($p<.10$). Yet because the correlation between fearful attachment style and loneliness remained significant, the interpersonal dimensions are not completely mediating the relationship between fearful attachment and loneliness. Preoccupied attachment style is a significant negative predictor of control ($p<.01$), and a significant positive predictor of affiliation ($p<.05$). The correlation between the preoccupied attachment style and loneliness is not significant; thus it appears that there is evidence of mediation between preoccupied attachment and loneliness via interpersonal affiliation and control. The dismissive attachment style is not a significant predictor of either dimension of interpersonal style, thus there is no evidence of mediation.

To determine whether the secure attachment style is a significantly better predictor of loneliness than the fearful attachment style, the model was re-specified by constraining the parameter estimates for each of these relationships to be equal, as described in the previous section. The result was nonsignificant: $\chi^2(1)=1.15$, ns.; therefore, secure attachment style is not a significantly better (negative) predictor of loneliness than is the fearful attachment style, after controlling for the contributions made by the dimensions of interpersonal behaviour. Finally, as in the previous analysis, the residuals of the dimensions of control and affiliation were significantly and negatively correlated ($p<.05$), contrary to the relationship proposed by interpersonal circumplex theory.

DISCUSSION

Summary of Findings

Table 12.

Summary of Hypotheses and Outcome

Hypothesis	Supported/Not Supported/ Partial Support
Offenders Classified by Interpersonal Style	
Rapists will be more hostile than child molesters	Supported
Rapists & violent offenders will be more dominant than child molesters & nonoffenders	Partial support
Child molesters will be more submissive than rapists	Partial support
Nonoffenders will be friendlier than offender groups	Not Supported
The groups would be differentially distributed among the areas of the circumplex – rapists concentrated in the hostile-dominant quadrant and child molesters in the submissive half	Not Supported
Rapists will have higher ratings on the hostile octants	Not Supported
Rapists will have a higher score than child molesters on the purely dominant octant	Not Supported
Child molesters will have the lowest score on the purely submissive octant than the other groups	Not Supported
Nonoffenders will have the highest scores on the friendly-dominant octant	Not Supported
Offenders will be more rigid than nonoffenders	Not Supported
Attachment and Interpersonal Style	
Secure and Dismissive groups will be more dominant and less submissive than Fearful and Preoccupied groups	Partial Support
Secure and Preoccupied groups will have interpersonal styles mapping onto the friendly half of the circumplex	Supported
Fearful and Dismissive groups will have interpersonal styles mapping onto the hostile half of the circumplex	Supported
Insecurely attached groups will be more rigid than Secure group	Not Supported
Psychopathy	
Psychopaths will be more likely to have a Dismissive Attachment style	Not Supported
Psychopaths will be more likely to exhibit a hostile interpersonal style	Supported
Psychopaths will exhibit greater rigidity than nonpsychopaths	Not Supported
Psychopaths will not be as likely as nonpsychopaths to endorse items relating to interpersonal problems associated with their interpersonal style	Not Supported
Interpersonal Style, Attachment, and Intimacy and Loneliness	
Sex offenders will report the greatest intimacy deficits and loneliness	Partial Support
Insecurely attached participants will report greater intimacy deficits and loneliness than securely attached participants	Supported
Interpersonal style will act as a mediating variable between attachment style and intimacy deficits, and between attachment style and loneliness	Not Supported

Interpersonal Style and Sexual Offenders

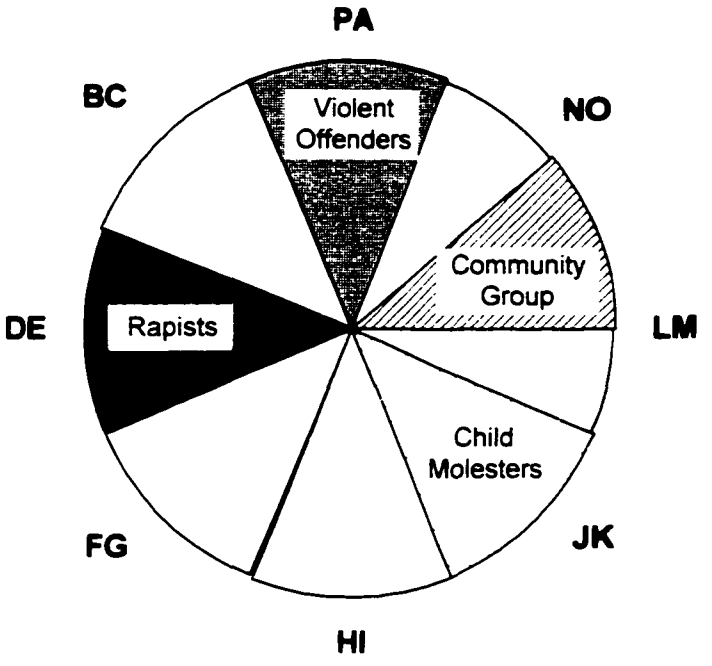


Figure 28. **Interpersonal Style and Sexual Offenders**

Note: Styles (Problems): PA=Assured-Dominant (Autocratic); BC=Arrogant-Calculating (Vindictive/Competitive); DE=Cold; FG=Aloof-Introverted (Socially Avoidant); HI=Unassured-Submissive (Nonassertive); JK=Unassuming-Ingenuous (Exploitable); LM=Warm-Agreeable (Overly Nurturant); NO=Gregarious-Extraverted (Intrusive).

The hypotheses regarding differences between rapists and child molesters, and differences between the different types of sexual offenders, nonsexual offenders, and community volunteers were partially supported (see Figure 28). With respect to the overall dimensions of control and affiliation, rapists indicated interpersonal styles and problems related to the negative side of the affiliation axis (i.e., toward the "coldhearted" or hostile end), whereas child molesters rated their styles and interpersonal problems on the negative side of the control axis (i.e., toward the submissive end). These findings were consistent when comparing

rapists to child molesters, as well as when comparing these sex offender groups to either of the other two groups. These differences between the sex offender groups, and between the sex offenders and comparison groups were also apparent regardless of the interpersonal circumplex measure, although the findings were not always statistically significant.

Similar to the findings of differences on the two dimensions, there were some differences in the scores on the octant categories of interpersonal style but not all of the differences reached significance. Yet the differences were in the expected directions; that is, rapists had higher scores than child molesters, and generally higher scores than the other two groups, on the octant categories on the side of the circumplex corresponding to negative affiliation (i.e., Arrogant-Calculating, Coldhearted, and Aloof-Introverted on the Revised Interpersonal Adjective Scales; and Vindictive-Competitive, Cold, and Socially Avoidant on the Inventory of Interpersonal Problems-Circumplex Version). As well, child molesters had the highest scores on the octant categories corresponding to the submissive side of the circumplex (i.e., Unassured-Submissive and Unassuming-Ingenuous on the Revised Interpersonal Adjective Scales; and Nonassertive and Exploitable on the Inventory of Interpersonal Problems-Circumplex Version).

Yet one of the bases of interpersonal circumplex theory is that people are not so neatly grouped into categories of interpersonal style or behaviour, and therefore the boundaries between each category are not clear. The theory discusses general inclinations in interpersonal interactions, so the importance in examining differences is not related to differences in absolute scores in each category, but rather the

different patterns of means and the overall direction where the behaviours converge, indicating the prototype for each group's interpersonal style. These tendencies are illustrated by the interpersonal profiles for each group. These profiles present a cohesive picture of the findings mentioned above, and provide support for the overall hypothesis that rapists and child molesters would demonstrate different interpersonal profiles, and these profiles would reflect differences on both dimensions of control and affiliation. The findings suggest that child molesters exhibit styles that are nonassertive, and this concurs with previous research (Marshall, Barbaree & Fernandez, 1995; Overholser & Beck, 1986). Thus it appears that child molesters experience most difficulties in the area of interpersonal control. The rapists, on the other hand, appear to demonstrate more difficulties in the area of interpersonal affiliation. That is, they rate their style as coldhearted (or on the hostile side of the affiliation continuum), and they do identify this style as problematic, as indicted by their elevated ratings of problems in the same area of the circumplex, according to their responses to the Inventory of Interpersonal Problems-Circumplex Version. These profiles for the different types of sexual offenders look different from each other, and different from the other comparison groups (generally speaking, violent offenders tend to be dominant while the community volunteers tend to be friendly).

These apparent differences between child molesters and rapists on the different dimensions of interpersonal functioning concur with previous research and clinical observations. Research findings on the social functioning of sexual offenders suggests that child molesters tend toward unassertive behaviour, whereas

rapists tend to choose aggressive behaviour as appropriate responses in an experimental manipulation (Marshall, Barbaree & Fernandez, 1995). These differences may be interpreted as different views toward the self and toward others. Horowitz et al. (1995) suggest that submissive behaviour is related to unflattering views of oneself, and they described the research findings of interpersonal behaviour in depressed people to illustrate their point. The findings of the current study suggest that the child molesters' difficulties in interpersonal interactions may be related to negative self-views. In contrast, the rapists' prototypical interpersonal style and their associated problems in interpersonal interactions may be more related to negative views of other people. In examining the items reflecting interpersonal behaviours identified by the rapists as problematic, the emerging themes are lack of trust of others, inability to form commitments or bond with another person, and a desire to fight or seek revenge. These themes suggest a difficulty in dealing with others, but do not appear to be as reflective of any particular views of the self. Previous research findings linking feelings of anger to rape of adult victims (Rada, 1978), and findings of rapists' desire to humiliate and degrade victims (Pithers, Beal, Armstrong & Petty, 1989) provide support to the notion that not only might rapists have generally negative views of others, and this may have an effect on their social interactions, but their views toward others may factor into their offending behaviour as well.

Thus in examining the patterns of the participant groups, the overall finding in this study is that rapists and child molesters describe differences from each other, and from the comparison groups, in their interpersonal styles and the problems

associated with those styles. The suggestion that these differences may stem from views of self and others is related to patterns in adult attachment, and the next section discusses the findings that incorporate attachment style with the interpersonal circumplex model.

Interpersonal Style, Attachment Style, Intimacy, and Loneliness

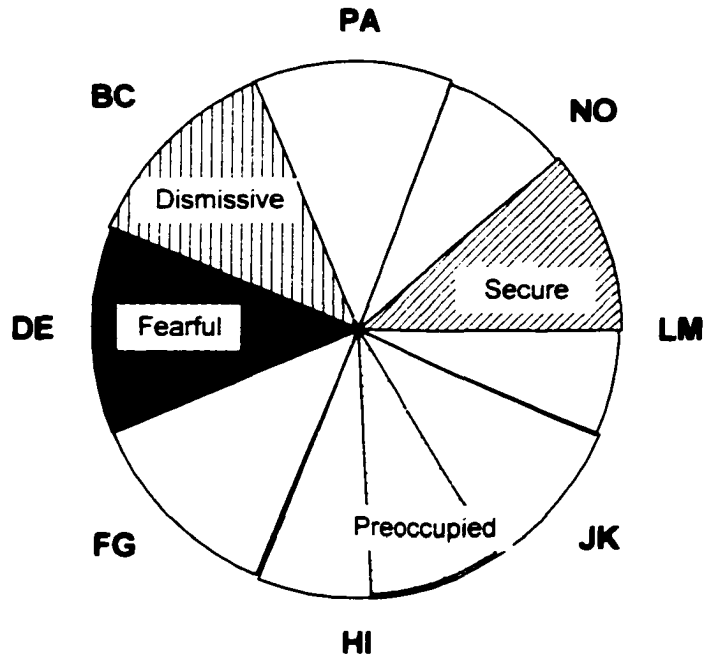


Figure 29. **Interpersonal Style and Attachment Groups**

Note: Styles (Problems): PA=Assured-Dominant (Autocratic); BC=Arrogant-Calculating (Vindictive/Competitive); DE=Cold; FG=Aloof-Introverted (Socially Avoidant); HI=Unassured-Submissive (Nonassertive); JK=Unassuming-Ingenuous (Exploitable); LM=Warm-Agreeable (Overly Nurturant); NO=Gregarious-Extraverted (Intrusive).

The consideration of how views of self and others might influence the two dimensions of interpersonal behaviours leads to an incorporation of attachment theory because views of the self and others are postulated to underlie adult attachment style. When the study sample was broken into the four attachment

groups, some clear differences in interpersonal style emerged. The basic presumption was that the control dimension of interpersonal style would correspond to views of the self, whereas the affiliation dimension would correspond to views of others. The differences seen in the interpersonal profiles of each attachment group were in line with these expectations (see Figure 29).

Because the secure attachment group theoretically has positive views toward self and positive views of others, it was expected that their interpersonal styles would reflect both assertiveness and friendliness. The interpersonal profile shows that the prototypical style of this group, as indicated by the angular location of the vector on the profile for the Revised Interpersonal Adjective Scales, does indeed reflect friendliness, and to a lesser degree, assertiveness. Consistent with the rating of interpersonal style, this group rated its problems to be of the Overly Nurturant type, as indicated by the angular location of the vector on the profile for the Inventory of Interpersonal Problems-Circumplex Version. Problems of this type are associated with trying too hard to please others, putting others' needs ahead of one's own, and being too trusting of others. Overall, the interpersonal profiles for the secure attachment group suggest that it is the group most likely to have effective interpersonal interactions, which is expected in comparison to the other three insecure attachment groups.

As with the secure group, the other three attachment group profiles are as expected from the hypotheses regarding the combination of control and affiliation according to views of self and others, respectively. The fearful attachment group, with negative views of self and others (Bartholomew & Horowitz, 1991), viewed its

typical interpersonal style as both hostile and submissive, and related its characteristic interpersonal problems as hostile, or cold. This finding suggests that the fearful group saw more problems with their ability to become close to others as opposed to seeing problems with making their needs known to others. The preoccupied attachment group, with positive views of others and negative views of the self, rated its typical interpersonal style as both friendly and submissive, and saw more of the problems of this style related to the lack of assertiveness. On the other hand, the dismissive group, with negative views of others and positive views of the self, had an opposite looking profile compared to the preoccupied group, which was expected. They viewed their typical style as both cold and dominant, while seeing problems related to both of these dimensions.

Although these findings were expected according to the hypotheses formed based on views of others and views of the self that comprise the four different attachment styles, the results of this study are somewhat different from Horowitz et al. (1993) who used only the Inventory of Interpersonal Problems to assess the interpersonal problems reported by people in the four attachment groups. While their secure attachment group looked similar, their fearful group reported problems related more to submissiveness, and not hostility. The dismissive group reported problems more closely related to hostility (but not related to dominance as much as the current study's sample), and the preoccupied group looked much different: their problems were reported as difficulties with intrusiveness, indicated by an angular location in the friendly-dominant region of the circumplex.

Horowitz et al. (1993) offered the following comments regarding this finding

with the preoccupied group: "Although one thinks of preoccupied individuals as needy and dependent, they and their friends seem to have emphasized the role of dominance in their interpersonal style" (p. 556). However, the authors did not offer any further explanation or conjecture for why the preoccupied group would be dominant in interpersonal relationships. There are some reasons why the Horowitz et al. sample looked somewhat different (and the preoccupied group looked quite different) from the present sample. Firstly, their sample size was approximately half that of the current study (77 participants). They noted that almost half of their sample was classified as secure, approximately 20 percent were in each of the dismissing and fearful groups, and 14 percent were in the preoccupied group (i.e., 10 or 11 participants in total). This is somewhat less than the numbers in the current study, and differences in findings may be due to sampling error. Also, the participants in the Horowitz et al. study were university students, and over half of them were female. It is quite possible that university students in general might appraise their interpersonal problems differently from men who have committed offenses and male volunteers from the community. Female university students falling into the preoccupied attachment style category might well regard their interpersonal problems differently from the men in the present study who fell into the same attachment category. Gender differences in octant scale scores have been found for the Inventory of Interpersonal Problems (Riding & Cartwright, 1999; Sheffield, Carey, Patenaude & Lambert, 1995), and the Revised Interpersonal Adjective Scales (Wiggins, 1995).

With respect to the different group types and their classification on attachment

style, the hypotheses were not supported: no offender group was more likely to be classified as insecurely attached, and the sex offender groups were not more likely than the other groups to be classified in certain insecure attachment categories. These findings are at odds with previous research. One notable difference between this study and previous ones is the rather even distribution of the nonoffenders across attachment types. Jamieson and Marshall (2000) found that 62 percent of their community participants rated their prototypical attachment style as secure, whereas only 27 percent of the current study's community group was classified as securely attached. Given that the community volunteers for this study were recruited in the same manner as those in previous studies (e.g., Cortoni, 1998; Jamieson & Marshall, 2000), there is not a readily apparent explanation for the differences found in the present study's sample.

The child molesters in the present study were also less likely to rate their prototypical attachment style as fearful (26%) than were child molester samples in previous studies. Jamieson and Marshall's (2000) study noted that 35% of their child molester participants rated their attachment style as fearful; Ward et al. (1996) found that 38% of their child molester sample was classified in the fearful attachment style category; and 58% of Cortoni's (1998) child molester group rated their attachment style as fearful. There is not an obvious explanation for the differences found in the present child molester sample. The child molesters in this sample have a slightly higher average number of sexual offense convictions (6.8) than the Cortoni (1998) study (5.6), but so do the rapists (2.3 compared to 1.9), and both studies found a significant difference between rapists and child molesters. However, the

child molester sample in the Cortoni study was serving a longer average sentence (6.5 years, compared to 5.8 years in the current study) and this may possibly influence the self-descriptions of prototypical attachment style. One major difference is that Cortoni (1998) used only one item of the Relationship Questionnaire (the paragraph descriptions) to classify participants in her study, whereas the current study used a composite score derived from both the Relationship Questionnaire and the Relationship Scales Questionnaire. This method resulted in some participants in the present study shifting into other categories (although the lack of significant findings in the current study remained even when the single-item Relationship Questionnaire was used).

Finally, classifying offenders into different attachment groups may not necessarily result in homogeneous groups within each attachment category. For example, one participant may strongly endorse items indicating two of the attachment categories, but based on a higher score he would be classified into the same attachment category as another participant who strongly endorsed items reflective of only that attachment style. These two participants might, therefore, have important differences from each other but the expectations of them on other constructs would be the same given their similar classification. If there truly is heterogeneity within the attachment categories, this may mask differences between the groups on other constructs.

Group differences on measures of intimacy and loneliness were as expected: the sexual offenders reported lower levels of intimacy, higher fear of intimacy, and greater loneliness than did either of the two comparison groups. These findings

concur with previous research (e.g., Bumby & Hansen, 1997; Garlick et al., 1996; Marshall et al., 1996; Seidman et al., 1994). Thus research findings with sexual offenders appear to consistently support clinical notions that intimacy deficits and loneliness are particularly problematic for this group, and inclusion of these issues in intervention is justified.

Psychopathy

The differences found in the attachment style of the psychopathic group compared to those scoring lower on the measure of psychopathy were as expected (i.e., psychopaths were more likely to rate their typical attachment style as dismissive), but the difference was not significant. This could be due to the lower numbers in the psychopathy group (17, as opposed to 30 in each of the other 2 groups). As well, the use of the clinical cutoff score of 30 to classify the psychopaths was stringent, but the choice of this cutoff ensured that only those actually identified as psychopaths would be included in this category.

The interpersonal profiles of the psychopaths also were as expected. They rated their prototypical style as Arrogant-Calculating. Interestingly, they saw problems with this style as well, as indicated by the convergence of the profile for the Inventory of Interpersonal Problems-Circumplex version and the profile for the Revised Interpersonal Adjective Scales. On the other hand, the men with low and moderate scores on the measure of psychopathy (i.e., the nonpsychopaths) did not seem to view their interpersonal problems as related to their prototypical style, as indicated by the different angular locations of the vectors on the profiles of the Inventory of Interpersonal Problems-Circumplex Version compared to those on the

profiles of the Revised Interpersonal Adjective Scales.

If the finding had been that the psychopaths did not view their interpersonal problems as being of the same type as their self-rated interpersonal style, that could possibly be explained by psychopaths simply not caring about being dominant and hostile in interpersonal reactions. While the profiles for the interpersonal circumplex were not completely different (i.e., the angular locations were within the same quadrant), the discrepancies between the profiles in the nonpsychopaths and the lack of discrepancy between the profiles for the psychopaths are difficult to explain. Quite possibly, the measures might converge better with the more disordered sample. Presumably, if the psychopaths are disordered and are more inclined to be rigid in their interpersonal style, their ratings on both of the interpersonal circumplex measures may be more consistent. On the other hand, with only 17 subjects in this psychopathic group, it is possible that the angular locations on the profiles are that close by chance.

One surprising finding was the lack of a statistically significant relationship between the psychopath category and rigidity of interpersonal style. However, the trend was in the expected direction (psychopaths did indicate more rigidity than the nonpsychopathic groups) and again, that the findings did not reach statistical significance may be attributable to the low numbers in the psychopathy group. Nevertheless, the overall expectation that psychopaths would appear different from nonpsychopaths on the interpersonal circumplex was met.

Relationship among Constructs

The hypothesis of this part of the study was that the interpersonal dimensions

of control and affiliation mediate the relationship between attachment and intimacy, and attachment and loneliness, respectively. This hypothesis was not supported in that complete mediation was not found, although there was some evidence of partial mediation along some of the paths. The fearful attachment style remained predictive of both intimacy deficits and loneliness, and the secure attachment style was predictive of loneliness, even after controlling for the effects of control and affiliation. Having pointed this out, the relationships were all in the expected direction. The attachment styles corresponding to negative views of self, negatively predicted the control dimension of interpersonal behaviour, suggesting that those with fearful or preoccupied attachment styles would likely be more submissive and/or less dominant in interpersonal interactions. The attachment styles corresponding to positive views of others were positively and significantly related to the affiliation dimension of interpersonal behaviour.

The only attachment style score that appeared unrelated to interpersonal behaviour in this model was the dismissive style, and this was a surprise. The dismissive attachment style, corresponding to positive views of the self and negative views of others, is postulated to be exploitative in romantic relationships. The expectation, therefore, was that higher levels of dismissiveness would correspond to greater dominance and greater hostility (and/or less submissiveness and less friendliness) in interpersonal interactions. This pattern of greater dominance and less affiliation was reflected in the interpersonal profiles for the sample categorized as dismissive (discussed in the previous section on Attachment Style, Intimacy, and Loneliness), but this lack of a predictive relationship in the model pertains to the

extent to which greater or lesser dismissiveness (i.e., when dismissiveness is considered as a continuous variable rather than attachment style considered as a categorical variable) is associated with greater or lesser dominance and affiliation.

There does not appear to be an obvious explanation for this lack of a relationship between dismissive attachment style and the other variables in the model. The variance in the dismissive attachment style appears comparable to that of the other attachment style variables, and the precision of measurement of the dismissive attachment category by the Relationship Questionnaire and the Relationship Scales Questionnaire is no worse than for the other attachment categories. Nor is there an obvious explanation for the lack of predictive value of the control dimension of interpersonal style on intimacy deficits. However, the control dimension was significantly and negatively predictive of loneliness, suggesting that too little assertiveness is related to the experience of loneliness. The affiliation dimension was predictive of both intimacy deficits and loneliness in the expected manner, such that greater affiliation (or more friendliness) was associated with fewer problems in intimacy and less loneliness.

There are different interpretations to the findings of a relationship between the interpersonal dimensions and intimacy deficits, and the interpersonal dimensions and loneliness. Either the relationships observed are explained by high scores on the dimensions, or lack of low scores. In other words, it is not known whether, for example, affiliation is related to lack of intimacy deficits and lack of loneliness due to friendliness or simply to the lack of hostility in interactions with others. Similarly, the significant negative predictive value of the control dimension on loneliness may be

due to the presence of dominance in interpersonal interactions, or it may be due to the absence of submissiveness. Such questions may be explored in future studies.

A further point of interest in these findings was the relationship between control and affiliation. Although interpersonal circumplex theory proposes that these variables are unrelated, the test of the mediator model implied some relationship due to common predictors (i.e., it was assumed that each attachment style would be related to both control and affiliation). The correlation between the residuals indicated some, albeit small, shared variance in these constructs even beyond what was accounted for by the attachment styles.

On a final note, it is not known whether the relationship among these constructs would be different for different groups of people in the population. Because this model was not a test of group differences but rather a test of the manner in which the constructs were related, there is no indication that the model would be different for offenders than it would be for nonoffenders (the groups were not large enough to test the model on the nonoffenders and offender groups separately). Also, the model does not depict a truly causal relationship. Perhaps the offenders have been deprived of intimate (not necessarily romantic) relationships throughout their entire lives, and their ongoing loneliness and intimacy deficits have contributed to the development of their interpersonal styles, and such styles are now functioning as mechanisms to defend against forming close bonds with others as they expect to be disappointed. This course of development might be different for someone raised in a different environment, and the resulting relationships among attachment, interpersonal style, and intimacy deficits and loneliness would be related

in a different manner (or different causal directions of the variables). Because structural equation modelling tests only the statistically causal relationships, a different study design is warranted to answer questions related to true cause and effect.

CONCLUSION

Utility of Interpersonal Circumplex Theory with Sexual Offenders

At the time of undertaking this project, and at the current time, no published studies investigating interpersonal circumplex theory with a population of sexual offenders could be found. The results of the current study suggest that interpersonal circumplex theory may be a useful framework for viewing the problems of sexual offenders and for examining current efforts to treat this population. The results of the present study suggest that different types of sexual offenders have different interpersonal styles and problems associated with those styles, and that these difficulties are related to problems in establishing fulfilling intimate relationships. Lack of an intimate relationship has been identified as a risk factor for sexual recidivism (Hanson & Harris, 2000; 2001), so it may be useful to target underlying problems of interpersonal dynamics. In that way, these offenders may be more likely to improve relationships with others, which could lead to a reduction in their risk to reoffend. The findings of the present study demonstrated that sexual offenders see in themselves problems that are different not only from nonincarcerated men, but also from incarcerated men who have committed violent but nonsexual offenses against other people. Finally, these findings also suggest a need to take into account the presence or absence of psychopathy when determining the types of interpersonal problems that might be associated with a group of sexual offenders.

Suggestions for Future Research and Limits to the Current Study

As this study was largely exploratory in nature, future efforts could further this line of research and address some of the limitations in this study. For example, the sample size used in this study presented an obstacle to testing some of the hypotheses. The model of relationship among the constructs of attachment style, interpersonal style, and intimacy deficits and loneliness could be tested in a more sophisticated manner with many more observations. Another difficulty related to sample size was the test of hypotheses related to the construct of psychopathy. The proportion of true psychopaths (according to the clinical cutoff on the PCL-R recommended by Hare) is quite low, even in the prison population. Although a different cutoff level could have been chosen, the hypotheses regarding differences in interpersonal style, particularly with respect to rigidity, demanded investigating a clinically disordered group. Nonetheless, the relatively few psychopaths in the study (compared to the numbers in the other groups) presented an obstacle and because the trends were in the expected direction, it is reasonable to assume that more subjects in this group would have resulted in some nearly significant differences reaching statistical significance.

It would also be useful to use alternative measures of attachment style. In this study, the internal consistency of the items on the attachment measures was low. Given that these items do not hang well together, and this finding was consistent with previous research (Griffin & Bartholomew, 1994; Mulloy, 1999), the extent to which we can be certain we are measuring what we intend to measure is limited. The construct of adult attachment was integral to several hypotheses of the

current study, and the presence or absence of statistically significant findings could be attributable to the problems associated with the measures. As well, if one were to attempt a more sophisticated analysis of the relationship among the constructs of attachment style, interpersonal style, and intimacy and loneliness, as suggested above, it would be important to ensure the adequacy of the measurement model. One potential suggestion for future research is to use an interview method of assessing attachment style, as Griffin and Bartholomew (1994) noted that the questionnaire method and interview method of measurement do not produce the same results.

Measurement problems may also be associated with the interpersonal circumplex measures. It was noted that there was a significant correlation between the underlying dimensions of control and affiliation in the test of the pattern of relationships among the central constructs of this study. If these underlying dimensions are somehow correlated, then this would affect the measurement model of the structural equation model. Again, this could obscure results of an examination of the relationships.

A shortcoming of the current study is the lack of experimental manipulation of the variables. Because of the design of this study, the results are not indicative of causal relationships among the variables. To underscore this point, Thompson (2000) states, "definitive causal evidence can only be extrapolated from thoughtfully designed true experiments" (p. 276). One example of an interesting manipulation related to interpersonal circumplex theory is to use confederates to manipulate the interpersonal style of participants in order to test hypotheses related to interpersonal

complementarity.

Another interesting project would be to examine whether the self-reported interpersonal style and the problems associated with that style of sexual offenders converge with the ratings of their styles and problems by others. Such a study would be similar to some previous studies that have used ratings by other people known to the participants or subjects of the study (e.g., staff members of institutions, as in Blackburn's studies, or ratings by friends, as in Horowitz et al., 1993).

Finally, there has been some interest in investigating the group process of sex offender therapy groups (e.g., Beech & Fordham, 1997). But this research has emphasized the importance of therapist characteristics while neglecting to investigate interpersonal styles and their fit with the therapist style as a potential source of bias in the ratings by group members. According to interpersonal circumplex theory as applied to the context of psychotherapy, to determine the effectiveness of group process and effectiveness of therapeutic style, one must take into account the interaction between clients and therapists instead of merely investigating therapist characteristics alone.

Implications for Clinical Intervention with Sexual Offenders

Current cognitive behavioural treatment programs for sexual offenders do incorporate factors related to offending, some of which were the subject of this investigation (see Marshall, Anderson & Fernandez, 1999, for a description of issues related to clinical intervention with sexual offenders). But the incorporation of interpersonal circumplex theory offers not only testable hypotheses in research, but also a manner in which to view our progress with clients and monitor our own

behaviour with them. As mentioned above, psychotherapeutic process may not be so simple as having therapists display certain characteristic traits. Anecdotal evidence suggests that therapists with certain styles seem to work better with different types of offenders than do their colleagues who exhibit different interpersonal styles.

The findings of this study also highlight the importance of exploring different methods for intervention with our psychopathic clients. If psychopaths are different from nonpsychopaths with respect to interpersonal problems, and if interpersonal problems are related to psychotherapeutic outcome such that different approaches are indicated for different types of interpersonal problems, then it follows that different approaches should be taken with psychopaths and nonpsychopaths. As well, the therapist would be required to interact differently with psychopathic clients from nonpsychopathic clients, and it may be too much to ask of a therapist to change his/her style in a group format to become a good match for a heterogeneous group. In this respect, it makes sense to attempt to form groups of people with similar interpersonal problems. At the very least, given the increased risk of the psychopathic group, it makes sense to design programs different for this subpopulation of sexual offenders.

Further to this point, the dynamic of the entire group is not solely dependent on the therapist-client interactions, but also on client-client interactions, and we must pay attention to how psychopathic clients interact with the nonpsychopathic clients to determine whether interpersonal styles are being reinforced and interpersonal problems are being accentuated rather than attenuated. At any rate, there is room

for improvement in our work, and given the severity of the outcome of unsuccessful intervention, we are obligated to continue to search for theoretical and empirical guidelines to refine our intervention methods and evolve our understanding of these problematic offenders.

REFERENCES

Ainsworth, M. D. S., Blehar, M. C., Waters, E., & Walls, S. (1978). Patterns of attachment: A psychological study of the Strange Situation. Hillsdale, NJ: Lawrence Erlbaum.

Alden, L. E., & Capreol, M. J. (1993). Avoidant personality disorder: Interpersonal problems as predictors of treatment response. Behavior Therapy, 24, 357-376.

Alden, L. E., Wiggins, J. S., & Pincus, A. L. (1990). Construction of circumplex scales for the Inventory of Interpersonal Problems. Journal of Personality Assessment, 55, 521-536.

Abracen, J. A., Looman, J. A., & Anderson, D. (2000). Alcohol and Drug Abuse in Sexual and Nonsexual Violent Offenders. Sexual Abuse: A Journal of Research and Treatment, 12, 263-274.

Bard, L. A., Carder, D. L., Cerce, D. D., Knight, R. A., Rosenberg, R., & Schneider, B. (1987). A descriptive study of rapists and child molesters: Developmental, clinical, and criminal characteristics. Behavioral Sciences and the Law, 5, 203-220.

Bartholomew, K. (1990). Avoidance of intimacy: An attachment perspective. Journal of Social and Personal Relationships, 7, 147-178.

Bartholomew, K., & Horowitz, L. M. (1991). Attachment styles among young adults: A test of a model. Journal of Personality and Social Psychology, 61, 226-244.

Beech, A., & Fordham, A. (1997). Therapeutic climate of sexual offender treatment programs. Sexual Abuse: A Journal of Research and Treatment, 9, 219-237.

Bigras, J., Leichner, P., Perreault, M., & Lavoie, R. (1991). Severe paternal sexual abuse in early childhood and systematic aggression against the family and the institution. Canadian Journal of Psychiatry, 36, 527-529.

Blackburn, R. (1998a). Criminality and the interpersonal circle in mentally disordered offenders. Criminal Justice and Behavior, 25, 155-176.

Blackburn, R. (1998b). Relationship of personality disorders to observer ratings of interpersonal style in forensic psychiatric patients. Journal of Personality Disorders , 12, 77-85.

Blackburn, R., & Renwick, S. J. (1996). Rating scales for measuring the interpersonal circle in forensic psychiatric patients. Psychological Assessment, 8, 76-84.

Blackburn, R., & Maybury, C. (1985). Identifying the psychopath: The relation of Cleckley's criteria to the interpersonal domain. Personality and Individual Differences, 6, 375-386.

Bowlby, (1973). Attachment and loss: Vol. 2 Separation: Anxiety and anger. New York: Basic Books.

Brady, K. T., Killeen, T., Saladin, M. E., & Dansky, B. (1994). Comorbid substance abuse and posttraumatic stress disorder: Characteristics of women in treatment. American Journal on Addictions, 3, 160-164.

Bumby, K. M., & Hansen, D. J. (1997). Intimacy deficits, fear of intimacy, and loneliness among sexual offenders. Criminal Justice and Behavior, 24, 315-331.

Cleveland, H., Koss, M. P., & Lyons, J. (1999). Rape tactics from the survivors'

perspective: Contextual dependence and within-event independence. Journal of Interpersonal Violence, 14, 532-547.

Clore, G. L., & Jeffrey, K. M. (1972). Emotional role playing, attitude change, and attraction toward a disabled person. Journal of Personality and Social Psychology, 23, 105-111.

Cohen, M. L., Garofalo, M. A., Boucher, R., & Seghorn, T. (1971). The psychology of rapists. Seminars in Psychiatry, 3, 307-327.

Correctional Service of Canada (2000). Basic facts about federal corrections. Retrieved June 30, 2001, from http://www.csc-scc.gc.ca/text/faits/facts07_e.shtml.

Cortoni, F. A. (1998). The relationship between attachment styles, coping, the use of sex as a coping mechanism, and juvenile sexual history in sexual offenders. Unpublished Doctoral Dissertation, Queen's University, Kingston, Ontario.

Cortoni, F., & Marshall, W. L. (2001). Sex as a coping strategy and its relationship to juvenile sexual history and intimacy in sexual offenders. Sexual Abuse: A Journal of Research and Treatment, v. 13, 27-43.

Cronbach, L. J. (1955). Processes affecting scores on "understanding of others" and "assumed similarity". Psychological Bulletin, 52, 177-193.

Descutner, C. J., & Thelen, M. H. (1991). Development and validation of a Fear-of-Intimacy Scale. Psychological Assessment, 3, 218-225.

Dhawan, S., & Marshall, W. L. (1996). Sexual abuse histories of sexual offenders. Sexual Abuse: A Journal of Research and Treatment, 8, 7-15.

Doi, S. C., & Thelen, M. H. (1993). The Fear-of-Intimacy Scale: Replication and validation. Psychological Assessment, 5, 377-383.

Downs, A. C., & Hillje, E. S. (1991). Reassessment of the Miller Social Intimacy Scale: Use with mixed- and same-sex dyads produces multidimensional structures. Psychological Reports, 69, 991-997.

Eher, R., Fruehwald, S., Aigner, M., Schmidl-Mohl, B., Frottier, P., Dwyer, M., & Gutierrez-Lobos, K. (1999). Discriminating among incarcerated sexual offenders by their perception of interpersonal problems and experience-related anxiety. Journal of Behavior Therapy and Experimental Psychiatry, 30, 93-103.

Fabrigar, L. R., Wegener, D. T., MacCallum, R. C., & Strahan, E. J. (1999). Evaluating the use of exploratory factor analysis in psychological research. Psychological Methods, 4, 272-299.

Fagan, J., & Wexler, S. (1988). Explanations of sexual assault among violent delinquents. Journal of Adolescent Research. Special Issue: Adolescent Sexual Behavior, 3, 363-385.

Finklehor, D. (1986). A sourcebook on child sexual abuse. Beverly Hills, CA: Sage Publications.

Firestone, P., Bradford, J. M., Greenberg, D. M., Larose, M. R., & Curry, S. (1998). Homicidal and nonhomicidal child molesters: Psychological, phallometric, and criminal features. Sexual Abuse: A Journal of Research and Treatment, 10, 305-323.

Foreman, M. E. (1989). Interpersonal assessment of psychopathy. Unpublished

doctoral dissertation, University of British Columbia, Vancouver, Canada.

Fraley, R. C., Waller, N. G., & Brennan, K. A. (2000). An item response theory analysis of self-report measures of adult attachment. Journal of Personality and Social Psychology, 78, 350-365.

Freedman, M. B., Leary, T. F., Ossorio, A. G. & Coffey,, H. S. (1951). The interpersonal dimension of personality. Journal of Personality, 20, 143-161.

Garlick, Y., Marshall, W. L., & Thornton, D. (1996). Intimacy deficits and attribution of blame among sexual offenders. Legal and Criminological Psychology, 1, 251-258.

Griffin, D., & Bartholomew, K. (1994). The metaphysics of measurement: Fundamental dimensions underlying measures of adult attachment. In K. Bartholomew and D. Perlman (Eds.), Attachment processes in adulthood: Advances in personal relationships, Vol. 5 (pp. 17-52). Bristol, PA: Jessica Kingsley Publishers, Ltd.

Gurtman, M. B. (1996). Interpersonal problems and the psychotherapy context: The construct validity of the Inventory of Interpersonal Problems. Psychological Assessment, 8, 241-255.

Hanson, R. K., & Harris, A. J. R. (2000). Where should we intervene? Dynamic predictors of sexual assault recidivism. Criminal Justice and Behavior, 27, 6-35.

Hanson, R. K., & Harris, A. J. R. (2001). A structured approach to evaluating change among sexual offenders. Sexual Abuse: A Journal of Research and Treatment, 13, 105-122.

Hare, R. D. (1991). The Hare Psychopathy Checklist – Revised: Manual. Toronto: Multi-Health Systems Inc.

Hare, R. D. (1993). Without conscience: The disturbing world of the psychopaths among us. New York: Simon & Schuster Inc.

Hare, R. D. (1996). Psychopathy: A clinical construct whose time has come. Criminal Justice and Behavior, 23, 25-54.

Harpur, T. J., Hare, R. D., & Hakistan, A. R. (1989). Two-factor conceptualization of psychopathy: Construct validity and assessment implications. Psychological Assessment, 1, 6-17.

Hazan, C., & Shaver, P. (1987). Romantic love conceptualized as an attachment process. Journal of Personality and Social Psychology, 52, 511-524.

Horowitz, L. M., Dryer, D. C., & Krasnoperova, E. N. (1997). The circumplex structure of interpersonal problems. In R. Plutchik & H. R. Conte (Eds.), Circumplex models of personality and emotions (pp. 347-384). Washington, DC: American Psychological Association.

Horowitz, L. M., Rosenberg, S. E., & Bartholomew, K. (1993). Interpersonal problems, attachment styles, and outcome in brief dynamic psychotherapy. Journal of Consulting and Clinical Psychology, 61, 549-560.

Horowitz, L. M., Rosenberg, S. E., Baer, B. A., Ureno, G., & Villasenor, V. S. (1988). Inventory of interpersonal problems: Psychometric properties and clinical applications. Journal of Consulting and Clinical Psychology, 56, 885-892.

Howell, D. C. (1992). Statistical Methods for Psychology, 3rd ed. Boston: PWS-Kent.

Hudson, S. M., Marshall, W. L., Wales, D. S., McDonald, E., Bakker, L. W., & McLean, A. (1993). Emotional recognition skills of sexual offenders. Annals of Sex Research, 6, 199-211.

Jamieson, S., & Marshall, W. L. (2000). Attachment styles and violence in child molesters. The Journal of Sexual Aggression, 5, 88-98.

Kiesler, D. J. (1983). The 1982 interpersonal circle: A taxonomy for complementarity in human transactions. Psychological Review, 90, 185-214.

Kiesler, D. J. (1996). Contemporary interpersonal theory and research: Personality, psychopathology, and psychotherapy. New York: John Wiley & Sons.

Kiesler, D. J., van Denburg, T. F., Sikes-Nova, V. E., Larus, J. P., & Goldston, C, S. (1990). Interpersonal behavior profiles of eight cases of DMS-III personality disorder. Journal of Clinical Psychology, 46, 440-453.

Klem, L. (2000). Structural equation modeling. In L. G. Grimm & P. R. Yarnold (Eds.), Reading and understanding more multivariate statistics (pp. 227-260). Washington, DC: American Psychological Association.

Koss, M. P., Dinero, T. E., Seibel, C. A., & Cox, S. L. (1988). Stranger and acquaintance rape: Are there differences in the victim's experience? Psychology of Women Quarterly, 12, 1-24.

Kosson, D. S., Smith, S. S., & Newman, J. P. (1990). Evaluating the construct validity of psychopathy in Black and White male inmates: Three preliminary studies. Journal of Abnormal Psychology, 99, 250-259.

Kroner, D. G., & Weekes, J. R. (1996). Balanced Inventory of Desirable Responding: Factor structure, reliability, and validity with an offender sample.

Personality and Individual Differences, 21, 323-333.

LaForge, R., Leary, T. F., Naboisek, H., Coffey, H. S., & Freedman, M. B. (1954). The interpersonal dimension of personality: 2. An objective study of repression. Journal of Personality, 23, 129-153.

LaForge, R., & Suczek, R. F. (1955). The interpersonal dimension of personality: 3. An interpersonal check list. Journal of Personality, 24, 94-112.

Leary, T. (1957). Interpersonal diagnosis of personality. New York: The Ronald Press Company.

Lipton, D. N., McDonel, E. C., & McFall, R. M. (1987). Heterosocial perception in rapists. Journal of Consulting and Clinical Psychology, 55, 17-21.

Lisak, D,. & Roth, S. (1988). Motivational factors in nonincarcerated sexually aggressive men. Journal of Personality and Social Psychology, 55, 795-802.

Looman, J., Abracen, J., Maillet, G., & DiFazio, R. (1998). Phallometric nonresponding in sexual offenders. Sexual Abuse: A Journal of Research and Treatment, 10, 325-336.

Marshall, W. L. (1971). A combined treatment method for certain sexual deviations. Behaviour Research and Therapy, 9, 292-294.

Marshall, W. L. (1989). Intimacy, loneliness, and sexual offenders. Behaviour Research and Therapy, 27, 491-503.

Marshall, W. L. (1993). The role of attachments, intimacy, and loneliness in the etiology and maintenance of sexual offending. Sexual and Marital Therapy, 8, 109-121.

Marshall, W. L. (1996). The sexual offender: Monster, victim or everyman? Sexual

Abuse: A Journal of Research and Treatment, 8, 317-335.

Marshall, W. L., Anderson, D., & Fernandez, Y. M. (1999). Cognitive behavioural treatment of sexual offenders. Chichester, England: John Wiley & Sons.

Marshall, W.L., & Barbaree, H. E. (1990). An integrated theory of sexual offending. In. W. L. Marshall, D. R. Laws & H. E. Barbaree (Eds.), Handbook of sexual assault: Issues, theories and treatment of the offender (pp. 257-275). New York: Plenum Press.

Marshall, W. L., Barbaree, H. E., & Fernandez, Y. M. (1995). Some aspects of social competence in sexual offenders. Sexual Abuse: A Journal of Research and Treatment, 7, 113-127.

Marshall, W. L., & Barrett, S. (1990). Criminal neglect: Why sexual offenders go free. Toronto: Doubleday.

Marshall, W. L., Bryce, P., Hudson, S. M., Ward, T., & Moth, B. (1996). The enhancement of intimacy and the reduction of loneliness among child molesters. Journal of Family Violence, 11, 219-235.

Marshall, W. L., Champagne, F., Brown, C., & Miller, S. (1997). Empathy, intimacy, loneliness, and self-esteem in nonfamilial child molesters: A brief report. Journal of Child Sexual Abuse, 6, 87-98.

Marshall, W. L., Champagne, F., Sturgeon, C., & Bryce, P. (1997). Increasing the self-esteem of child molesters. Sexual Abuse: A Journal of Research and Treatment, 9, 321-333.

Marshall, W. L., Hudson, S. M., Jones, R., & Fernandez, Y. M. (1995). Empathy in sexual offenders, Clinical Psychology Review, 15, 99-113.

Marshall, W. L., Laws, D. R., & Barbaree, H. E. (1990). Issues in sexual assault. In W. L. Marshall, D. R. Laws & H. E. Barbaree (Eds.), Handbook of sexual assault: Issues, theories and treatment of the offender (pp. 3-7). New York: Plenum Press.

McKibben, A., Proulx, J., & Lusignan, R. (1994). Relationships between conflict, affect and deviant sexual behaviors in rapists and pedophiles. Behaviour Research and Therapy, 32, 571-575.

McRae, R. R., & Costa, P. T. (1989). The structure of interpersonal traits: Wiggins' circumplex and the five-factor model. Journal of Personality and Social Psychology, 56, 586-595.

Miller, R. S., & Lefcourt, H. M. (1982). The assessment of social intimacy. Journal of Personality Assessment, 46, 514-518.

Monto, M., Zgourides, G., & Harris, R. (1998). Empathy, self-esteem, and the adolescent sexual offender. Sexual Abuse: A Journal of Research and Treatment, 10, 127-140.

Motiuk, L., & Belcourt, R. (1996). Profiling the Canadian federal sex offender population. Forum on Corrections Research, 8 (2), 3-7.

Motiuk, L., & Belcourt, R. (1997). Profiling federal offenders with violent offenses. Forum on Corrections Research, 9 (2), 8-13.

Mulloy, R. (1999). Attachment in incarcerated rapists: An examination of intimacy styles and crime characteristics. Unpublished Master's thesis, Queen's University, Kingston, Ontario.

Muran, J. C., Segal, Z. V., Samstag, L. W., & Crawford, C. E. (1994). Patient

pretreatment interpersonal problems and therapeutic alliance in short-term cognitive therapy. Journal of Consulting and Clinical Psychology, 62, 185-190.

Overholser, J. C., & Beck, S. (1986). Multimethod assessment of rapists, child molesters, and three control groups on behavioral and psychological measures. Journal of Consulting and Clinical Psychology, 45, 682-687.

Paulhus, D. L. (1991). Measurement and control of response bias. In J. P. Robinson, P. R. Shaver & L. S. Wrightsman (Eds.), Measures of personality and social psychological attitudes (pp. 17-59). San Diego, CA: Academic Press.

Pithers, W. D., Beal, L. S., Armstrong, J., & Petty, J. (1989). Identification of risk factors through clinical interviews and analysis of records. In D. R. Laws (Ed.), Relapse prevention with sexual offenders (pp. 77-87). New York: Guilford Press.

Prentky, R. A., & Knight, R. B. (1991). Identifying critical dimensions for discriminating among rapists. Journal of Consulting and Clinical Psychology, 59, 643-661

Proulx, J., Granger, L., Ouimet, M., Guay, J., McKibben, A., St-Yves, M., Bigras, J., Perreault, C., Brien, T., & Pellerin, B. (1999). A descriptive profile of incarcerated sexual offenders. Forum on Corrections Research, 11, 11-14.

Proulx, J, McKibben, A., & Lusignan, R. (1996). Relationships between affective components and sexual behaviors in sexual aggressors. Sexual Abuse: A Journal of Research and Treatment, 8, 279-289.

Quinsey, V. L., & Lalumière, M. (1995). Evolutionary perspectives on sexual offending. Sexual Abuse: A Journal of Research and Treatment, 7, 301-315.

Rada, R. T. (1978). Clinical aspects of the rapist. New York: Grune & Stratton.

Rice, M. E., Harris, G. T., & Quinsey, V. L. (1990). A follow-up of rapists assessed in a maximum-security psychiatric facility. Journal of Interpersonal Violence, 5, 435-448.

Riding, N., & Cartwright, A. (1999). Interpreting the Inventory of Interpersonal Problems: Subscales based on an interpersonal theory model. British Journal of Medical Psychology, 72, 407-420.

Russell, D., Peplau, L. A., & Cutrona, C. E. (1980). The revised UCLA Loneliness Scale: Concurrent and discriminant validity evidence. Journal of Personality & Social Psychology. 39, 472-480.

Schwartz, B. K., & Canfield, G. M. S. (1998). Treating the "sexually dangerous person": The Massachusetts Treatment Center. In W. L. Marshall, Y. M. Fernandez, S. M. Hudson, & T. Ward (Eds.), Sourcebook of treatment programs for sexual offenders (pp. 235-245). New York: Plenum Press.

Scully, D., & Marolla, J. (1985). "Riding the bull at Gilley's": Convicted rapists describe the rewards of rape. Social Problems, 31, 530-544.

Seidman, B. T., Marshall, W. L., Hudson, S. M., & Robertson, P. J. (1994). An examination of intimacy and loneliness in sexual offenders. Journal of Interpersonal Violence, 9, 518-534.

Serin, R. C. (1991). Psychopathy and violence in criminals. Journal of Interpersonal Violence, 64, 423-431.

Serin, R. C., Mailloux, D. L., & Malcolm, P. B. (2001). Psychopathy, deviant sexual arousal and recidivism among sexual offenders: A psycho-culturally determined group defense. Journal of Interpersonal Violence, 16, 234-246.

Seto, M. C., & Barbaree, H. E. (1999). Psychopathy, treatment behavior, and sex offender recidivism. Journal of Interpersonal Violence, 14, 1235-1248.

Sheffield, M., Carey, J., Patenaude, W., & Lambert, M. J. (1995). An exploration of the relationship between interpersonal problems and psychological health. Psychological Reports, 76, 947-956.

Sloan, G., & Leichner, P. (1986). Is there a relationship between sexual abuse or incest and eating disorders? Canadian Journal of Psychiatry, 31, 656-660.

Soldz, S., Budman, S., Demby, A., & Merry, J. (1993). Representation of personality disorders in circumplex and five-factor space: Explorations with a clinical sample. Psychological Assessment, 5, 41-52.

Solicitor General of Canada (1996). Fact sheets. Retrieved April 27, 1997 from, http://www.sgc.gc.ca/EFact.

Spaccarelli, S., Bowden, B., Coatsworth, J. D., & Kim, S. (1997). Psychosocial correlates of male sexual aggression in a chronic delinquent sample. Criminal Justice and Behavior, 24, 71-95.

Strong, S. R., Hills, H. I., Kilmartin, C. T., DeVries, H., Lanier, K., Nelson, B. N., Strickland, D., & Meyer, C. W. (1988). The dynamic relations among interpersonal behaviors: A test of complementarity and anticomplementarity. Journal of Personality and Social Psychology, 54, 798-810.

Tabachnick, B. G., & Fidell, L. S. (2001). Using multivariate statistics, (4th ed.)

Boston: Allyn and Bacon.

Thompson, B. (2000). Ten commandments of structural equation modeling. In L. G. Grimm & P. R. Yarnold (Eds.), Reading and understanding more multivariate statistics (pp. 261-283). Washington, DC: American Psychological Association.

Vachss, A. (1993, January 5). Sex predators can't be saved. New York Times. Article retrieved June 7, 2001, from http://www.vachss.com.

Ward, T., & Hudson, S. M. (1998). The construction and development of theory in the sexual offending area: A metatheoretical framework. Sexual Abuse: A Journal of Research and Treatment, 10, 47-63.

Ward, T., Hudson, S. M., & France, K. G. (1993). Self-reported reasons for offending behavior in the child molester. Annals of Sex Research, 6, 139-148.

Ward, T., Hudson, S. M., & Marshall, W. L. (1996). Attachment style in sexual offenders: A preliminary study. The Journal of Sex Research, 33, 17-26.

West, D. J. (1987). Sexual crimes and confrontations. Brookfield, VT: Gower Publishing Company.

Westerlund, E. (1992). Women's sexuality after childhood incest. New York: W. W. Norton.

Wiggins, J. S. (1979). A psychological taxonomy of trait-descriptive terms: The impersonal domain. Journal of Personality and Social Psychology, 37, 395-412.

Wiggins, J. S. (1995). Interpersonal adjective scales: Professional manual. Odessa,

FL: Psychological Assessment Resources.

Wiggins, J. S., Phillips, N., & Trapnell, P. (1989). Circular reasoning about interpersonal behavior: Evidence concerning some untested assumptions underlying diagnostic classification. Journal of Personality and Social Psychology, 56, 296-305.

Wiggins, J. S., Trapnell, P., & Phillips, N. (1988). Psychometric and geometric characteristics of the revised Interpersonal Adjective Scales (IAS-R). Multivariate Behavioral Research, 23, 517-530.

Williamson, S., Hare, R. D., & Wong, S. (1987). Violence: Criminal psychopaths and their victims. Canadian Journal of Behavioural Science, 19, 454-462.

Wilson, R. J. (1999). Emotional congruence in sexual offenders against children. Sexual Abuse: A Journal of Research and Treatment, 11, 33-47.

APPENDICES

Appendix I: Screening Questionnaire

The following questions are asked only to make certain that there are not inadvertent differences between the groups in this research study. We are aware that the information we are asking you is very sensitive, so in order to ensure that you answer as truthfully as possible, we guarantee your confidentiality. You will have noted that you were assigned a code number so that your name will never appear in connection with the questionnaires you have filled out.

Thank you.

Screening Questionnaire (continued)

Please circle either a "yes" or "no" in response to the following questions.

Since the age of 19 years, have you...

...felt concerned that your sexual desires, fantasies, or behaviours were not normal? Yes No

...ever sought professional help for a sexual problem (excluding impotence and infertility)? Yes No

...felt like you wanted to have sex with a boy or girl of 14 years or younger? Yes No

...touched a boy or girl of 14years or younger sexually on their private parts? Yes No

...been charged and/or convicted of sexual assault, gross indecency, rape, or sex with a minor? Yes No

...had a boy or girl of 14 years or younger "go down on you"? Yes No

...had sexual intercourse with a boy or girl of 14 years or younger? Yes No

...forced anyone into any sexual activities without their consent? Yes No

...had sexual contact with any kind of animal? Yes No

Screening Questionnaire (continued)

Since the age of 19 years, have you been charged or convicted of any offense?

Yes___ No___

If yes, please list the charges and indicate whether or not you were convicted

Charge	Conviction
1._____	Yes/No
2._____	Yes/No
3._____	Yes/No
4._____	Yes/No
5._____	Yes/No

Since the age of 19 years, have you committed any offenses that you were not charged for? Yes___ No___

If yes, how many offenses?_____

Please describe the nature of these offenses (Circle all that apply)

Theft Fraud Arson Treason Assault Rape

Drugs

Homicide Speeding Other_____

Appendix II: Demographic Information

(Community Form)

Age_____

Occupation (Please describe the last paid position you held)

_____

Education Level (Please indicate the last grade level completed, or note any post secondary education)

_____

(Incarcerated Participant Form)

Age_____ Marital Status_____

Education Level (Please indicate the highest level of education that you have completed to date)

_____

Occupation prior to incarceration_____

How long did you do this job?_____

Current Offense(s)_____

_____

Length of Sentence_____

Date Sentence Began_____

Offense History (Please list your convictions, as many as you can recall. Use back page if necessary)

As an adult	As a juvenile
1._____	1._____
2._____	2._____
3._____	3._____
4._____	4._____
5._____	5._____
6._____	6._____
7._____	7._____
8._____	8._____
9._____	9._____

Appendix III: Revised Interpersonal Adjective Scales

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Appendix IV: Glossary for Revised Interpersonal Adjective Scales

This glossary is part of the Interpersonal Adjective Scales-Revised by Jerry S. Wiggins, Ph.D., and is copyrighted by Psychological Assessment Resources, Inc., 16204 North Florida Avenue, Lutz, Florida, 33549, and may not be reproduced without permission from the publisher.

Appendix V: Inventory of Interpersonal Problems – Circumplex Version

Listed below are a variety of common problems that people report in relating to other people. Please read each one and consider whether that problem has been a problem for you with respect to ***any*** significant person in your life. Then select the number that describes how distressing that problem has been, and circle that number.

EXAMPLE

How much have you been distressed by this problem?	Not at all	A little bit	Moderately	Quite a bit	Extremely
It is** hard **for me to...					
00. get along with my relatives	0	1	2	3	4

Part I. The following are things you find hard to do with other people.

It is hard ***for me to...***		Not at all	A little bit	Moderately	Quite a bit	Extremely
1.	trust other people.	0	1	2	3	4
2.	say "no" to other people.	0	1	2	3	4
3.	join in on groups.	0	1	2	3	4
4.	keep things private from other people.	0	1	2	3	4
5.	let other people know what I want.	0	1	2	3	4
6.	tell a person to stop bothering me.	0	1	2	3	4
7.	introduce myself to new people.	0	1	2	3	4
8.	confront people with problems that come up.	0	1	2	3	4
9.	be assertive with another person.	0	1	2	3	4
10.	let other people know when I'm angry.	0	1	2	3	4
11.	make a long-term commitment to another person.	0	1	2	3	4
12.	be another person's boss.	0	1	2	3	4
13.	be aggressive toward someone when the situation calls for it.	0	1	2	3	4
14.	socialize with other people.	0	1	2	3	4
15.	show affection to people.	0	1	2	3	4
16.	get along with people.	0	1	2	3	4
17.	understand another person's point of view.	0	1	2	3	4
18.	express my feelings to other people directly.	0	1	2	3	4
19.	be firm when I need to be.	0	1	2	3	4
20.	experience a feeling of love for another person.	0	1	2	3	4

21.	set limits on other people.	0	1.	2	3	4
22.	be supportive of another person's goals in life.	0	1	2	3	4
23.	feel close to other people.	0	1	2	3	4
24.	really care about other people's problems.	0	1	2	3	4
25.	argue with another person.	0	1	2	3	4
26.	spend time alone.	0	1	2	3	4
27.	give a gift to another person.	0	1	2	3	4
28.	let myself feel angry at somebody I like.	0	1	2	3	4
29.	put somebody else's needs before my own	0	1	2	3	4
30.	stay out of other people's business.	0	1	2	3	4
31.	take instructions from people who have authority over me.	0	1	2	3	4
32.	feel good about another person's happiness.	0	1	2	3	4
33.	ask other people to get together socially with me.	0	1	2	3	4
34.	feel angry at other people.	0	1	2	3	4
35.	open up and tell my feelings to another person.	0	1	2	3	4
36.	forgive another person after I've been angry.	0	1	2	3	4
37.	attend to my own welfare when somebody else is needy.	0	1	2	3	4
38.	be assertive without worrying about hurting others feelings.	0	1	2	3	4
39.	be self-confident when I am with other people.	0	1	2	3	4

Part II. The following are things that you do *too **much.***

		Not at all	A little bit	Moderatel	Quite a bit	Extremely
40.	I fight with other people too much.	0	1	2	3	4
41.	I feel too responsible for solving other people's problems.	0	1	2	3	4
42.	I am too easily persuaded by other people.	0	1	2	3	4
43.	I open up to people too much.	0	1	2	3	4
44.	I am too independent.	0	1	2	3	4
45.	I am too aggressive toward other people.	0	1	2	3	4
46.	I try to please other people too much.	0	1	2	3	4
47.	I clown around too much.	0	1	2	3	4
48.	I want to be noticed too much.	0	1	2	3	4
49.	I trust other people too much.	0	1	2	3	4
50.	I try to control other people too much.	0	1	2	3	4
51.	I put other people's needs before my own too much.	0	1	2	3	4
52.	I try to change other people too much.	0	1.	2	3	4
53.	I am too gullible.	0	1	2	3	4
54.	I am overly generous to other people.	0	1	2	3	4
55.	Iam too afraid of other people.	0	1	2	3	4
56.	I am too suspicious of other people.	0	1	2	3	4

57.	I manipulate other people too much to get what I want.	0	1	2	3	4
58.	I tell personal things to other people too much.	0	1	2	3	4
59.	I argue with other people too much.	0	1	2	3	4
60.	I keep other people at a distance too much.	0	1	2	3	4
61.	I let other people take advantage of me too much.	0	1	2	3	4
62.	I feel embarrassed in front of other people too much.	0	1	2	3	4
63.	I am affected by another person's misery too much.	0	1	2	3	4
64.	I want to get revenge against people too much.	0	1	2	3	4

Appendix VI: Relationship Questionnaire

PLEASE READ DIRECTIONS!!!

Following are descriptions of four general relationship styles that people often report. Please read each description and CIRCLE the letter corresponding to the style that best describes you or is closest to the way you generally are in your close relationships.

It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don't worry about being alone or having others not accept me.

I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others.

I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much as I value them.

I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me.

Now please rate each of the following relationship styles according to the extent to which you think each description corresponds to your general relationship style.

It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don't worry about being alone or having others not accept me.

I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others.

I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much as I value them.

I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me.

	Not at all like me			Somewhat like me			Very much like me
Style A	1	2	3	4	5	6	7
Style B	1	2	3	4	5	6	7
Style C	1	2	3	4	5	6	7
Style D	1	2	3	4	5	6	7

Overall, how satisfied or happy are you with your present network of close relationships?

1	2	3	4	5	6	7	8	9
Extremely Unhappy		Somewhat Unhappy		Somewhat happy		Very happy		Perfectly happy

Appendix VII: Relationship Scales Questionnaire

Please read each of the following statements and rate the extent to which it describes your feelings about adult romantic relationships. Think about all of your adult romantic relationships, past and present, and respond in terms of how you generally feel in these relationships.

If you have not had an adult romantic relationship, please imagine how you would likely feel in one.

	Not at all like me		Somewhat like me		Very much like me
I find it difficult to depend on other people.	1	2	3	4	5
It is very important to me to feel independent.	1	2	3	4	5
I find it easy to get emotionally close to others.	1	2	3	4	5
I worry that I will be hurt if I allow myself to become too close to others.	1	2	3	4	5
I am comfortable without close emotional relationships.	1	2	3	4	5
I want to be completely emotionally intimate with others.	1	2	3	4	5
I worry about being alone.	1	2	3	4	5
I am comfortable depending on other people.	1	2	3	4	5
I find it difficult to trust others completely.	1	2	3	4	5
I am comfortable having other people depend on me.	1	2	3	4	5
I worry that others don't value me as much as I value them.	1	2	3	4	5
It is very important to me to feel self-sufficient.	1	2	3	4	5
I am nervous when anyone gets too close to me.	1	2	3	4	5
I prefer not to have other people depend on me.	1	2	3	4	5

	Not at all like me		Somewhat like me		Very much like me
I am somewhat uncomfortable being close to others.	1	2	3	4	5
I find that others are reluctant to get as close as I would like.	1	2	3	4	5
I prefer not to depend on others.	1	2	3	4	5
I worry about having others not accept me.	1	2	3	4	5

Appendix VIII: Social Intimacy Scale

NAME:_____ DATE:_____

The following questions ask you to describe your relationship with your romantic partner. Please respond by circling the number that best describes your relationship. If you are not currently in a relationship, please respond to the questions by thinking about the last romantic relationship you were involved in. Please indicate if you are filling this out according to:

CURRENT RELATIONSHIP_____PAST RELATIONSHIP_____(Check one)

		Very Rarely				Some of the time				Almost Always	
1.	When you have leisure time how often do you choose to spend it with your partner alone?	1	2	3	4	5	6	7	8	9	10
2.	How often do you keep very personal information to yourself and not share it with your partner?	1	2	3	4	5	6	7	8	9	10
3.	How often do you show your partner affection?	1	2	3	4	5	6	7	8	9	10
4.	How often do you confide very personal information to your partner?	1	2	3	4	5	6	7	8	9	10
5.	How often are you able to understand your partner's feelings?	1	2	3	4	5	6	7	8	9	10
6.	How often do you feel close to your partner?	1	2	3	4	5	6	7	8	9	10
		Not Much				A little				A Great Deal	
7.	How much do you like to spend time alone with your partner?	1	2	3	4	5	6	7	8	9	10
8.	How much do you feel like being encouraging and supportive to your partner when your partner is unhappy?	1	2	3	4	5	6	7	8	9	10
9.	How close do you feel to your partner most of the time?	1	2	3	4	5	6	7	8	9	10
10.	How important is it to you to listen to your partner's very personal disclosures?	1	2	3	4	5	6	7	8	9	10

11.	How satisfying is your relationship with your partner?	1	2	3	4	5	6	7	8	9	10
12.	How affectionate do you feel towards your partner?	1	2	3	4	5	6	7	8	9	10
13.	How important is it to you that your partner understands your feelings?	1	2	3	4	5	6	7	8	9	10
14.	How much damage is caused by a typical disagreement in your relationship with your partner?	1	2	3	4	5	6	7	8	9	10
15.	How important is it to you that your partner be encouraging and supportive to you when you are unhappy?	1	2	3	4	5	6	7	8	9	10
16.	How important is it to you that your partner show you affection?	1	2	3	4	5	6	7	8	9	10
17.	How important is your relationship with your partner in your life?	1	2	3	4	5	6	7	8	9	10

Appendix IX: Fear of Intimacy Scale

Part A Instructions: Imagine you are in a *close, dating* relationship. Respond to the following statements as you would *if you were in that close relationship.* Rate how characteristic each statement is of you (that is, how well each statement describes you) on a scale of 1 to 5 as described below, and circle your response. If you are *already* in a close relationship (e.g., dating, married, common-law), then rate how characteristic each statement is of you in your relationship.

Note. In each statement, "X" refers to the person who would be (or who is) in the close relationship with you.

Not at all characteristic of me	1
Slightly characteristic of me	2
Moderately characteristic of me	3
Very characteristic of me	4
Extremely characteristic of me	5

1.	I would feel uncomfortable telling X about things in the past that I have felt ashamed of.	1	2	3	4	5
2.	I would feel uneasy talking with X about something that has hurt me deeply.	1	2	3	4	5
3.	I would feel comfortable expressing my true feelings to X.	1	2	3	4	5
4.	If X were upset I would sometimes be afraid of showing that I care.	1	2	3	4	5
5.	I might be afraid to confide my innermost feelings to X.	1	2	3	4	5
6.	I would feel at ease telling X that I care about him/her.	1	2	3	4	5
7.	I would have a feeling of complete togetherness with X.	1	2	3	4	5
8.	I would be comfortable discussing significant problems with X.	1	2	3	4	5
9.	A part of me would be afraid to make a long-term commitment to X.	1	2	3	4	5

Not at all characteristic of me	1
Slightly characteristic of me	2
Moderately characteristic of me	3
Very characteristic of me	4
Extremely characteristic of me	5

10.	I would feel comfortable telling my experiences, even sad ones, to X.	1	2	3	4	5
11.	I would probably feel nervous showing X strong feelings of affection.	1	2	3	4	5
12.	I would find it difficult being open with X about my personal thoughts	1	2	3	4	5
13.	I would feel uneasy with X depending on me for emotional support.	1	2	3	4	5
14.	I would not be afraid to share with X what I dislike about myself.	1	2	3	4	5
15.	I would be afraid to take the risk of being hurt in order to establish a closer relationship with X.	1	2	3	4	5
16.	I would feel comfortable keeping very personal information to myself.	1	2	3	4	5
17.	I would not be nervous about being spontaneous with X.	1	2	3	4	5
18.	I would feel comfortable telling X things that I do not tell other people.	1	2	3	4	5
19.	I would feel comfortable trusting X with my deepest thoughts and feelings.	1	2	3	4	5
20.	I would sometimes feel uneasy if X told me about very personal matters.	1	2	3	4	5
21.	I would be comfortable revealing to X what I feel are my shortcomings and handicaps.	1	2	3	4	5

Not at all characteristic of me	1
Slightly characteristic of me	2
Moderately characteristic of me	3
Very characteristic of me	4
Extremely characteristic of me	5

22.	I would be comfortable with having a close emotional tie between us.	1	2	3	4	5
23.	I would be afraid of sharing my private thoughts with X.	1	2	3	4	5
24.	I would be afraid that I might not always feel close to X.	1	2	3	4	5
25.	I would be comfortable telling X what my needs are.	1	2	3	4	5
26.	I would be afraid that X would be more invested in the relationship than I would be.	1	2	3	4	5
27.	I would feel comfortable about having open and honest communication with X.	1	2	3	4	5
28.	I would sometimes feel uncomfortable listening to X's personal problems.	1	2	3	4	5
29.	I would feel at ease to completely be myself around X.	1	2	3	4	5
30.	I would feel relaxed being together and talking about our personal goals.	1	2	3	4	5

Part B Instructions: Respond to the following statements as they apply to your past relationships. Rate how characteristic each statement is of you on a scale of 1 to 5 as described in the instructions for Part A.

Not at all characteristic of me	1
Slightly characteristic of me	2
Moderately characteristic of me	3
Very characteristic of me	4
Extremely characteristic of me	5

31.	I have shied away from opportunities to be close to someone.	1	2	3	4	5
32.	I have held back my feelings in previous relationships.	1	2	3	4	5
33.	There are people who think that I am afraid to get close to them.	1	2	3	4	5
34.	There are people who think that I am not an easy person to get to know.	1	2	3	4	5
35.	I have done things in previous relationships to keep me from developing closeness.	1	2	3	4	5

Appendix X: UCLA Loneliness Scale

Directions: Indicate how often you feel the way described in each of the following statements. Circle one number for each.

		Never	Rarely	Sometimes	Often
1.	I feel in tune with the people around me.	1	2	3	4
2.	I lack companionship	1	2	3	4
3.	There is no one I can turn to.	1	2	3	4
4.	I do not feel alone.	1	2	3	4
5.	I feel part of a group of friends.	1	2	3	4
6.	I have a lot in common with the people around me.	1	2	3	4
7.	I am no longer close to anyone.	1	2	3	4
8.	My interests and ideas are not shared by those around me.	1	2	3	4
9.	I am an outgoing person.	1	2	3	4
10.	There are people I feel close to.	1	2	3	4
11.	I feel left out.	1	2	3	4
12.	My social relationships are superficial.	1	2	3	4
13.	No one really knows me.	1	2	3	4
14.	I feel isolated from others.	1	2	3	4
15.	I can find companionship when I want it.	1	2	3	4
16.	There are people who really understand me.	1	2	3	4
17.	I am unhappy being so withdrawn.	1	2	3	4
18.	People are around me but not with me.	1	2	3	4
19.	There are people I can talk to.	1	2	3	4
20.	There are people I can turn to.	1	2	3	4

Appendix XI: Balanced Inventory of Desirable Responding

Using the scale below as a guide, write a number beside each statement to indicate how much you agree with it.

1----------2----------3----------4----------5----------6----------7

Not True Somewhat True Very True

_____1. My first impressions of people usually turn out to be right.

_____2. It would be hard for me to break any of my bad habits.

_____3. I don't care to know what other people really think of me.

_____4. I have not always been honest with myself.

_____5. I always know why I like things.

_____6. When my emotions are aroused, it biases my thinking.

_____7. Once I've made up my mind, other people can seldom change my opinion.

_____8. I am not a safe driver when I exceed the speed limit.

_____9. I am fully in control of my own fate.

_____10. It's hard for me to shut off a disturbing thought.

_____11. I never regret my decisions.

_____12. I sometimes lose out on things because I can't make up my mind soon enough.

_____13. The reason I vote is because my vote can make a difference.

_____14. My parents were not always fair when they punished me.

_____15. I am a completely rational person.

_____16. I rarely appreciate criticism.

_____17. I am very confident in my judgments

_____18. I have sometimes doubted my ability as a lover.

_____19. It's all right with me if some people happen to dislike me.

Using the scale below as a guide, write a number beside each statement to indicate how much you agree with it.

1----------2----------3----------4----------5----------6----------7

Not True Somewhat True Very True

_____20. I don't always know the reasons why I do the things I do.

_____21. I sometimes tell lies if I have to.

_____22. I never cover up my mistakes.

_____23. There have been occasions when I have taken advantage of someone.

_____24. I never swear.

_____25. I sometimes try to get even rather than forgive and forget.

_____26. I always obey laws, even if I'm unlikely to get caught.

_____27. I have said something bad about a friend behind his or her back.

_____28. When I hear people talking privately, I avoid listening.

_____29. I have received too much change form a salesperson without telling him or her.

_____30. I always declare everything at customs.

_____31. When I was young I sometimes stole things.

_____32. I have never dropped litter on the street.

_____33. I sometimes drive faster than the speed limit.

_____34. I never read sexy books or magazines.

_____35. I have done things that I don't tell other people about.

_____36. I never take things that don't belong to me.

_____37. I have taken sick leave from work or school even though I wasn't really sick.

_____38. I have never damaged a library book or store merchandise without reporting it.

_____39. I have some pretty awful habits.

_____40. I don't gossip about other people's business.

Appendix XII: Research Consent Form (Incarcerated Participants)

This research is being conducted by Dana Anderson, under the supervision of Dr. W. Marshall, as part of a doctoral degree in clinical psychology. The purpose of this study is to examine the relationship between attachment to others and social intimacy.

I understand that I will be asked to complete several questionnaires about my thoughts and feelings about myself and others. I also understand that I will be asked to provide personal information, which will include information such as age and education. I also understand that I am giving permission for the researcher to access my file to obtain information about my offenses and PCL-R score, if available, and that no other information from my file will be used.

I understand that my answers will remain strictly confidential, as this study is for research purposes. My answers will not be shared with any correctional staff, and they will not appear in my CSC files. I also understand that my name will not be mentioned in any report or publication of the results of the study.

I understand that my name will be connected to the consent form, but that it will not appear on any of the questionnaires. I also understand that I may withdraw from the study at any time, and if I do so, my answers will be destroyed. Furthermore, I understand that my decision to participate or not will have no effect for me in the institution.

I understand that if I have any comments, questions, or concerns, I am to address these to Dana Anderson. If I have further questions or concerns, I should phone Dana Anderson's supervisor, Dr. W. Marshall at 533-6017. If I have any continuing concerns, I am to phone the head of the Department of Psychology at Queen's University, Dr. A. MacLean, at 533-2492, or contact the Warden of my institution.

Signed_____

Code Number_____

Date_____

Witness_____

Please indicate below if you wish to receive a summary of the research results. Please be advised that it may take several months before the results become available.

I wish to receive a summary of the research results._____

Appendix XIII: Debriefing Form (Incarcerated Participants)

INFORMATION ABOUT PURPOSE OF RESEARCH

This study is being conducted by Dana Anderson, under the supervision of Dr. William Marshall at Queen's University for her Doctoral degree in Psychology. The purpose of the study is to investigate the way in which people relate to others, their attachment styles to other adults, and social intimacy. It is expected that certain interpersonal styles will be related to certain attachment styles. These styles with then be expected to be associated with the intimacy levels in people's relationships as well as the loneliness that some people experience.

It is also expected that people who differ with regard to their personality will also relate to people in different ways. Again, these people will be expected to have different types of relationships and vary in terms of their intimacy with others and levels of loneliness. Although most people experience many of the thoughts and feelings that we are trying to measure, we are examining trends in responses, so that some people who respond one way on one questionnaire are more likely to respond in a certain way on a different questionnaire.

No participant will be identified individually. The purpose of the research is to combine the results and look at trends and patterns. Therefore, no names are reported and the scores for any individual are not given to anyone.

If you have any comments, questions, or concerns, please address them to Dana Anderson by calling her office at 536-6767. If you have further questions or concerns, you may phone Dana Anderson's supervisor, Dr. W. Marshall at 533-6017. If you have any continuing concerns, please contact the head of the Department of Psychology at Queen's University, Dr. A. MacLean, at 533-2492, or contact the Warden of your institution.

Your participation in this study is greatly appreciated.

Appendix XIV: Debriefing Form (Community Participants)

INFORMATION ABOUT PURPOSE OF RESEARCH

This study is being conducted by Dana Anderson, under the supervision of Dr. William Marshall at Queen's University for her Doctoral degree in Psychology. The purpose of the study is to investigate the way in which people relate to others, their attachment styles to other adults, and social intimacy. It is expected that certain interpersonal styles will be related to certain attachment styles. These styles with then be expected to be associated with the intimacy levels in people's relationships as well as the loneliness that some people experience.

It is also expected that people who differ with regard to their personality will also relate to people in different ways. Again, these people will be expected to have different types of relationships and vary in terms of their intimacy with others and levels of loneliness. Although most people experience many of the thoughts and feelings that we are trying to measure, we are examining trends in responses, so that some people who respond one way on one questionnaire are more likely to respond in a certain way on a different questionnaire.

No participant will be identified individually. The purpose of the research is to combine the results and look at trends and patterns. Therefore, no names are reported and the scores for any individual are not given to anyone. If you have any comments, questions, or concerns, please address them to Dana Anderson by calling her office at 536-6767.

If you have further questions or concerns, you may phone Dana Anderson's supervisor, Dr. W. Marshall at 533-6017. If you have any continuing concerns, please contact the head of the Department of Psychology at Queen's University, Dr. A. MacLean, at 533-2492. Your participation in this study is greatly appreciated.

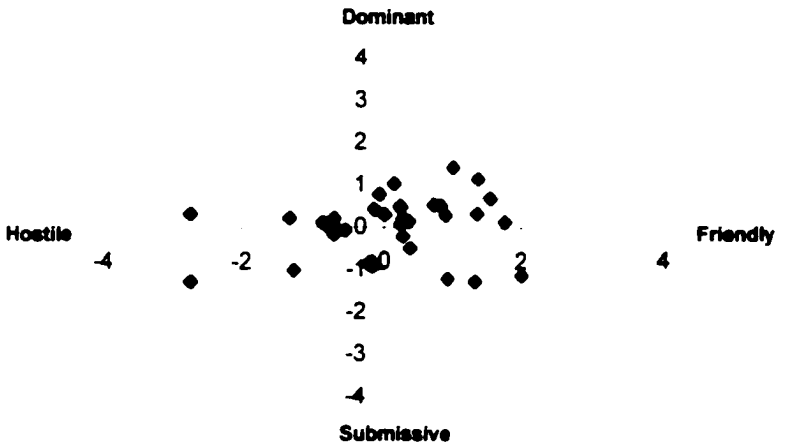
Appendix XV: Mean of Raw Scores on Octant Scales of Circumplex Measures

Measure: Octant	Entire Sample	Community Group Mean (sd)	Rapists Mean (sd)	Child Molesters Mean (sd)	Violent Offenders Mean (sd)
Interpersonal Adjective Scales					
PA: Assured-Dominant	4.76 (1.12)	4.71 (0.91)	4.97 (1.15)	4.38 (1.26)	5.01 (1.02)
BC: Arrogant-Calculating	3.21 (1.45)	3.25 (1.54)	3.58 (1.57)	2.77 (1.15)	3.26 (1.46)
DE: Coldhearted	2.60 (1.38)	2.39 (1.17)	3.17 (1.82)	2.36 (1.08)	2.48 (1.21)
FG: Aloof-Introverted	3.10 (1.43)	2.91 (1.52)	3.59 (1.66)	2.83 (1.27)	3.06 (1.17)
HI: Unassured-Submissive	3.78 (1.19)	3.80 (1.26)	3.79 (1.13)	4.01 (1.12)	3.54 (1.23)
JK: Unassuming-Ingenuous	4.84 (1.35)	4.88 (1.47)	4.73 (1.22)	4.95 (1.35)	4.80 (1.39)
LM: Warm-Agreeable	6.13 (1.31)	6.19 (1.08)	5.74 (1.59)	6.39 (1.32)	6.19 (1.15)
NO: Gregarious-Extraverted	5.80 (1.36)	5.79 (1.45)	5.45 (1.60)	6.04 (1.26)	5.91 (1.09)
Inventory of Interpersonal Problems[a]					
PA: Domineering/ Autocratic	7.93 (5.69)	8.38 (5.68)	9.15 (6.86)	7.14 (4.73)	7.17 (5.33)
BC: Vindictive/ Competitive	8.72 (6.11)	9.35 (6.20)	9.74 (6.59)	8.05 (5.45)	7.88 (6.21)
DE: Cold	9.96 (7.64)	10.11(7.98)	11.82(8.13)	10.17(7.56)	7.85 (6.61)
FG: Socially Avoidant/ Introverted	11.03(7.14)	11.95(7.48)	11.87(7.09)	12.00(7.60)	8.41 (5.89)
HI: Nonassertive	11.27(7.37)	11.97(7.01)	12.00(7.16)	13.10(7.94)	8.07 (6.46)
JK: Exploitable	11.14(6.99)	11.54(6.37)	11.36(7.18)	12.67(7.57)	9.00 (6.43)
LM: Overly-Nurturant	12.65(6.82)	13.22(7.31)	12.41(6.45)	14.83(7.08)	10.15(5.76)
NO: Intrusive/Overly-Expressive	8.33 (5.83)	10.70(6.04)	7.82 (5.78)	9.07 (5.94)	5.90 (4.62)

Note:[a]Raw scores were ipsatized as per authors' instructions, and z-score transformations were completed on the ipsatized data.

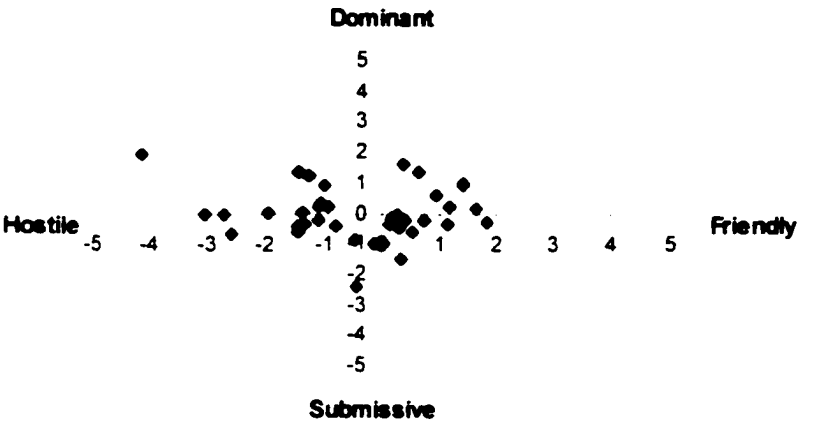
Appendix XVI: Scatterplots of Groups on Interpersonal Measures

Scatter plot of Co-ordinates for Dimensions on Revised Interpersonal Adjective Scales: Community Group

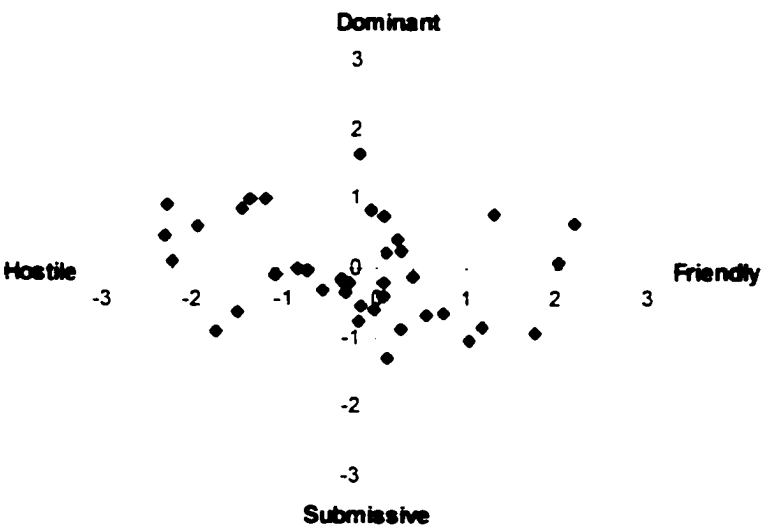


Scatter plot of Co-ordinates for Dimensions on Inventory of Interpersonal Problems – Circumplex Version: Community Group

Scatter plot of Co-ordinates for Dimensions on Revised Interpersonal Adjective Scales: Rapists

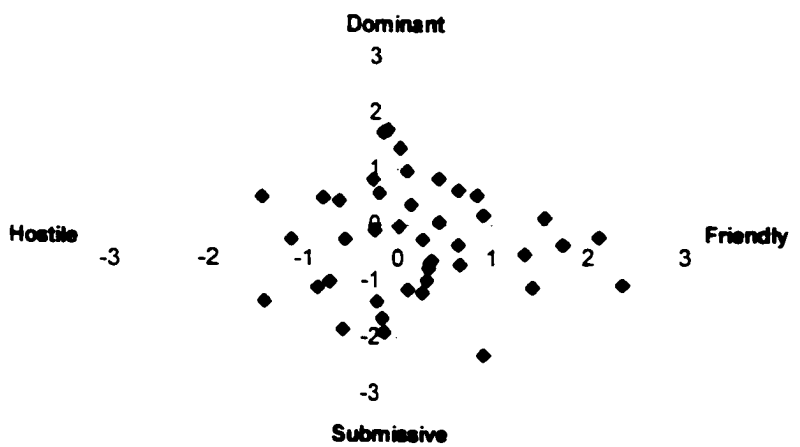


Scatter plot of Co-ordinates for Dimensions on Inventory of Interpersonal Problems – Circumplex Version: Rapists

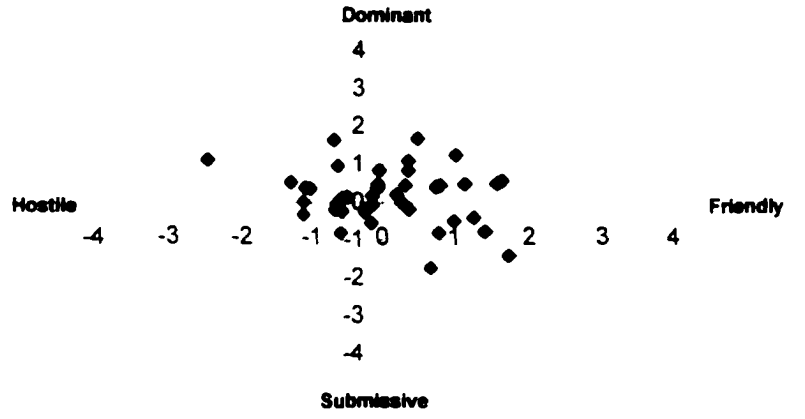


Scatter plot of Co-ordinates for Dimensions on Revised Interpersonal Adjective Scales: Child Molesters

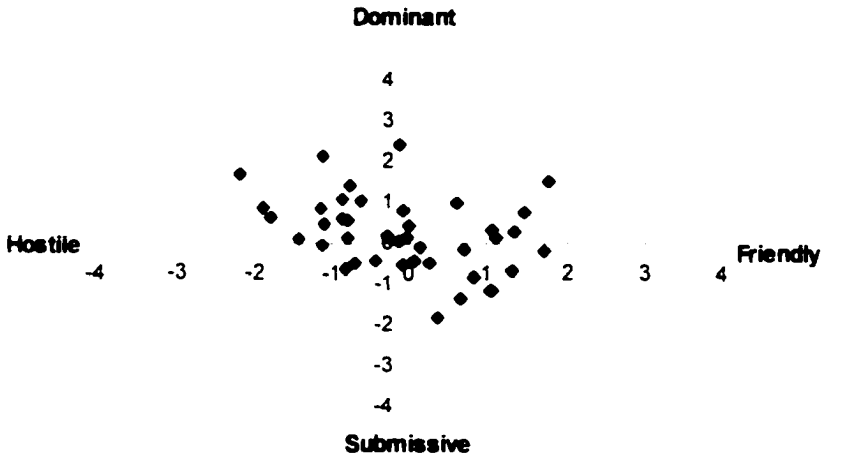
Scatter plot of Co-ordinates for Dimensions on Inventory of Interpersonal Problems – Circumplex Version: Child Molesters



Scatter plot of Co-ordinates for Dimensions on Revised Interpersonal Adjective Scales: Violent Offenders



Scatter plot of Co-ordinates for Dimensions on Inventory of Interpersonal Problems – Circumplex Version: Violent Offenders



CURRICULUM VITAE

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EDUCATION

Present	Queen's University, Kingston, Ontario • Candidate for Doctor of Philosophy in Clinical Psychology
1994-1996	Queen's University, Kingston, Ontario • Master of Arts in Clinical Psychology
1990-1994	University of Waterloo, Waterloo, Ontario • Bachelor of Arts in Psychology (Hons., Co-op)

AWARDS AND SCHOLARSHIPS

1997-2000	Social Sciences and Humanities Research Council of Canada Doctoral Fellowship
1994, 1996	Ontario Graduate Scholarship
1995	Queen's Graduate Award
1991-1994	University of Waterloo Arts Faculty Upper-Year Scholarship
1993	R. H. Walters Scholarship, University of Waterloo

PROFESSIONAL AFFILIATIONS

American Psychological Association (Student Affiliate)

Association for the Treatment of Sexual Abusers (Student Affiliate)

Society for Interpersonal Theory and Research (Student Affiliate)

EXPERIENCE

Teaching Experience

1997-2000 — Queen's University at Kingston
Substitute Lecturer
- Experimental Bases of Behaviour

November, 2000 — Carleton University
Guest Lecturer
- Forensic Psychology

1994-1997 — Queen's University at Kingston
Teaching Assistant
- Introductory Psychology
- Abnormal Psychology
- Abnormal Psychology – Continuing and Distance Studies

Clinical Experience

Present — Fenbrook Institution, Tupiq Program for Inuit Offenders
Clinical Director

1999-2000 — Kingston Penitentiary, Sexual Offenders' Program
Clinical Director

1995-1998 — Bath Institution, Sexual Offenders' Program
Therapist

1998 — Pittsburgh Institution, Sexual Offenders' Program
Senior Therapist and On-site Supervisor

1996-1997 — Regional Treatment Centre (Ontario), Sex Offender Unit
Therapist

1997 — Kingston Penitentiary, Department of Psychology
Doctoral Practicum

1995 — Ongwanada, Kingston, Ontario
Doctoral Practicum

1994-1995 — Regional Treatment Centre (Ontario), Sex Offender Unit
Doctoral Practicum

1989 — Queen Street Mental Health Centre
Recreation Therapist Assistant

PUBLICATIONS

Abracen, J. A., Looman, J. A. & Anderson, D. (2000). Alcohol and Drug Abuse in Sexual and Nonsexual Violent Offenders. Sexual Abuse: A Journal of Research and Treatment, 12, 263-274.

Anderson, D. & Marshall, W. L. (2002). The utility of interpersonal circumplex theory in research and treatment of sexual offenders. Forum on Corrections Research, 14, 28-30.

Cortoni, F., Anderson, D. & Bright, D. (in press). Locus of Control and Sexual Offenders. In Barbara K. Schwartz & H. R. Cellini (Eds.) The Sex Offender, Volume 4. Kingston, NJ: Civic Research Institute.

Fernandez, Y., Anderson, D. & Marshall, W. L. (1999). The relationship among empathy, cognitive distortions and self-esteem in sexual offenders. In Barbara K. Schwartz (Ed.) The Sex Offender, Volume 3. Kingston, NJ: Civic Research Institute.

Marshall, W. L. & Anderson, D. (1996). An evaluation of the benefits of relapse prevention programs with sexual offenders. Sexual Abuse: A Journal of Research and Treatment, 8, 209-221.

Marshall, W. L. & Anderson, D. (2000). Do relapse prevention components enhance treatment effectiveness? In D. R. Laws, S. M. Hudson & T. Ward (Eds.) Remaking Relapse Prevention with Sex Offenders: A Sourcebook. Newbury Park, CA: Sage Publications.

Marshall, W. L., Anderson, D., & Champagne, F. (1996). Self-esteem and its relationship to sexual offending. Psychology, Crime & Law, 3, 81-106.

Marshall, W. L., Anderson, D. & Fernandez, Y. (1997). The role of self-esteem enhancement in the treatment of sexual offenders. In J. Dunovsky, P. Weiss & O. Trojan (Eds.), Child sexual abuse and sexual violence. Prague: Ministerro Prace a Socialnich Veci.

Marshall, W. L., Anderson, D. & Fernandez, Y. (1999). Cognitive-behavioural treatment of sexual offenders. London: John Wiley & Sons.

Marshall, W. L., Cripps, E., Anderson, D. & Cortoni, F. (1999). Self-esteem and coping strategies in child molesters. Journal of Interpersonal Violence, 14, 955-962.

Morrison, T.G., McLeod, L.D., Morrison, M.A., Anderson, D., & O'Connor, W.E. (1997). Gender stereotyping, homonegativity, and misconceptions about sexually coercive behaviour among adolescents. Youth & Society, 28, 351-382.

O'Connor, W.E., Morrison, T.G., McLeod, L.D., Anderson, D., Morrison, M.A., & Parriag, A. (1996). A meta-analytic review of the relationship between gender and belief in a just world. Journal of Social Behaviour & Personality, 11, 141-148.

CONFERENCE PRESENTATIONS

Abracen, J., Looman, J. & Anderson, D. (2000). Treatment of Denial and Minimization.

Paper presented at the Association for Treatment of Sexual Abusers 19th Annual Research and Treatment Conference, San Diego, California.

Akavak, P., Ishulutak, M. & Anderson, D. (2001). Tupiq – Reintegrating Inuit Offenders into their Northern Communities. Paper presented at the Association for Treatment of Sexual Abusers 20th Annual Research and Treatment Conference, San Antonio, Texas.

Anderson, D. (2002). Drawing the Lines at a Different Place: Working with Inuit Offenders and Inuit Staff in a Federal Penitentiary. Paper presented at the 55th Annual Convention of the Ontario Psychological Association, Toronto, Canada.

Anderson, D. & Bailey, B. (2000). Suspended Parolees: Applying Research Findings to the Supervision and Treatment of Sexual Offenders. Poster presented at the 61st Annual Convention of the Canadian Psychological Association, Ottawa, Canada.

Anderson, D. & Boland, F. (1997). The Motivation to Become Thin. Poster presented at the Canadian Psychological Association Convention, Toronto, Ontario.

Anderson, D. & Cortoni, F. (2000). Modifying Dynamic Risk Factors: Translating Assessment Research into Treatment Strategies. Paper presented at the Association for Treatment of Sexual Abusers 19th Annual Research and Treatment Conference, San Diego, California.

Anderson, D., Fernandez, Y. & Marshall, W. L. (1997). Integrating Treatment Components in Sexual Offender Therapy: Toward a More Cost Effective Approach. Poster presented at the Association for Treatment of Sexual Abusers 16th Annual Research and Treatment Conference, Arlington, Virginia.

Anderson, D. & Marshall, W. L. (1998). Treatment Outcome with Sexual Offenders. Paper presented at the 28th Annual Congress of the European Association for Behavioural and Cognitive Therapies, Cork, Ireland.

Anderson, D. & Marshall, W.L. (1996). A Multidimensional Self-esteem Inventory Related to Sexual Offending. Poster presented at the Association for Treatment of Sexual Abusers 15th Annual Research and Treatment Conference, Chicago, Illinois.

Anderson, D., Thornton, D. & Mann, R. (2000). Psychopathic Sexual Offenders. Symposium presented at the Association for Treatment of Sexual Abusers 19th Annual Research and Treatment Conference, San Diego, California.

Bailey, W., Anderson, D. & Cortoni, F. (1999). Kingston Penitentiary's Long Termers' Program: Matching treatment to client needs. Poster presented at the Association for Treatment of Sexual Abusers 18th Annual Research and Treatment Conference, Orlando, Florida.

Bailey, W., Anderson, D. & Malcolm, B. (2000). Sex Offenders Released to the Community directly from a Maximum Security Penitentiary: Empirical Support for Clinical Observations? Paper presented at the Association for Treatment of Sexual Abusers 19th Annual Research and Treatment Conference, San Diego, California.

Bailey, W., Mills, J., & Anderson, D. A Preliminary Examination of the Relationship between Criminal Attitudes and Associates and Recidivism among Sex Offenders. Poster presented at the Association for Treatment of Sexual Abusers 20th Annual Research and Treatment Conference, San Antonio, Texas.

Cortoni, F. & Anderson, D. Modifying Dynamic Risk Factors. Pre-conference workshop presented at the Association for Treatment of Sexual Abusers 20th Annual Research and Treatment Conference, San Antonio, Texas.

Cortoni, F., Looman, J. & Anderson, D. (1999). Locus of control and coping in sexual offenders. Poster presented at the Association for Treatment of Sexual Abusers 18th Annual Research and Treatment Conference, Orlando, Florida.

Fernandez, Y., Marshall, W. L. & Anderson, D. (1999, April) Issues in treating empathy deficits in sexual offenders. Paper presented at the Child Sexual Abuse, Sexual Violence and Post Traumatic Stress Syndrome, 2nd East-West Conference, Prague, The Czech Republic.

Fernandez, Y., Anderson, D. & Marshall, W. L. (1997). The Relationship Between Empathy, Cognitive Distortions and Domain Specific Self-esteem in Sexual Offenders. Paper presented at the Association for Treatment of Sexual Abusers 16th Annual Research and Treatment Conference, Arlington, Virginia.

Lauzon, L., Anderson, D. & Looman, J. (1997). Psychopathy and Denial in Sexual Offenders. Paper presented at the Association for Treatment of Sexual Abusers 16th Annual Research and Treatment Conference, Arlington, Virginia.

Mills, J. & Anderson, D. (2000). Relevance of Criminal Associates and Attitudes to Assessment and Treatment of Sexual Offenders. Poster presented at the Association for Treatment of Sexual Abusers 19th Annual Research and Treatment Conference, San Diego, California.