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An Exploration of Risk Factors for Aggression in Relationships

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Dissertation submitted to the School of Graduate Studies and Research

of the University of Ottawa

in partial fulfillment of the requirements for

the degree of Doctor of Philosophy

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Dedicated

to my brother Tommy, whose ongoing battle with AIDS has taught me to never underestimate the power and strength of the human spirit

and

to the memory of my dear friend Carla, whose untimely death made me more fully appreciate the moments of life.

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Abstract

Violence in relationships is a serious social issue in our society. However, the developmental path that leads to this specific type of aggressive behaviour is unclear. The influence of familial factors, including violence in the family, parenting practices, lack of prosocial skills, and involvement in deviant peer groups, on the development of general aggression has been widely studied. Other research suggests that attachment bonds to parents are critical in the development of aggression, providing a role model for interactions in relationships and a foundation for intimacy, social development, and empathy. Further, adult attachment patterns that develop based on bonds with parents impact on how people interact in close relationships and are considered an important factor in sexual aggression and aggression in relationships. In addition to familial risk factors, interpersonal skills deficits, personality characteristics, negative influences of peers, and sexist attitudes may be important risk factors for aggression in relationships. The first purpose of the present study was to explore risk factors for aggression in the context of relationships. The second purpose was to compare groups of nonoffenders (students), nonviolent offenders, offenders violent outside of relationships, offenders violent within relationships, and offenders violent both within and outside of relationships with respect to familial variables, attachment styles, problem-solving skills, personality styles, influences of male peers, and sexist attitudes. The results indicated that family violence in childhood, poor attachment bonds with parents, interpersonal problem-solving deficits, insecure attachment styles in adulthood, abusive personality characteristics, negative influences from male peers, and sexist attitudes are important predictors of aggression in relationships. These risk factors also differentiated nonoffenders from offenders. However, the lack of differences among offender groups on these predictors points to a more general model of criminality, consistent with results of longitudinal studies with violent and nonviolent offenders. Implications in terms of parent training and early prevention with children at risk are discussed.

Introduction

Violence by men against women in intimate relationships is a serious social problem in North American society. A 1987 survey in Metropolitan Toronto indicated that 14% of women reported violent assaults by male partners in the past year and 25% reported having been abused at some time by a male partner (Smith, 1987). Of the married women interviewed by Russell (1990), 21% reported being physically assaulted by a husband at some point in their lives and 14% reported having been raped by a husband. In a review of research on wife assault, Dutton (1988a) found incidence rates between 21% and 28%, with rates between 9% and 13% for severe assaults. Estimates from various surveys of college students suggest that between 20% and 25% of women have experienced verbal or physical abuse in heterosexual dating relationships (Aizenman & Kelley, 1988; Makepeace, 1986), with 22% to 78% reporting sexual aggression by dating partners and 6% to 15% reporting sexual aggression involving penetration (Aizenman & Kelley, 1988; Muehlenhard & Linton, 1987; Ullman & Siegel, 1993). In a sample of male high school students, 39% reported physically abusive behaviour towards female dating partners (O'Keefe, 1997).

The acknowledgement of the seriousness of sexual and physical aggression by male youths toward female dating partners has altered the "boys will be boys" attitude of the past (Barbaree & Cortoni, 1993; White & Koss, 1993). As a result, clinicians, researchers, and the criminal justice system are starting to view aggression by youths in the context of relationships as criminal behaviour with traumatic consequences for victims (Barbaree, Hudson, & Seto, 1993; Ryan, 1991a). However, because of its fairly recent recognition as "deviant behaviour", methodologically sound research on adolescent sexual offenders and young men's physically abusive behaviour in dating relationships is limited (Becker, Harris, & Sales, 1993; Henton, Cate, Koval, Lloyd, & Christopher, 1983; O'Keefe, 1997). In view of the evidence from incarcerated sexual offenders suggesting a pattern of offending beginning in adolescence (Abel, Osborn, & Twigg, 1993; Davis & Leitenberg, 1987) and reports from victims of physical violence suggesting a progressive pattern from possessiveness and increasing dominance and control in dating

relationships to physical violence early in marriage (Dobash & Dobash, 1979; Gamache, 1991), research investigating developmental risk factors for abusive behaviour by men against women is critical.

The risk factors influencing the development of general antisocial behaviour in boys have been widely studied and Patterson and his colleagues (Patterson, 1986; Patterson, Capaldi, & Bank, 1991; Patterson, DeBaryshe, & Ramsey, 1989; Patterson & Stouthamer-Loeber, 1984) have proposed a "coercion training model" of antisocial behaviour, suggesting that poor and inconsistent parenting reinforces antisocial behaviour while failing to reinforce prosocial skills that might counteract that behaviour. Boys from such families are then at risk for persistent antisocial behaviour through adolescence and adulthood (Loeber, 1990; Patterson et al., 1991; Patterson & Stouthamer-Loeber, 1984). With the transition from childhood to adolescence, deviant peer groups may further reinforce antisocial behaviour learned in the family environment, training antisocial behaviour in older boys who did not learn such behaviour at home (Patterson et al., 1991).

Recent attempts to explain sexual aggression and domestic violence expand on the coercion training model, hypothesizing that insecure attachment bonds between children and parents create vulnerability to negative influences (such as poor parenting and deviant peer groups) and reduce the likelihood of developing prosocial skills (e.g., empathy, warmth, sensitivity, self-confidence) (Dutton, 1995a; Holtzworth-Munroe & Stuart, 1994; Marshall, 1993; Marshall, Hudson, & Hodkinson, 1993). Further, because the parent-child bond serves as a model for future intimate relationships, children who experience insecure attachments to their parents are less likely to develop the skills necessary to establish and maintain successful adult relationships (Dutton, 1994a, 1994b, 1995b; Dutton & Starzomski, 1993; Marshall et al., 1993).

Violence in the family of origin has also been considered a critical risk factor for the development of aggressive behaviour patterns. According to the "intergenerational transmission hypothesis", witnessing or experiencing violence in childhood serves as a model for learning that aggressive behaviour is appropriate and acceptable, particularly in the family environment

(Avakame, 1998; Cappell & Heiner, 1990; Carter, Stacey, & Shupe, 1988; Jaffe, Wolfe, & Wilson, 1990; Kalmuss, 1984; MacEwen, 1994; Rosenberg, 1987). Research supporting the intergenerational transmission hypothesis indicates that aggressive children, adolescents, and adults were more likely to have experienced or witnessed violence in their families of origin (Avakame, 1998; Carlson, 1990; Dodge, Bates, & Pettit, 1990; Widom, 1989). Although critics of the intergenerational transmission hypothesis argue that violence in the family of origin may not specifically lead to violence in adulthood (Cappell & Heiner, 1990; Herman, 1990; Okun, 1986), the experience of violence in childhood continues to be viewed as an important contributor to aggression in adult relationships (Avakame, 1998; Dutton, 1995a, 1995d; Hanson, Cadsky, Harris, & Lalonde, 1997; Johnston, 1988; MacEwen, 1994; Seghorn, Prentky, & Boucher, 1987).

In addition to the direct impact of familial factors on children's development, indirect influences also place children at risk. More specifically, deficits in problem-solving skills may be a consequence of insecure attachments to parents and lack of positive role models. Problem-solving deficits may negatively impact on the ability to form and maintain close relationships (Marshall et al., 1993; Ryan, 1991b, Steele & Ryan, 1991). Further, aggressive role models teach that violence is an acceptable method for solving interpersonal problems.

In addition to influencing the development of social skills deficits, insecure and chaotic family backgrounds may also play a role in the development of abusive personality styles. The aggressive behaviour patterns of psychopaths have been related to egocentricity, superficiality in relationships, and lack of empathy (Schalling, 1978; Myers, Burket, & Harris, 1995). Borderline personality style, also thought to be the result of insecure attachments in childhood, is characterized by unstable interpersonal relationships and has been linked to aggressive behaviour in relationships (Dutton, 1994a, 1994b, 1995b).

Factors outside the family also influence the development of aggressive behaviour. Cultural values related to sex, women, violence, and male-female roles are believed to contribute to

aggressive behaviour, particularly violence against women (Burt, 1980; Dobash & Dobash, 1979; Russell, 1990; Stermac, Segal, & Gillis, 1990). Cultural values impact on parents, reinforcing traditional gender roles and contributing to the socialization of aggression in males (Adams & McCormick, 1982). Cultural factors also reinforce the use of violence, providing popular violent male role models and rationalizations for violent behaviour. More specific values from peers and peer role models may also influence the development of aggressive behaviour. Male peer groups can train antisocial behaviour (Patterson, 1986; Patterson et al., 1991; Patterson et al., 1989; Patterson & Stouthamer-Loeber, 1984), legitimize values that support abusive behaviour in relationships (DeKeseredy, 1988a, 1988b), and reinforce the use of violence as a problem-solving method.

The present research examines risk factors for aggression in general and, more specifically, for aggression in relationships. The following literature review begins with a discussion of the role of the family in the development of aggressive behaviour. Familial risk factors are examined in terms of the coercion training model, attachment theory, and the intergenerational transmission of violence. Literature linking problem-solving deficits and aggression is briefly reviewed, followed by a discussion of the role of personality factors. Cultural factors and the role of male peers in the development of aggression are then discussed. Finally, the general purpose and specific hypotheses of the present study are outlined.

Familial Risk Factors

The Coercion Training Model of Antisocial Behaviour

In 1963 McCord, McCord, and Howard published the results of a longitudinal study examining the effects of child-rearing practices on aggression in males. Boys between 10 and 15 years of age were observed by teachers at school and by social workers on random home visits. Follow-up included an examination of criminal records approximately 10 years later. Boys who were aggressive in adolescence and had an adult criminal record were likely to have experienced punitive and threatening parental discipline and were not likely to have received approval from

parents (McCord et al., 1963). Follow-up 30 years later indicated that lack of parental supervision predicted both property and person-oriented crimes (McCord, 1979). Further, boys exposed to more parental conflict and aggression had a higher incidence of convictions for person-oriented crimes (McCord, 1979).

The family's role in the development of antisocial and aggressive behaviour continues to be an important research issue. The Eugene Oregon research group led by Patterson has been particularly influential in directing longitudinal studies on developmental risk factors, particularly familial risk factors, for antisocial behaviour in boys (Patterson, 1986; Patterson & Bank, 1986; Patterson et al., 1991; Patterson et al., 1989; Patterson & Dishion, 1985; Patterson, Dishion, & Bank, 1984; Snyder & Patterson, 1987). According to the coercion training model, "a key requirement for family training in antisocial behaviour is that the child live in a highly coercive family" (Patterson et al., 1991, p. 147). Parent-child interactions are at risk to become coercive if parents are unskilled (i.e., using inconsistent discipline practices, providing little or no monitoring and supervision, and failing to reinforce positive prosocial behaviours) and/or the children have "difficult temperaments" (e.g.., noncompliant, conduct problems). Further, specific familial "disruptors" (e.g., marital conflict, divorce, financial stress) can negatively influence parenting abilities, indirectly contributing to coercive training (Patterson et al., 1989).

Patterson et al. (1989) hypothesize that coercive child behaviours generalize to aggressive behaviours in settings outside of the family and may lead to rejection from the "normal" prosocial peer group. Aggressive behaviour and subsequent rejection from the prosocial peer group in turn leads to affiliation with deviant peer groups, which reinforce and maintain antisocial behaviour by providing opportunities and a rationale for antisocial acts (Patterson et al., 1989).

According to Patterson et al. (1991), there are two paths to delinquency. Boys who follow the first path (referred to as "early starters") tend to have poor social skills and engage in antisocial behaviour in early childhood. Early starters are at high risk for academic failure and delinquent behaviour patterns in adolescence and antisocial behaviour in adulthood (Patterson et al., 1991).

Boys who follow the second path ("late starters") do not evidence antisocial behaviour until later, usually at the onset of adolescence, at which time various disruptions in adequate family management practices may promote involvement with a deviant peer group. Compared to early starters, boys who are late starters are more socially skilled, less likely to fail academically, and less likely to persist in their antisocial behaviours (Patterson et al., 1991).

Reviews by Loeber (1990) and Snyder and Patterson (1987) support the link between parenting practices and antisocial behaviour. More recent research has also suggested that inadequate parental supervision, parental aggression, lax and overly harsh disciplinary styles, lack of positive parental involvement, and ineffective problem-solving skills are risk factors for delinquency (Dix & Lochman, 1990; Hoge, Andrews, & Leschied, 1994; Hoge, Andrews, & Leschied, 1996; Loeber, 1990; Patterson, 1992; Patterson et al., 1991; Snyder & Patterson, 1987). A meta-analysis confirmed these findings, indicating that poor parental caregiving and lack of parental control were associated with externalizing behaviour in boys (Rothbaum & Weisz, 1994). Consistent with the coercion training model, research has shown that disruptions in family management (due to stressors such as divorce, financial stress, parental depression) are moderate risk factors for antisocial behaviour in boys (Forehand, 1990; Forehand et al., 1991; Patterson et al., 1991). Finally, research suggesting that children's temperaments play an important role in the development of conduct problems (Abidin, Jenkins, & McGaughey, 1992; Kashani, Ezpeleta, Dandoy, Doi, & Reid, 1991; Kingston & Prior, 1995) supports the coercion training model in that children who are noncompliant are more challenging to raise, particularly for unskilled parents. As a result, these children are at higher risk to develop coercive behaviours (Patterson & Bank, 1986; Patterson et al., 1991).

Although univariate research has helped to identify some important familial risk factors for antisocial behaviour, designs combining multiple indicators of family management styles show better predictive value (Loeber & Dishion, 1983; Patterson & Bank, 1986; Snyder & Patterson, 1987). Patterson and Bank (1986) included both family management practices and children's

interactional styles in their model. This model accounted for 40% of the variance in antisocial behaviour in a sample of fourth grade boys (Patterson & Bank, 1986). A second multivariate study indicated that the combination of difficult temperament, involvement in a deviant peer group, inadequate parental monitoring and discipline, and academic failure, placed boys at *extreme* risk for antisocial behaviour (Patterson et al., 1991).

The coercion training model provides a framework for understanding the role of the family in training antisocial behaviour. However, "the differential association of family variables with distinguishable types of antisocial and delinquent behaviour is less clear" (Snyder & Patterson, 1987, p. 236). Some reviews suggest that *overt* antisocial behaviour (aggressive, person-oriented) may be associated with harsh, punitive parental disciplinary styles and rejection by the parents, whereas *covert* antisocial behaviour (nonaggressive, property-oriented) may be associated with lax parental discipline and less parental involvement (Loeber, 1982; Loeber & Schmaling, 1985a; Snyder & Patterson, 1987). Loeber and Schmaling (1985b) identified a third pattern of antisocial behaviour, referred to as "versatile" antisocial behaviour, characterized by both overt and covert antisocial acts. This behaviour pattern was associated with the most disturbed child-rearing practices (i.e., the least parental supervision and the most maternal rejection).

However, some recent longitudinal research questions these suggestions, pointing to generality in antisocial behaviour and finding few differences in the predictors for violent and nonviolent offenders (Capaldi & Patterson, 1996; Farrington, 1991). Explanatory models included family background variables (parental antisocial behaviour, monitoring, and discipline practices) and characteristics of the child, including early behavioural problems (Capaldi & Patterson, 1996; Farrington, 1991). Based on this longitudinal research, Farrington (1991) has suggested that "the causes of aggression and violence must be essentially the same as the causes of persistent and extreme antisocial, delinquent, and criminal behaviour" (p. 25).

In summary, research focusing on familial risk factors in the development of antisocial behaviour supports the coercion training model proposed by Patterson and his colleagues. More

specifically, harsh and/or inconsistent parental discipline, inadequate parental supervision, and lack of positive parental involvement are risk factors for the development of antisocial behaviour. The influence of familial factors on specific types of antisocial behaviour is less clear. However, some research suggests that harsh discipline and parental rejection may be risk factors for aggressive, person-oriented antisocial behaviour whereas ineffective monitoring and lack of supervision may be risk factors for nonaggressive, property-oriented antisocial behaviour.

Patterson and his colleagues have significantly advanced research on the developmental pathways for antisocial and aggressive behaviour. Much of their research has been longitudinal and, as a result, they have provided evidence of the development consequences of early risk factors in children and youth. However, because the coercion training model has focused on specific coercive interactions between parents and children, it has been criticized for its reductionistic nature and lack of attention to the role of cognitions, attitudes, and modelling in the learning of antisocial behaviour (Greenberg & Speltz, 1988; Robinson, 1985). Further, although the coercion training model focuses on interactions between parents and children, it neglects the impact of parent-child relationships (i.e., attachment bonds) on emotional and social development (Greenberg & Speltz, 1988; Hoge et al., 1994; Robinson, 1985).

Attachment to Parents

As early as 1965, Peterson and Becker proposed that "the basic defect in delinquency, as in most other forms of disturbance, is thought to lie somewhere in the feelings parents and children have for each other" (p. 75). Based on a review of research at that time, they concluded that, compared to nonaggressive boys, aggressive boys were "loved less and rejected more" (Peterson & Becker, 1965, p. 78). Although most research at the time attributed the primary responsibility of providing love and affection to the mother,[1] Peterson and Becker (1965) found that the father-son

[1]The focus on mothers' roles and lack of attention to fathers' roles in the development of psychopathology is still very common (e.g., see Lyons-Ruth, 1996; Lyons-Ruth, Alpern, & Repacholi, 1993; Rosenstein & Horowitz, 1996; IJzendoorn, Goldberg, Kroonenberg, & Frenkel, 1992).

relationship was also an important determinant of delinquent behaviour.

More recently, Bowlby's theory of attachment[2] has become important in exploring the impact of parenting on the development of antisocial behaviour (Dutton, Saunders, Starzomski, & Bartholomew, 1994; Loeber, 1990; Lyons-Ruth, 1996; Mak, 1990; Marshall et al., 1993; Ward, Hudson, & Marshall, 1996). Attachment bonds between caregivers and children form the basis of a behavioural system of interacting with others (Ainsworth, 1989). Insecure attachment has been identified as a risk factor for various forms of psychopathology (for recent reviews, see Jones, 1996 and Main, 1996), delinquency (Loeber, 1990; Mak, 1994), adult criminality (Loeber, 1990), and aggressive behaviour (Greenberg, Speltz, & DeKlyen, 1993). Insecure bonds with parents affect children's ability to cope with changing life circumstances (Sroufe, 1983), their cognitive functioning (Jacobsen, Edelstein, & Hofmann, 1994), and their social competency (Allen, Hauser, & Borman-Spurell, 1996; Coble, Gantt, & Mallinckrodt, 1996; Hartup, 1989; Pianta, Egeland, & Adam, 1996; Sroufe, 1983). In turn, impairments in these areas increase children's vulnerability to developmental difficulties (Alexander, 1992; Greenberg & Speltz, 1988; Rosenstein & Horowitz, 1996; Sroufe, 1983, 1988).

Early research in the area of attachment to parents relied on a paradigm known as the Strange Situation task (Ainsworth, Blehar, Waters, & Wall, 1978). Initially, three patterns of infant attachment were identified: (a) the secure attachment pattern, reflecting a sense of trust by the infant in the reliability and protection of the parent; behaviour of securely-attached infants includes exploration, with a return to parents for comfort when distressed or threatened; (b) the insecure-avoidant attachment pattern, in which infants actively avoid the parental figure under conditions of distress; and (c) the insecure-ambivalent attachment pattern, characterized by ambivalence toward the parental figure when distressed (i.e., seeking contact with the caregiver, but resisting comforting). Thus, in contrast to securely attached infants, infants in the two insecure categories

[2]See Bretherton (1992) for a review of the theoretical foundations of attachment.

had difficulty obtaining comfort and a sense of security from caregivers and seemed to lack the necessary confidence for exploration (Ainsworth et al., 1978). In 1990, Main and Solomon introduced a fourth pattern of infant attachment in order to explain the behaviour of infants that did not fit into the other three categories.[3] This pattern was named disorganized attachment and was defined by lack of a consistent strategy for responding to separation from parents, with reactions characterized by helplessness, fear, and unpredictability (Main & Solomon, 1990; Rosenstein & Horowitz, 1996).

Following Ainsworth et al.'s (1978) work, researchers began to examine the link between insecure attachment patterns in infancy and the development of childhood psychopathology. Egeland and his colleagues followed a sample of impoverished mothers over a period of four years and found that avoidant attachment in infancy predicted aggressive and withdrawn behaviour in grades 1 to 3 boys, but not in girls (Egeland, Pianta, & O'Brien, 1993; Erikson, Egeland, & Sroufe, 1985; Renken, Egeland, Marvinney, Mangelsdorf, & Sroufe, 1989). Troy and Sroufe (1987) also found that, compared to securely attached preschoolers, preschoolers characterized by avoidant attachment relationships in infancy were more likely to be either victims or victimizers in their interpersonal interactions. More recent research has focused on disorganized attachment in infants and has linked this attachment pattern to aggressive and noncompliant behaviour in childhood (Greenberg, Speltz, DeKlyen, & Endriga, 1991; Lyons-Ruth et al., 1993; Lyons-Ruth, Connell, & Grunebaum, 1990; Lyons-Ruth, Repacholi, McLoed, & Silva, 1991; Speltz, Greenberg, & DeKlyen, 1990).

On the other hand, some researchers have found no differences between securely and insecurely attached infants on externalizing and aggressive behaviour problems later in childhood (Bates, Bayles, Bennett, Ridge, & Brown, 1991; Fagot & Kavanagh, 1990; Goldberg, Perrotta,

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[3]In fact, many high risk children (maltreated or neglected) were being classified as securely-attached. Closer examination of their behaviour in the Strange Situation task revealed important differences leading to the inclusion of the disorganized attachment pattern (Main & Solomon, 1990).

Minde, & Corter, 1986). Lyons-Ruth (1996) hypothesizes that sampling differences may account for some of the inconsistent results, with insecure attachment patterns increasing the risk for development of aggressive behaviour in children from impoverished, high risk families, but not in children from low risk environments.

In addition to links with aggression, researchers have explored the relationship between early attachment bonds and the development of social skills and empathy. Sroufe (1983) found that preschoolers who were securely attached demonstrated more empathic and positive affective responses in social situations than did insecurely attached preschoolers. Insecure attachment was associated with whining and aggressive interpersonal styles and an egocentric focus, with little ability to respond to distress in others (Sroufe, 1983). Compared to securely attached children, children with insecure attachment histories were also less popular with peers (LaFreniere & Sroufe, 1985; Sroufe, 1983).

Although the initial focus was on infants and preschoolers, researchers have begun to recognize the importance of attachment relationships in adolescence and adulthood (Allen et al., 1996; Bartholomew, 1993; Bartholomew & Horowitz, 1991; Cohn, Silver, Cowan, Cowan, & Pearson, 1992; Collins & Read, 1990; Hazan & Shaver, 1994; Pianta et al., 1996; Rosenstein & Horowitz, 1996). Based on Bowlby's original theory, Bartholomew (1990) has proposed a model of attachment relationships in adulthood. This model takes into account views of self (positive or negative) and views of others (positive or negative), creating four categories of attachment patterns: (a) secure attachment (positive view of self and others, characterized by comfort with intimacy and autonomy and balanced, stable interpersonal relationships); (b) preoccupied attachment (negative view of self and positive view of others, characterized by a preoccupation with relationships and a warm, dominant interpersonal style); (c) dismissing attachment (positive view of self and negative view of others, characterized by avoidance of others and dismissal of intimacy and a cold, competitive interpersonal style); and (d) fearful attachment (negative view of self and others, characterized by fear of intimacy and social avoidance and a cold, passive

interpersonal style) (Bartholomew, 1990; Bartholomew & Horowitz, 1991). The four categories of adult attachment are analogous to the infant attachment patterns - secure, ambivalent, avoidant, and disorganized, respectively (Bartholomew, 1990).

Research has linked adult attachment patterns to antisocial and aggressive behaviour patterns in adolescents and adults. Rosenstein and Horowitz (1996) found that dismissing attachment was associated with conduct disorder and substance abuse in adolescent males. In a longitudinal study, Allen et al. (1996) found that adolescents classified into the dismissing attachment pattern were more likely to engage in criminal behaviour in adulthood. The dismissing attachment style has also been linked to hostile interactional styles in college students (Kobak & Sceery, 1988). In general, insecure attachment styles have been linked to conflict in intimate relationships (Cohn et al., 1992; Pistole, 1989; Scharfe & Bartholomew, 1995).

The application of attachment theory to adult intimate relationships has led to the examination of possible links between attachment patterns and violence towards women. Marshall and his colleagues (Marshall & Eccles, 1993; Marshall et al., 1993; Ward et al., 1996) have proposed a multifaceted theory of sexual offending that considers the importance of secure attachment bonds in increasing children's resilience to negative events and providing models for empathy and intimate relationships. Early experiences of insecure attachment are characterized by parental rejection, inconsistent discipline and praise, abuse, lack of warmth, and ambivalence. Some of the consequences of poor attachment bonds are critical to the development of abusive behaviour, including low self-esteem, social skills deficits, and lack of empathy (Marshall et al., 1993; Ryan, 1991b; Steele & Ryan, 1991). Inability to engage in intimate relationships may lead to emotional loneliness, and because of cultural values that equate sex with love, young men may then pursue sexual experiences, perhaps without consideration of their sexual partner, to fulfill their emotional needs (Marshall et al., 1993). Given the chaotic family histories of sexual offenders, the development of secure attachment bonds with their parents is unlikely (Marshall & Barbaree, 1990).

In their study of adolescent sexual offenders, Kobayashi, Sales, Becker, Figueredo, and Kaplan (1995) found that sexual abuse in childhood, physical abuse by father, and lack of a strong maternal bond were significant predictors of sexual aggression in adolescence. Ward et al. (1996) examined the adult attachment styles of various groups of incarcerated offenders, including nonviolent offenders, violent non-sexual offenders, rapists, and child molesters. The findings of this study indicated that the four groups did not differ significantly with respect to secure, dismissing, or fearful attachment styles. Two of the groups (child molesters and nonviolent offenders) differed on preoccupied attachment style, with child molesters scoring significantly higher. Overall, although sexual offenders were insecurely attached, insecure attachment patterns in adult relationships were also characteristic of other types of offenders, "point[ing] to a general factor of insecure attachment being associated with incarceration or criminality" (Ward et al., 1996, p. 23).

Recently, researchers in the area of wife abuse have also turned their attention to attachment theory (Dutton, 1994b; 1995a; 1995b; Dutton et al., 1994; Holtzworth-Munroe & Stuart, 1994; Holtzworth-Munroe, Stuart, & Hutchinson, 1997; Pistole & Tarrant, 1993). According to Dutton (1995b) the fearful pattern of attachment is most consistent with the controlling pattern of wife battering, in which men want intimacy and fear rejection and use violence as a method of maintaining control in the relationships. On the other hand, in their conceptualization of batterers, Holtzworth-Munroe and Stuart (1994) assert that the preoccupied style of attachment characterizes batterers who are violent only within the context of relationships ("family-only") and psychologically distressed batterers ("dysphoric/borderline"). These researchers also argue that the attachment style of more "generally violent" batterers (violent both within and outside of the context of relationships) is likely to be dismissing.

Empirical research provides some support for the link between adult attachment styles and wife battering. With a sample of wife batterers, Dutton et al. (1994) found that both fearful and preoccupied attachment styles were positively correlated with partner's reports of abusiveness. In a

study by Holtzworth et al. (1997), groups wife batterers and maritally distressed men were more likely than nonviolent/nondistressed men to have insecure attachment styles. Further, compared to maritally distressed men, wife batterers reporting more preoccupied attachment patterns. In contrast, Pistole and Tarrant's (1993) study of wife batterers indicated a distribution of attachment styles that was similar to college samples, with no significant prevalence of insecure attachment styles.

In summary, insecure attachment bonds are an important contributing factor to the development of aggressive behaviour. Early attachments to caregivers provide children with a model for future intimate relationships and a foundation for the development of empathy and social skills. Research supports a link between insecure maternal attachment bonds in infancy and aggressive and delinquent behaviour (Allen et al., 1996; Loeber, 1990; Lyons-Ruth, 1996). More specifically, studies with infants and preschoolers document an association between avoidant and disorganized attachment patterns and aggressive and noncompliant behaviour (Erikson et al., 1985; Greenberg et al., 1991; Lyons-Ruth et al., 1993). Recent examinations of attachment relationships in adolescence and adulthood suggest that dismissing attachment styles is associated with antisocial behaviour (conduct problems, substance abuse, aggression, criminal behaviour) and a hostile interpersonal style (Allen et al., 1996; Cohn et al., 1992; Kobak & Sceery, 1988; Rosenstein & Horowitz, 1996).

Theories of sexual offending (Marshall, 1993) and wife abuse (Dutton, 1995b; Holtzworth-Munroe & Stuart, 1994) propose links between insecure attachment bonds in childhood and subsequent relationship difficulties in adolescence and adulthood. The controlling interpersonal style and fear of rejection characteristic of some wife batterers is consistent with fearful and preoccupied attachment patterns (Dutton, 1995b; Holtzworth-Munroe & Stuart, 1994). Research on attachment styles in wife batterers has provided some support for this hypothesis (Dutton et al., 1994; Holtzworth-Munroe et al., 1997). Comparisons of batterers with other types of offenders are needed in order to explore whether particular attachment patterns are unique to batterers.

Inconsistencies in attachment research make clear interpretation of the links between attachment and aggression problematical. One reason for the inconsistencies may be the varying definitions of aggressive/antisocial behaviour. In attachment research with children and adolescents, aggressive behaviour has been conceptualized in terms of diagnoses of oppositional defiant disorder or conduct disorder[4] (Allen et al., 1996; Greenberg et al., 1991; Rosenstein & Horowitz, 1996; Speltz et al., 1990), conflict and hostility towards peers (Kobak & Sceery, 1988), and externalizing problems on behaviour checklists (Fagot & Kavanagh, 1990; Lyons-Ruth et al., 1993). In adulthood, specific attachment patterns have been linked to criminal behaviour in general (Allen et al., 1996), conflict in relationships (Pianta et al., 1996; Pistole, 1989), and abusive behaviour in relationships (Dutton, 1995a; Dutton et al., 1994).

Research on attachment has provided insights into the development of aggressive behaviour. However, only recently has the focus switched to particular types of aggressive behaviour. Examining the role of attachment in the development of specific types of aggressive behaviour may help to account for inconsistencies in attachment research. For example, it may be that dismissing attachment styles are associated with psychopathic personality characteristics including antisocial acting out, superficial relationships, and lack of empathy. In contrast, the fearful and preoccupied attachment styles may be associated with other types interpersonal difficulties including insecurity and fear of abandonment in relationships and poor affect regulation (Dutton, 1995a). Researchers in the areas of wife abuse and sexual aggression are beginning to explore the significance of attachment styles to the development of these specific aggressive behaviour patterns (e.g., Dutton, 1995a; Dutton et al., 1994; Holtzworth-Munroe et al., 1997; Ward et al., 1996).

Early research documented that the father-son relationship was important in the development

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[4]These are labels often applied to rebellious children and adolescents displaying so-called "unmanageable" behaviour. In many cases, the diagnosis of oppositional defiant disorder (ODD) or conduct disorder (CD) may be more accurately diagnosed as adjustment disorder. Further, diagnoses of ODD or CD in children and adolescents is frequently used in the same circular fashion as antisocial personality disorder (APD) in adults, i.e., committing an "antisocial" act may lead to a diagnosis of APD and the reason for committing the antisocial act is APD (D. J. Baxter, personal communication, January, 1997).

of delinquency (Peterson & Becker, 1965). Further, research has found that sons' relationships with their fathers predicts externalizing problems (Cowan, Cohn, Cowan, & Pearson, 1996; Forehand et al., 1991; Morris et al., 1988) and a review by Atkeson, Forehand, and Rickard (1982) indicated that externalizing problems are higher in children and adolescents whose father is absent. Finally, in a recent study, repeat offenders reported close relationships with their mothers and distant relationships with their fathers (Hagell & Newburn, 1996). "This suggests that most of the literature, which has ignored the role of fathers, may have failed to include an important source of influence on children" (Forehand et al., 1991, p. 320). Attachment theory and empirical research has been biased toward maternal attachment bonds. Although some researchers focusing on adult attachment patterns have begun to include fathers (e.g., Cowan et al., 1996; Forehand et al., 1991; Hagell & Newburn, 1996; Harper & Ryder, 1986; IJzendoorn & Bakermans-Kranenburg, 1996), lack of attention to attachment bonds with male caregivers continues to be problematic.

Violence in the Family of Origin

According to Carter et al. (1988), the hypothesis of intergenerational transmission of violence is a common assumption in family violence literature. This hypothesis has its foundation in social learning theory and suggests that witnessing or experiencing violence in childhood serves as a model for learning aggressive behaviour, teaching children that aggression is appropriate and acceptable in family environments (Cappell & Heiner, 1990; Carter et al., 1988; Jaffe et al., 1990; Kalmuss, 1984; MacEwen, 1994; Rosenberg, 1987).

Research on family violence provides some support for the intergenerational transmission hypothesis. Widom (1989) reviewed research on juvenile delinquency and found that, compared to nonviolent male delinquents, violent male delinquents were more likely to have experienced or witnessed abuse in childhood. Carlson (1990) found that, compared to boys who reported that they had not witnessed abuse in childhood, adolescent boys who witnessed spousal abuse were more likely to hit their mothers. Children of battered women also tended to use more aggressive

means of solving problems than a comparison group (Jaffe, Wilson, & Wolfe, 1988). Dodge et al. (1990) interviewed mothers about discipline practices and abusive behaviour toward children. Six months later, their children were rated for aggressive behaviour. Physical abuse was a risk factor for aggressive behaviour, mediated through social problem solving (Dodge et al., 1990). Other research indicated a higher incidence of aggressive behaviour and delinquency in children who experienced ongoing verbal abuse by parents (Vissing, Straus, Gelles, & Harrop, 1991).

Research with violent men also supports the intergenerational transmission hypothesis. Jalbert (1994) found that violent offenders were more likely than nonviolent offenders to have been abused as children. Physical and sexual abuse are common in the family backgrounds of wife batterers (Dutton & Hart, 1992; MacEwen & Barling, 1988) and sexual offenders (Dhawan & Marshall, 1996, Knight & Prentky, 1993; Kobayashi et al., 1995; Seghorn et al., 1987).

Witnessing and experiencing violence in the family of origin has been considered a critical risk factor for wife abuse. Studies of children of battered women suggest an association between witnessing violence and subsequent aggressive behaviour (Jaffe et al., 1990; Kalmuss, 1984; Kolbo, Blakely, & Engleman, 1996; McNeal & Amato, 1998). Researchers have also found that, compared to men who did not witness family violence, men who witnessed violence between their parents were significantly more likely to report violence in their relationships (Hanson et al., 1997; Howell & Pugliesi, 1988; Johnston, 1988; MacEwen, 1994; Murphy, Meyer, & O'Leary, 1993; O'Leary, Malone & Tyree, 1994; Ronfeldt, Kimerling, & Arias, 1998; Stith & Farley, 1993). Further, compared to nonviolent married men, wife batterers were more likely to have had childhood experiences of physical punishment and witnessing their mothers being abused by a male partner (Barnett & Hamberger, 1992; Caesar, 1988; Dutton, 1988a; Hamberger & Hastings, 1991; Murphy et al., 1993). Jalbert (1994) also found that offenders who reported histories of child abuse were more likely to have convictions of domestic violence whereas men with no histories of child abuse were more likely to have nonviolent criminal convictions. Carter et al. (1988) found that wives' reports of severe violence by male partners was correlated with male

partners' reports of witnessing interparental violence in childhood. Avakame (1998) also found that physical abuse by fathers and witnessing of abuse of mother by father was correlated with the use of psychological aggression in relationships (note that the sample for this study included both men and women).

Studies examining the relationship between violence in the family of origin and dating violence have yielded mixed results (O'Keefe, 1997; Simons, Lin, & Gordon, 1998; Smith & Williams, 1992; Sugarman & Hotaling, 1989a, 1989b, 1991; Tontodonato & Crew, 1992). Other research has not supported the intergenerational transmission hypothesis. Martin and Elmer (1992) followed children who were severely abused in childhood over a period of 20 years. Although the small sample of men and women reported numerous difficulties in relationships and family functioning, there was little evidence of overt aggression. Carlson (1991) found no significant effects of experiencing or witnessing family violence on adolescents' approval of or use of violence in relationships. MacEwen and Barling's (1988) study of a community sample of married couples indicated no effects of violence in the family of origin on current use of physical aggression against partners. Goldsmith (1990) interviewed a small sample of women who had been abused by their husbands. There was no evidence of violence in the family of origin for more than half of the husbands of the women interviewed.

In summary, witnessing or experiencing violence in the family of origin has been viewed as a critical risk factor for violence in adulthood, specifically family violence. Research suggests that, compared to children from families where there is no violence, children who experience and/or witness violence in their families are more likely to commit violent criminal acts in adolescence and are more likely to use aggression as a form of problem-solving. Compared to nonviolent offenders, violent adult offenders, including generally violent offenders, sexual offenders, and wife batterers, are more likely to have histories of family violence. However, research results linking family violence to both marital and dating violence in adulthood are mixed. These "mixed results" may be due to varying definitions of the construct of "violence in the family", types of

comparison groups used, sampling differences, and sample sizes studied (Hanson et al., 1997).

Criticisms of research on violence in the family of origin are both methodological and theoretical. In terms of methodology, the majority of studies rely on retrospective accounts of childhood, use correlational rather than longitudinal designs, and lack appropriate comparison groups (Widom, 1989). The major theoretical criticism is aimed at the assumption that violence in childhood is an all encompassing explanation for specific adult behaviour (i.e., violence toward family members). The fact that some violent offenders experience nonviolent childhoods and many people from violent families do not commit violence in adulthood does not support the intergenerational transmission hypothesis (Cappell & Heiner, 1990; Herman, 1990; Jaffe et al., 1990; Okun, 1986). Further, childhood trauma, including experiencing and witnessing violence, is frequently reported by adolescents and adults with a variety of psychological difficulties, including alcohol abuse, nonviolent criminal behaviour, depression, and personality disorders (Boney-McCoy & Finkelhor, 1995; Carlson, 1990; Henning, Leitenberg, Coffey, Turner, & Bennett, 1996; Martin & Elmer, 1992). Finally, other risk factors, such as disruptions in parenting, insecure attachment to a caregiver, and poor parenting practices, must also be considered in the development of aggressive behaviour (Jaffe et al., 1990; Loeber, 1990; Patterson et al., 1991; Snyder & Patterson, 1987). Although violence in the family of origin may increase the risk for intimate aggression, it is "neither a necessary nor sufficient condition for generating aggression in one's current family" (Cappell & Heiner, 1990, p. 136).

Summary

Familial factors play an important role in the development of aggression. Poor disciplinary practices, inadequate parental supervision, lack of positive parental involvement, and disruptions in family management have been identified as risk factors for the development of antisocial behaviour in boys (Loeber, 1990; Patterson, 1986; Patterson et al., 1991). More recently, researchers have turned to attachment theory to further explain social and emotional deficits that may place children at risk to develop conduct problems.

Attachments to primary caregivers are believed to provide children with models for future intimate relationships and provide a foundation for the development of empathy and interpersonal skills. Research on children, adolescents, and adults suggests that insecure attachment patterns are linked to antisocial behaviour. However, the link between specific attachment patterns and aggression is less clear. Dismissing attachment patterns, characterized by a hostile interpersonal style, have been linked to aggression in general; however, Dutton et al. (1994) found that fearful and preoccupied attachment styles were more common in men who abused their wives. In addition, comparisons of nonviolent, violent, and sexual offenders indicated a general pattern of insecure attachment across groups (Ward et al., 1996). Further research is needed to explore the significance of attachment styles to specific types of aggression.

Finally, modelling of violence in families has been assumed by many researchers to be a critical risk factor for the development of intimate aggression in adulthood. Although support exists for the intergenerational transmission hypothesis, methodological and theoretical criticisms suggest that experiences of violence in childhood does not necessarily lead to aggression in adulthood. Witnessing and/or experiencing family violence, in combination with other developmental experiences, increases children's risk to develop aggressive behaviour patterns.

Interpersonal Skills Deficits

According to the coercion training model, poor parenting practices fail to teach prosocial skills to children (Patterson, 1986; Patterson et al., 1991). Insecure attachment bonds may also contribute to interpersonal skills deficits, particularly social skills in close relationships (Marshall et al., 1993). A final risk factor for the development of poor social skills is aggressive familial and cultural role models that teach violence as a method of problem-solving (Jaffe et al., 1988).

Research has demonstrated that, compared to control groups, aggressive boys have more social problem-solving deficits, including less flexibility, less effective solutions, and more aggressive responses (Evans & Short, 1991; Guerra & Slaby, 1989, 1990; Lochman & Lampron, 1986; Pelletier, Vitaro, & Coutu, 1992; Rubin, Bream, & Rose-Krasnor, 1991). Further,

aggressive children have demonstrated deficits in perceptions of social cues, viewing ambiguity as threatening (Rubin et al., 1991). These problem-solving deficits influence interactions in interpersonal relationships and have been associated with peer-rejection (French & Waas, 1987; Pelletier et al., 1992).

Based on the assumption that social skills play a role in one's ability to form and maintain meaningful relationships, social skills deficits may be an important factor in sexual aggression and physical aggression in relationships (Bumby & Hansen, 1997; Holtzworth-Munroe, 1992; Marshall, 1993; Marshall & Barbaree, 1984; Stermac et al., 1990). Research with sexual offenders has identified deficits in empathic ability and ability to process interpersonal cues, particularly in interactions with women (Hanson & Scott, 1995; Hudson et al., 1993; Katz, 1990; Lipton, McDonel, & McFall, 1987). However, other research suggests that offenders *in general* exhibit many of the same cognitive and interpersonal deficits (Baxter, Motiuk, & Fortin, 1995; Becker et al., 1993; Ford & Liney, 1995; McKenzie, 1992; Oliver, Hall, & Neuhaus, 1993; Ross & Fabiano, 1983; Tweedale, 1990).

Interviews with victims of wife battering suggest that the use of violence as a means of solving problems is one of many factors in wife abuse. Holtzworth-Munroe and her colleagues have found some evidence that, compared to nonviolent/nondistressed and nonviolent/maritally distressed husbands, wife batterers have more problem-solving deficits, particularly in problematic marital situations (Anglin & Holtzworth-Munroe, 1997; Holtzworth-Munroe & Anglin, 1991; Holtzworth-Munroe & Hutchinson, 1993). However, comparisons of wife batterers to other violent offenders (violence outside of the context of relationships) and nonviolent offenders, indicated no differences with respect to measures of assertiveness (Dutton, 1988a; Morrison, Hasselt, & Bellack, 1987). Although interpersonal skills deficits may play a role in abusive behaviour in relationships, as predicted by the coercion training model, it is probable that social skills deficits are a risk factor for aggressive and antisocial behaviour in general.

Personality Characteristics

Psychopathy

"Psychopathy is a personality disorder defined by a constellation of affective, interpersonal, and behavioural characteristics, central to which are a profound lack of empathy, guilt, or remorse, and a callous disregard for the feelings, rights, and welfare of others" (Hare, Forth, & Strachan, 1992, p. 285). Psychopathic behaviour begins at an early age and psychopathic offenders are likely to have formal encounters with the criminal justice system in adolescence (Hare et al., 1992). However, as Myers et al. (1995) note, children who engage in antisocial behaviour may not necessarily be psychopathic. Supporting this, Frick, O'Brien, Wootton, and McBurnett (1994) identified two factors related to psychopathy in children: (a) conduct problems, characterized by antisocial behaviour; and (b) a grandiose sense of self-worth and failure to take responsibility for behaviour.

Psychopathy has been linked to criminal behaviour in general (Blackburn & Coid, 1998; Hare et al., 1992; Hart & Hare, 1997; Shine & Hobson, 1997) and violent criminal behaviour (Salekin, Rogers, & Sewell, 1996; Serin & Amos, 1995; Weiler & Widom, 1996). Empirical research also suggests that psychopathic personality style is an important contributor to criminal recidivism (Bonta, Law, & Hanson, 1998; Harris, Rice, & Cormier, 1991; Hemphill & Hare, 1995; Hemphill, Hare, & Wong, 1998; Serin, 1991, 1996; Serin, Peters, & Barbaree, 1990; Wong, 1995). Although researchers have explored the role of psychopathy in sexual aggression (Brown & Forth, 1997; Furr, 1993; Hersh & Gray-Little, 1998; Kosson, Kelly, & White, 1997; Looman, Abracen, Maillet, & DiFazio, 1998; Serin, Malcolm, Khanna, & Barbaree, 1994), research linking psychopathy to abusive behaviour in relationships is sparse. Holtzworth-Munroe and Stuart (1994) hypothesize that "generally violent" men (men who are violent both within and outside of the context of relationships) are more likely to have characteristics consistent with psychopathy including impulsivity and narcissism. Saunders (1995) also argues that severe assault by wife batterers may be linked to a lack of remorse. Some research suggests that wife batterers tend to

score higher than nonviolent married men on personality scales measuring antisocial personality (Barnett & Hamberger, 1992; Bersani, Chen, Pendleton, & Denton, 1992; Flournoy & Wilson, 1991; Hamberger & Hastings, 1991; Hastings & Hamberger, 1988); however, other research has not supported this finding (Hamberger, Lohr, Bonge, & Tolin, 1996). Although Jalbert (1994) found no overall differences among MMPI-2 personality profiles of offenders who committed domestic violence, offenders who committed domestic violence and violence outside of relationships, and offenders who committed violence outside of relationships, her study revealed that men in the domestic violence group were also more likely to minimize psychopathology, calling into question the validity of responses to personality inventories for this group of offenders.

In terms of interpersonal deficits, psychopathy is characterized by superficiality, avoidance of intimacy, lack of empathy, and egocentricity (Hare et al., 1992; Schalling, 1978; Myers et al., 1995). According to Wolff (1990), empathy and the ability to establish intimate relationships are assumed to develop in the context of the attachment relationship with a primary caregiver. A study conducted by Koestner, Franz, and Weinberger (1990) supports this assumption in that parental, particularly paternal, involvement with children was associated with their ability to be empathic in adulthood. Similar to personality characteristics that define psychopathy, Bartholomew's dismissing attachment pattern is characterized by a cold, competitive interpersonal style, denial of problems, little awareness of their impact on others, and an extremely positive view of self (Bartholomew & Horowitz, 1991; Kobak & Sceery, 1988; Pianta et al., 1996). Further, the emotional deprivation, neglect, and abuse that is associated with the development of insecure attachment patterns in childhood also characterizes the family background of psychopathic individuals (Koivisto & Haapasalo, 1996; Walsh. Beyer, & Petee, 1987; Weiler & Widom, 1996).

The Psychopathy Checklist-Revised (PCL-R; Hare, 1991) is the measure of psychopathy most commonly used in offender populations. Based on research with the original Psychopathy Checklist (PCL) and the PCL-R (Cooke & Michie, 1997; Haapasalo & Pulkkinen, 1992; Hare et

al., 1990; Harpur, Hare, & Hakstian, 1989; Hemphill & Hare, 1995) two factors have been identified: an interpersonal/affective component (Factor 1) and an antisocial/behavioural component (Factor 2). Although research suggests that the interpersonal/affective component contributes to criminal recidivism and violent behaviour (Hemphill & Hare, 1995; Serin, 1996), it is the antisocial/behavioural component of that seems to be the most significant contributor (Hemphill et al., 1998; Serin, 1996; Shine & Hobson, 1997). In fact, some researchers have argued that Factor 2 of the PCL-R is a measure of criminality and, in general, the PCL-R does not adequately measure the interpersonal characteristics that are critical to the conceptualization of psychopathy (Hill, 1999; Shine & Hobson, 1997).

More recently, researchers have explored alternative measures of psychopathy in attempts to gain a clearer understanding of the personality features that characterize psychopathy both within forensic settings and in the general community (e.g., Hill, 1999; Kosson, Steuerwald, Forth, & Kirkhart, 1997). Although Hill (1999) did not find a significant correlation between his self-report measure of psychopathic personality characteristics and the PCL-R, the self-report measure was positively correlated with measures of socialization, narcissism, and dominance and was negatively correlated with measures of nurturance and conscientiousness. Further, the correlation between the self-report measure of psychopathy and the personality factor of the PCL-R approached significance in a small sample of offenders (Hill, 1999). Hill argues that measures of psychopathy that focus on personality characteristics are not expected to correlate with the PCL-R as they do not focus on criminality/antisocial behaviour. Hill (1999) also argues that the focus on personality features rather than antisocial behaviour also explains the lack of differentiation between offenders and general community participants on his interpersonal measure of psychopathy.

In summary, research has linked psychopathy to violent behaviour and criminal recidivism. However, research examining the impact of psychopathic personality style on abusive behaviour in relationships is limited. Further, although the development of psychopathy has been associated

with neglect and abuse in childhood, the role of attachment in this developmental process has not been systematically examined. Finally, the PCL-R, a common measure of psychopathy, seems to adequately tap into antisocial/behavioural characteristics of psychopathy, but its ability to measure personality characteristics has been called into question. Measurement instruments that focus specifically on the interpersonal aspects of psychopathy may provide further understanding of this personality constellation, both within and outside of the offender population.

Abusive Personality Characteristics

Initially, research on wife battering explored a wide variety of personality characteristics in an attempt to gain a clear understanding of this type of violence. However, sampling differences, varying comparison groups, and use of different personality measures has yielded mixed results in this research area and has left a vague picture of the wife batterer as an individual who may or may not possess a wide variety of traits (Dutton, 1988b). Further, lack of appropriate control groups made it difficult to identify personality characteristics that distinguished wife batterers from other violent and nonviolent men (Dutton, 1988b; Hotaling & Sugarman, 1986).

Research has suggested that, compared to nonviolent married men, wife batterers are more depressed, anxious, and impulsive, and are more dependent in relationships (Barnett & Hamberger, 1992; Bersani et al., 1992; Flournoy & Wilson, 1991; Hamberger & Hastings, 1991; Hanson et al., 1997). In 1993, Dutton and Starzomski found that characteristics of borderline personality disorder accounted for a significant proportion of variance (11%) in wives' reports of abusive behaviour by their male partners. According to Dutton and Starzomski (1993), this "borderline personality organization" was characterized by "intense, unstable, interpersonal relationships, an unstable sense of self, intense and phasic anger, and impulsivity" (p. 327). It was hypothesized that this personality style originates in early insecure attachment patterns (Dutton, 1994a, 1994b, 1995b; Dutton & Starzomski, 1993). Further, typologies proposed by Saunders (1992) and Holtzworth-Munroe and Stuart (1994) assert that some wife batterers are characterized by psychological distress, specifically borderline and emotionally volatile symptoms.

Research examining personality characteristics relevant to borderline personality organization have provided mixed results in relation to wife battering. Interviews with battered women have identified traits of dominance, anger, low self-esteem, jealousy, and unpredictability as common characteristics of their abusive partners (Browne, 1987; Goldsmith, 1990; Russell, 1990). Dutton and Starzomski (1993) found that men's reports of high levels of anger accounted for a significant amount of variance in female partners' reports of abuse tactics involving domination and isolation (39%) and emotional abuse (30%). Hostility toward women also differentiated wife batterers from nonviolent men in several studies (Dewhurst, Moore, & Alfano, 1992; Hanson et al., 1997; O'Leary et al., 1994). Other researchers have found no differences between wife batterers and comparison groups (men who are violent outside of the context of relationships, nonviolent men) with respect to measures of anger and hostility (Dutton, 1988a; Hastings & Hamberger, 1988; Maiuro, Cahn, Vitaliano, Wagner, & Zegree, 1988). Explorations of the association between wife battering and low self-esteem have also provided mixed results (Johnston, 1988; Rouse, 1988; Stith & Farley, 1993).

In summary, research is inconclusive regarding personality characteristics of maritally violent men. If these traits are able to discriminate wife batterers from comparison groups, the causal pathway must still be explored. It may be that particular personality characteristics such as anger and low self-esteem are consequences of public acknowledgement of battering (i.e., getting caught), having to participate in treatment, and fear that a female partner may leave rather than being causal factors in wife battering (Dutton, 1988b). A final criticism of research exploring personality characteristics of wife batterers is the fact that many of personality traits have been studied univariately. It may be that a constellation of variables (such as the "borderline personality organization") that best discriminates wife batterers from comparison groups. Recent research suggests that the borderline personality style may differentiate wife batterers from comparison groups and is associated with reports of physical abuse in relationships (Dutton, 1995c). Further research examining differences between wife batterers and other violent men in terms of this

abusive personality style may provide further insight into aggressive behaviour in relationships.

Male Peer Influences

In addition to family, peers are a major source of socialization. Peer relationships are primarily same-sex from a very young age (Hartup, 1989). Not only are boys most likely to form friendships with boys, but male peer groups are likely to be segregated from female peer groups (Maccoby & Jacklin, 1987). These same-sex groups reinforce and perpetuate learned sex-role differences and, given that they are segregated, may serve to depersonalize the other sex group (Farr, 1988; Maccoby & Jacklin, 1987). When children reach adolescence, they tend to spend more time with peer groups. At the same time, sexual changes and formation of opposite-sex relationships become increasingly important. Peers play an influential role in these developmental changes (Bolton & MacEachron, 1988).

According to Patterson and his colleagues, children who behave aggressively from a young age and lack prosocial skills (i.e., "early starters") will have difficulty being accepted by prosocial peer groups and, subsequently, are more likely to become involved in deviant peer groups (Patterson et al., 1989, 1991). Given that normal peer group bonds are an important contributor to social and emotional development (Hartup, 1989; Youniss, 1980), children who are rejected by their peers may have more difficulty developing intimate relationships in adulthood (Patterson, 1986). "Late starters" (children who initiate antisocial behaviour at a later age) may also become involved in deviant peer groups due to disruptions in family management (Patterson et al., 1991). Based on longitudinal research, rejection by prosocial peers and subsequent involvement with deviant peer groups are consequences rather than causes of aggressive behaviour and social skills deficits (Patterson et al., 1991).

Although association with prosocial peers may serve as a deterrent for repeated offending (Fraser & Norman, 1988), rejection from the prosocial peer group and subsequent involvement in deviant peer groups contributes to the further development of antisocial and aggressive behaviour through modelling, reinforcement, and opportunities to engage in antisocial behaviour (Patterson

& Dishion, 1985; Patterson et al., 1984). In fact, bonding with delinquent peers may be a stronger predictor of delinquency than familial variables (Levine & Singer, 1988). Delinquent youth tend to report supportive peer relationships, but it is in the company of this "supportive" peer group that most of their offences are committed (Hagell & Newburn, 1996). Further, delinquent youths may describe peer relationships as positive, but also report feeling lonely, isolated, and unable to discuss problems with peers (Pabon, Rodriguez, & Gurin, 1992).

According to DeKeseredy (1988a; 1988b), male peer support is both a direct and indirect contributor to abuse of women. Male peers may legitimize values supportive of abuse and provide rationalizations for abusive behaviour. In addition, because relationships are associated with stress, peers may encourage the use of abusive behaviours to deal with problems and may alleviate stress through validation of abusive tactics (DeKeseredy, 1988a; 1988b). DeKeseredy's (1988a) review of relevant research indicated that "men heavily integrated into male social networks engage in woman abuse" (p. 7). This may include work environments and leisure activities (e.g., sports, men's clubs) (Farr, 1988; Messner, 1992).

In his research, DeKeseredy (1988b) asked undergraduate males about abusive behaviour in relationships, male peer networks, and stressful life events. The results indicated associations between woman abuse and stress and between peer advice on abuse and abusive behaviour. Participation in male-dominated social activities was significantly related to abusive behaviour by men who were experiencing high levels of stress. However, this relationship did not hold for men with lower levels of stress (DeKeseredy, 1988b).

In their developmental model of wife battering, Holtzworth-Munroe and Stuart (1994) consider association with delinquent peers to be an important risk factor, particularly for men who are violent both within and outside of the context of relationships. However, research examining the links between peer relationships and abusive behaviour towards female partners is sparse. Studies of wife batterers' associations with male friends in adulthood have provided tentative support for the link between wife pattering and male bonds. Dobash and Dobash (1979) found that

men who batter spent at least one night per week socializing with their male peers. Bowker (1983) found that social contact with male peers was positively correlated with frequency and severity of wife beating.

As part of their sexual development, it is assumed that young men are pressured by peers to reach sexual goals (Heilbrun & Loftus, 1986). Research on college men's early peer group socialization indicated a tendency for involvement in "erotic-oriented" peer groups, where sexual conquest was seen as a measure of self-worth (Kanin, 1984). Ageton (1983) surveyed adolescent sexual offenders and found that nearly half had told their male peers about their sexually aggressive behaviour and that most peers supported this behaviour. Although a review by Davis and Leitenberg (1987) indicated that gang rape is rare compared to individual sexual assaults, rape in groups was more common among male adolescents than among adult men. Hanson and Scott (1996) also found that incarcerated child molesters were more likely than other offenders to have male peers who were also child molesters.

Studies of college students have linked gang rape to college men's participation in fraternities and athletics (Ehrhart & Sandler, 1985 cited in Koss & Gaines, 1993; Jackson, 1991; Sanday, 1981, 1990; Martin & Hummer, 1995). Further, Garrett-Gooding and Senter (1987) found that, in an anonymous survey, men who belonged to fraternities were more likely to report rape (35%) than were men affiliated with student government (9%) or men who were not affiliated with campus organizations (11%). Although Koss and Gaines (1993) found that participation in athletics accounted for a significant (albeit small) proportion of the variance in college students' reports of sexual aggression, fraternity membership was not a significant predictor.

In sum, peer relationships are an important contributor to children's social and emotional development. Rejection by prosocial peer groups is a risk factor for boys as it reduces the opportunity for involvement in socially acceptable relationships and activities. In addition, boys who are rejected by normal peer groups are more likely to be involved in deviant peer groups that train and maintain antisocial behaviour. However, even socially acceptable male peer bonding may

have negative consequences for young men in terms of supporting sexist attitudes, sexual exploits, and domination of female partners.

The role of male peers in violence in relationships is far from clear. Research to date is sparse and methodological problems are prevalent. Many studies lack comparison groups, are based on self-reports of aggressive behaviour, and focus on the quantity of interaction with male peers, rather than the type of interaction. Further research examining the contribution of male bonding to intimate violence is needed.

Cultural Factors

Myths about the family as a "safe haven" and the idea that domestic issues are private and not to be questioned have been challenged by feminist theorists (Dobash & Dobash, 1979; Finkelhor & Yllö, 1985; Russell, 1990). Feminists have also called into question society's construction of "stranger violence" and have worked to change to laws and social structures that they feel have supported physical and sexual aggression by husbands against wives.[5] Although progressive changes in values and beliefs related to the roles of men and women are ongoing, traditional values are still viewed as important contributors to violence against women (Adams & McCormick, 1982; Bograd, 1988; Burt, 1980; Dobash & Dobash, 1979; Holtzworth-Munroe & Stuart, 1994; Malamuth, 1984; Scott & Tetreault, 1987; Stermac, et al., 1990).

Attitudes suggesting that men should be dominant (including sexually dominant) and that women should be passive in intimate relationships may be particularly relevant to violence in relationships. Cultural attitudes about rape and sexuality are reinforced by pornography and general media portrayal of women as sexual objects, including portrayals of women being "turned on" to rape (Brownmiller, 1975; Herman, 1990; Linz, Wilson, & Donnerstein, 1992; Malamuth, 1984). The use of pornographic material has been linked to sexual aggression in general (Malamuth, 1984; Marshall & Barbaree, 1990; Murrin & Laws, 1990) and, more specifically, to

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[5]In 1980, only three states in the United States of America designated rape in marriage as a crime. By 1989, rape in marriage was against the law in 42 states (Russell, 1990).

rape and battering in intimate relationships (Russell, 1990; Sommers & Check, 1987).

In addition to media and external influences on children, family members have a direct influence on the formation of attitudes through modelling and expression of beliefs within the home. In North American families, women are usually the primary caregivers (Schechter, 1982). Traditionally, fathers have been unavailable to children, particularly in terms of intimate attachments. This division within many families exemplifies a model of traditional gender roles, i.e., mother as nurturing caregiver and father as detached breadwinner. "In many families, men are socialized to be tough, cool, aggressive, and in control. These attributes reflect the dominant position they are supposed to assume in relationship to women and in the work world" (Schechter, 1982, p. 230). Further, because the establishment of intimate bonds with children has traditionally been the mother's role, boys have had few models of male intimacy. Different standards for sons and daughters within families on issues of sexuality, dating, and marriage may also reinforce traditional sex role attitudes. Boys are often encouraged to be competitive and aggressive, while girls are expected to be passive and nurturing. These "double standards" within families teach children that men and women have different positions and power in society (Miedzian, 1991).

Attitudinal research with sex offenders suggests that commonly held attitudes include hostility towards women, support for rape myths, and adherence to traditional sex roles (Malamuth, 1986; Scott & Tetreault, 1987). However, comparisons of sex offenders to other types of offenders have revealed mixed results on measures of such attitudes (Epps, Hawarth, & Swaffer, 1993; Hall, 1990; Stermac et al., 1990), suggesting that these attitudes may be held by incarcerated men in general.

Research on wife battering has focused on attitudes related to sex roles, power in relationships, hostility (specifically hostility towards women), and violence. Studies of the relationship between battering and acceptance of traditional sex roles has yielded inconsistent results. A study of a large community sample of wife batterers and nonviolent controls revealed that men who were abusive in relationships were more likely to accept attitudes tolerant of wife

assault (Hanson et al., 1997). Crossman, Stith, and Bender (1990) found a significant correlation between sex role egalitarianism and the use of violence by men toward their wives. Participants in this study were men in treatment for anger or substance abuse problems. Similarly, with samples of men in treatment for battering or alcohol abuse, Stith and Farley (1993) found that acceptance of traditional sex roles and approval of marital violence predicted use of severe violence by men toward their wives. Based on interviews with a random sample of women, Smith (1990) found that patriarchal belief systems and approval of violence were independent predictors of husbands' violence toward wives.

In contrast, Dewhurst et al. (1992) reported no differences among groups of batterers, sex offenders, and nonviolent men with respect to measures of acceptance of traditional sex roles and adversarial sexual beliefs. Comparisons of maritally violent men with three control groups ("happily married" men, men in marital conflict, and men who were aggressive outside of relationships) also revealed no group differences in terms of sex role stereotyping and acceptance of adversarial sexual beliefs (Dutton, 1988a). In a random sample of men from the community, Rouse (1988) found no significant correlation between adherence to particular beliefs about roles in relationships and self-reported use of violence against wives.

Results of attitudinal research on dating violence are also mixed (Sugarman & Hotaling, 1989a, 1991). Acceptance of attitudes supportive of violence in relationships differentiated young men who engaged in dating violence from other young men (O'Keefe, 1997; Sugarman & Hotaling, 1989a, 1991). However, literature reviews suggest inconsistent findings related to the association between acceptance of traditional sex roles and dating violence (Sugarman & Hotaling, 1989a, 1991).

In summary, the role of specific attitudes in abusive behaviour in relationships is far from clear. Methodological differences across studies make direct comparisons difficult. Sampling differences, sample sizes, and the use of different measures of attitudes may account for some of the inconsistent findings. Further, given that measures of attitudes are primarily based on the

self-reports of men being studied, the validity of these measures is questionable (Dutton, 1988b). In addition to difficulties with impression management, most attitudinal research has taken a univariate approach to this issue. The focus has been on predicting violence from attitudinal variables or discriminating between groups of men based on a particular type of attitude. However, research suggests that attitudes alone do not sufficiently account for intimate violence. It may be more useful to consider particular attitudes (e.g., hostility towards women, acceptance of traditional sex role stereotypes, beliefs that violence is an acceptable interpersonal style) as risk factors, increasing individual potential to use aggression in relationships. Further, traditional attitudes provide rationalizations supporting aggression in relationships and the role of attitudes in maintaining this behaviour should not be ignored.

Summary

Violence in relationships is a serious social issue in our society. However, the developmental path that leads to this specific type of aggressive behaviour is unclear. The influence of familial factors on the development of general aggressive behaviour has been widely studied (Patterson, 1986; Patterson et al., 1991; Patterson & Stouthamer-Loeber, 1984). Research based on the coercion training model has identified risk factors for the development of antisocial and aggressive behaviour in boys, including parenting practices, children's temperaments, lack of prosocial skills, and involvement in deviant peer groups. Parenting practices that were significant contributors to antisocial behaviour in boys included harsh discipline, parental monitoring, and lack of positive feedback from parents (Loeber, 1990; Patterson et al., 1991; Patterson & Stouthamer-Loeber, 1984).

Although the coercion training model has provided a framework for examining developmental processes in aggression, the inclusion of attachment bonds with parents may add to our ability to explain aggression. Attachment bonds are thought to provide a role model for interactions in intimate relationships and a foundation for intimacy, social development, self-esteem, and empathy (Dutton, 1995a; Marshall et al., 1993). Children who are insecurely attached to parents are at risk

for psychopathology, including aggressive and antisocial tendencies (Allen et al., 1996; Cohn et al., 1992; Kobak & Sceery, 1988; Rosenstein & Horowitz, 1996). However, the link between specific attachment patterns and aggression is unclear. Dismissing attachment patterns have been associated with aggression in both adolescents and adults (Allen et al., 1996; Cohn et al., 1992). In contrast, research on wife batterers indicates that fearful and preoccupied attachment styles may be related to this specific type of aggression (Dutton, 1995b; Holtzworth et al., 1997).

Witnessing and/or experiencing violence in the family of origin has also been viewed as a critical risk factor for violence in relationships (Cappell & Heiner, 1990; Carter et al., 1988; Jaffe et al., 1990; MacEwen, 1994). Children exposed to violence in their childhoods may come to believe that violence is an acceptable method of solving family conflict. There is some empirical support for the association between violence in the family of origin and violence in general (Widom, 1989; Carlson, 1990; Jaffe et al., 1988; Jalbert, 1994), but specific links to violence in relationships are less clear (Kalmuss, 1984; McNeal & Amato, 1998; Sugarman & Hotaling, 1989a, 1989b).

Violent family homes, poor parenting practices, and insecure attachments affect children's potential to develop interpersonal skills. Social skills deficits influence the quality and type of peer relationships and may be an important factor in rejection from prosocial peer groups and subsequent involvement in antisocial peer groups. Further, interpersonal skills are critical to interactions in close relationships and deficits may lead to difficulties in communication and conflict resolution, as well as misinterpretation of social cues (Marshall et al., 1993). Finally, modelling of violence in the family may teach children that violence is an acceptable strategy for interpersonal problem-solving (Jaffe et al., 1988). Although research supports the association between social skills deficits and specific types of aggression (i.e., sexual aggression and aggression in relationships) (Anglin & Holtzworth-Munroe, 1997; Bumby & Hansen, 1997; Holtzworth-Munroe & Anglin, 1991; Marshall & Barbaree, 1984; Stermac et al., 1990), social skills deficits seem to be a risk factor for antisocial and aggressive behaviour in general (Baxter et

al., 1995; Becker et al., 1993; Ford & Liney, 1995; Oliver et al., 1993; Tweedale, 1990).

Personality styles may also contribute to aggressive behaviour. Psychopathic personality style, characterized by lack of empathy, egocentricity, and superficial relationships, has not been a focus of research on relationship violence. Further, the association between psychopathy and specific attachment styles has not been explored. Given that the cold, competitive, and self-centered style of the dismissing attachment style parallels many of the characteristics of psychopathy, further exploration of the association between psychopathy and attachment patterns may prove interesting.

Based on research with wife batterers, a specific abusive personality style, characteristic of men who are violent in relationships, has been proposed. Characteristics of this "borderline personality organization" include instability, intense relationships, anger, impulsivity, and unstable sense of self (Dutton & Starzomski, 1993). This personality constellation is thought to have its origins in insecure attachment bonds in childhood. Although research has examined individual characteristics in wife batterers (Browne, 1987; Dewhurst et al., 1992; Goldsmith, 1990; Maiuro et al., 1988), the abusive personality style has been a more recent focus of research. The abusive personality style has shown discriminatory power in differentiating wife batterers from comparison groups and is associated with reports of physical abuse in relationships (Dutton, 1994b).

In addition to family, peer and cultural factors are important to the process of socialization of boys. Involvement in male deviant peer groups provides training opportunities and reinforcement for antisocial behaviour (Patterson et al., 1989, 1991). Interactions with male peers may also reinforce traditional values about relationship roles and provide information and advice about coping with conflict in relationships (DeKeseredy, 1988a, 1988b). Depending on the peer group, this advice could serve as an encouragement for the use of violent tactics in relationships. Cultural support for the use of violence and the maintenance of traditional roles may also contribute to violence by men in relationships.

Longitudinal research with boys suggests that the developmental paths to aggressive and

antisocial behaviour are the same (Capaldi & Patterson, 1996; Farrington, 1991). However, development research has not specifically examined aggression in relationships. Thus, it is unclear whether the developmental path to violence in relationships is different from the path to other types of aggressive behaviour.

Purpose of the Study

Primary Objectives

There were three primary objectives to this study:

1. The first objective was to examine factors that may discriminate among types of antisocial behaviour in men. Reviews of existing literature on violence in relationships indicate a lack of appropriate comparison groups, use of univariate rather than multivariate designs, and a reliance on self-report to define aggressive behaviour. Given this, the primary purpose of the present research was to examine multiple factors that may discriminate men who are violent in relationships (based on both criminal records and self-report) from other groups of offenders. More specifically, the present research focused on factors that may discriminate nonoffenders from offenders, nonviolent offenders from violent offenders, and offenders who are violent outside of relationships from offenders who are violent within dating or marital relationships.

2. Although the research literature has linked aggressive and antisocial behaviour in boys to insecure attachment bonds, the relationship between early attachment and psychopathic personality style has received relatively little attention. Given this, the second objective of the present research was to explore the relationship between attachment patterns (bonds with parents and adult attachment patterns) and psychopathic personality style.

3. The third objective of the present research was to explore, from a multivariate perspective, a risk model for self-reported aggression in intimate relationships in a large sample of adult men. Risk factors included familial variables, problem-solving, attachment style, male bonding, sexist attitudes, and personality style.

Secondary Objectives

In addition to the primary objectives of the present research, there were two secondary objectives:

1. Given the neglect of the role of fathers in research on attachment and aggression, the present research included participants' perspectives of relationships with both their maternal and paternal caregivers in order to explore the relative impact of both types of relationships on aggressive behaviour.

2. Sexual aggression involving higher levels of violence and/or a victim not well known to the offender may lead to higher rates of victim-reporting and convictions than sexual aggression in the context of a relationship. As a result, incarcerated sexual offenders may be a unique group in terms of patterns of offending (i.e., outside the context of an intimate relationship) and level of violence. For this reason, convicted sexual offenders were not included in the offender sample in the current study. However, offenders convicted for other types of crime may also commit sexually aggressive acts in the context of relationships. The present research examined the prevalence of self-reported sexual aggression in a sample of men who have not been convicted of sexual assault.

Specific Hypotheses

1. It was hypothesized that nonoffenders and offenders would differ in terms of experiences of violence in childhood, parental discipline styles, parental bonding, attachment styles, interpersonal problem-solving, and sexist attitudes. Compared to the nonoffender sample, it was expected that offenders would report more experiences of abuse/witnessing abuse in childhood, harsher parental discipline, less parental supervision and caring, more parental rejection, and more controlling behaviour by parents. Offenders would also be more likely to have insecure attachment styles, interpersonal problem-solving difficulties, and adherence to sexist attitudes.

2. It was hypothesized that nonviolent offenders and violent offenders would differ with respect to experiences of violence in childhood, parental discipline styles, parental monitoring, parental bonding, attachment styles, interpersonal problem-solving, and personality styles. More

specifically, compared to nonviolent offenders, it was expected that violent offenders would report more experiences of abuse/witnessing abuse in childhood, harsher parental discipline, less parental supervision and caring, more parental rejection, and more controlling behaviour by parents. Violent offenders were also expected to have more insecure attachment styles, problem-solving deficits, and abusive and psychopathic personality characteristics.

3. It was hypothesized that offenders who are violent outside of the context of relationships (external violence), offenders who are violent within relationships (domestic violence), and offenders who are violent both within and outside of relationships (mixed violence) would differ in terms of family background variables, attachment styles, interpersonal problem-solving skills, personality styles, influences from male peers, and sexist attitudes. More specifically, compared to the external violence group, it was expected that the domestic and mixed violence groups would report more experiences of violence in childhood, would have more interpersonal problem-solving deficits (particularly in interactions with women), would have more support for abusive behaviour from male peers, and would be more accepting of sexist attitudes. Further, the external violence and mixed violence groups were expected to have primarily dismissing styles of attachment whereas the domestic violence group was expected to have either a fearful or preoccupied attachment style. Finally, compared to the external violence group, the domestic violence group and mixed violence group were expected to score higher on a measure of abusive personality characteristics. Compared to the domestic violence group, the mixed violence group was expected to score higher on a measure of psychopathic personality characteristics.

4. It was hypothesized that parental bonding and adult attachment style would significantly predict psychopathy. More specifically, lack of parental nurturance, controlling parenting styles, and the dismissing attachment style would be the best predictors of psychopathic personality.

5. It was hypothesized that the linear combination of risk factors (experiences of violence in childhood, parental discipline and monitoring, relationship with father and mother, interpersonal problem-solving, attachment style, negative male peer influences, sexist attitudes, and personality

style) would account for a significant proportion of variance in self-reported abusive behaviour in relationships.

6. It was hypothesized that men who self-reported sexual aggression would differ from non-reporters with respect to attachment style, personality style, male peer influences, and sexist attitudes. Compared to non-reporters, self-reporters would have more insecure attachment styles, would receive more male peer support for abusive behaviour, and would be more likely to endorse sexist attitudes.

Method

Participants

Offender Sample

The offender sample consisted of 177 adult males incarcerated in the minimum security unit of a regional detention centre and in the assessment and treatment units of a provincial medium security correctional facility. Participants were approached on their units by the primary researcher and were asked to volunteer for the study. Participants on remand without a criminal history were not included in the study. Four additional volunteers had histories of sexually assaultive behaviour (one against children and three against adult women) and were therefore excluded from data analyses.

Of the 177 offenders used in the study, 90 (51%) were incarcerated in the minimum security unit of the regional detention centre and 87 (49%) were incarcerated in the provincial medium security correctional facility. Of the 90 participants incarcerated in the regional detention centre, 10 were on remand at the time of their participation in the study (5 in the no violence group, 2 in the external violence group, and 3 in the mixed violence group). For these 10 participants, the remand charges were consistent with their previous criminal histories and did not alter their group assignment. Of the 87 offenders in the medium security facility, 61 (70%) came from the treatment unit, 23 (26%) came from the assessment unit, and 3 (4%) came from the correctional unit. The three volunteers from the correctional unit of the provincial medium security facility were recruited from the assessment and treatment units, but were transferred to the correctional unit prior to completing the study.

Offenders ranged in age from 19 to 54 years (M = 30.37 years, SD = 8.43). Education level ranged from 6 to 18 years (M = 10.81 years, SD = 1.92). Based on criminal records, offenders committed an average of 8.64 property offences (SD = 8.83), 1.86 substance-related offences (SD = 2.37), and 3.25 violations of court orders and/or release conditions (SD = 3.69). The average sentence for the most recent offence was 9.76 months (SD = 7.42) and the average aggregate

sentence in adulthood was 34.85 months (SD = 33.71). The majority of the offender sample reported a history of drug abuse (76%), alcohol abuse (75%), and arrests in their youth (79%).

To investigate hypotheses related to group differences, the offender sample was divided into groups based on criminal histories and self-reports of violence in relationships. Self-reported violence in relationships was based on the 11 physical abuse items of the Abusive Behaviour Inventory (see Appendix K). The average score on this subscale for offenders with convictions of domestic violence (n = 70) was 14.69 (SD = 2.99). Based on this, offenders with no convictions of domestic violence and scores greater than 15 on the physical abuse subscale were assigned to either the domestic or mixed violence group. Nine participants with no known violent criminal offences were assigned to the domestic violence group based on their self-reports of physical abuse in relationships. Seven participants with criminal histories outside of the context of relationships and no known criminal histories of violence in relationships were assigned to the mixed violence group based on their self-reports of physical abuse in relationships.

After consideration of both criminal history and self-report, offenders were assigned to one of four groups: 1) men in the no violence group (n = 45) had no violent offences on their criminal record and reported no history of violence; 2) men in the external violence group (n = 46) had histories of violent offences outside the context of relationships and no histories or self-reports of violence within the context of relationships; 3) men in the domestic violence group (n = 40) had criminal histories and/or self-reports of violence in relationships, but no histories of other violent offences; and 4) men in the mixed violence group (n = 46) had criminal histories and/or self-reports of violence outside of the context of relationships and within the context of relationships.

Nonoffender (Student) Sample

Initially, attempts were made to access a sample of unemployed men from the community as a control group. Poster advertisements (see Appendix A) were placed in local employment centres and in local businesses (e.g., dry-cleaners, book stores, grocery stores) in downtown Ottawa. Within a four month time frame, only two calls were received from men in the community and

neither of these men showed up for appointments to complete the questionnaires. Given the lack of response to community advertisements, student participants were recruited through the local community college.

The nonoffender sample consisted of 58 adult males enrolled in a local community college. Participants were recruited through an electronic mail advertisement sent to all students in the college. Interested participants contacted the primary researcher by telephone or electronic mail for more information about the project and to determine if they met the criteria of the research (i.e., heterosexual men with no criminal history). Individual meeting times were arranged for men who met these criteria to complete the study. Two additional volunteers were excluded from the student sample due to self-reports of physically abusive behaviour in relationships (one student) and sexually assaultive behaviour (one student). The age range of the students used in this study (n = 58) was 19 to 58 years (M = 26.40 years, SD =7.07). Education level ranged from 12 to 17 years (M = 14.34 years, SD = 1.22).

Measures

A questionnaire package containing measures of social desirability, family relationships, attachment styles, sexist attitudes, male peer influences, psychopathic personality style, propensity for abusiveness, abusive behaviour in relationships, and sexual aggression was administered to each participant. Demographic information, reports of violence in the family of origin, perceptions of parental discipline and monitoring practices, self-report of criminal history, employment history, and relationship history were obtained from a structured interview. For the offender sample, background and criminal history information was also obtained from participants' institutional files. Each participant was also asked to complete a problem-solving measure. Responses to the problems were audiotaped and then transcribed for scoring.

Demographic Information

Demographic information was obtained from a short interview and, for the offender sample, from institutional files. Demographic information included age, birth country, first language,

education level, family background, employment history, and relationship history (see Appendix B).

Social Desirability

Social desirability response tendencies were measured using the Marlowe-Crowne Social Desirability Scale-Form C (Reynolds, 1982). This short form of the Social Desirability Scale consists of 13 items with a true-false response format. Higher scores reflect socially desirable response tendencies. Internal consistency for Form C with Reynold's (1982) sample was .76. Form C was also correlated with the original Marlowe-Crowne and with another measure of social desirability (Reynolds, 1982). In the present study, Cronbach's alpha was .71, comparable to Reynolds (1982).

Violence in the Family of Origin

Childhood experiences of abuse by parents and witnessing violence between parents were measured with five interview questions (see Appendix B). Respondents rated the frequency of violence on a 5-point scale ranging from *never* (1) to *very frequently* (5). Malamuth, Linz, Heavey, Barnes, and Acker (1995) used these questions to measure experiences of family violence. They found that this short scale correlated with a 17-item scale measuring family violence ($r = .63$). In the current study, the internal consistency of this short family violence scale was good (Cronbach's alpha = .71).

Parenting Practices

Harsh parental discipline (i.e., physically abusive behaviour by parents) was measured using the Harsh Discipline Scale developed by Simons, Whitbeck, Conger, and Chyi-In (1991). This scale contains five interview questions (see Appendix B), asking respondents to rate their parents' discipline practices on a 5-point scale ranging from *never* (1) to *always* (5). Higher scores on this scale represent harsher parental discipline. In previous research, internal consistencies for an adult sample ranged from .70 to .78 for ratings of mothers and fathers (Simons et al., 1991). Consistent with this, Cronbach's alpha for the Harsh Discipline Scale in the present study was .83.

Parental monitoring was measured based on six interview items (see Appendix B) suggested by Dishion, Patterson, Stoolmiller, and Skinner (1991). Participants were asked to provide ratings based on their memories of parental monitoring practices. For the present research, respondents rated the frequency of parental monitoring on a 3-point scale ranging from *never* (1) to *always* (3). Lower scores on this scale represent less parental monitoring. Although Dishion et al. (1991) report low internal consistencies for this scale (.49 and .59), test-retest reliability for one sample was .68, suggesting fairly stable measurement over time. The internal consistency of this scale in the present study was good (Cronbach's alpha = .80).

Relationship with Parents

Perceptions of relationships with paternal and maternal caregivers were measured using the Parental Bonding Instrument (PBI; Parker, Tupling, & Brown, 1979). The PBI (see Appendix C) is a self-report questionnaire consisting of 25 items measuring perceptions of parental care and overprotection. Respondents answer each item on a 4-point scale ranging from *very unlike* (0) to *very like* (3), once for their father figure and once for their mother figure. Higher scores on the care subscale indicate more parental caring, affection, and warmth, with lower scores indicative of parental rejection and coldness. Higher scores on the overprotection subscale represent more parental intrusion and control and lower scores on this subscale represent parental encouragement of independence and autonomy (Parker et al., 1979).

The PBI has been used extensively with adult samples from community (Hingst, Regan, & Sexton, 1985; MacKinnon, Henderson, Scott, & Duncan-Jones, 1989), university (Baker & Helmes, 1983; Wilhelm & Parker, 1990), and hospital populations (Kazarian, Baker, & Helmes, 1987; Parker, 1981, 1983; Truant, 1994; Truant, Herscovitch, & Lohrenz, 1987). The PBI has also been used as a measure of parental perception in research focusing on specific psychiatric diagnoses including substance abuse (Joyce et al., 1994; Schweitzer & Lawton, 1989), schizophrenia (Kazarian et al., 1987), depression (Parker, 1981), and personality disorders (Truant, 1994).

Parker et al. (1979) reported test-retest reliabilities (three-week interval) of .76 for the care subscale and .63 for the overprotection subscale. Over a nine-week interval, test-retest reliabilities ranged from .87 to .92 (Parker, 1981). Longitudinal research indicated stability of PBI scores over time, with mean test-retest correlation coefficients of .74 and .77 for the five year time periods and .65 for the ten year period (Wilhelm & Parker, 1990). Estimates of internal consistency for the PBI range from .84 to .95 for the care subscale and from .76 to .92 for the overprotection subscale (Shams & Williams, 1995; Todd, Boyce, Heath, & Martin, 1994). Split-half reliabilities in Parker et al.'s (1979) original sample were .88 for the care subscale and .74 for the overprotection subscale.

Self-reports of relationships with parents on the PBI correlated significantly with ratings based on interviews with respondents (Parker et al., 1979). Further, subscales of the PBI were not correlated with age or social class (Parker et al., 1979). Research with a sample of twins indicated mean correlations of .70 for ratings provided by monozygotic twins and .71 for ratings provided by dizygotic twins (Parker, 1986). As expected, compared to "well-adjusted" adults, those with a psychiatric diagnosis scored lower on the care dimension and higher on the overprotection dimension of the PBI (Schweitzer & Lawton, 1989; Truant et al., 1987). Heiss, Berman, and Sperling (1996) administered several parental attachment and personality measures to university students. Results supported the validity of the PBI in that it correlated with other measures of parental attachment. Further, correlations between the PBI and personality measures were in expected directions (Heiss et al., 1996). Parker and Gladstone (1996) reviewed research on the validity of the PBI and concluded that it is a valid measure of perceived parenting.

Factor analytic research supports Parker et al.'s (1979) two-dimensional model of parental bonding (Kazarian et al., 1987; MacKinnon et al., 1989). Research suggests that these two dimensions may measure different constructs, but are negatively correlated (Klimidis, Minas, & Ata, 1992; MacKinnon et al., 1989; Parker et al., 1979).

Consistent with Shams and Williams (1995) and Todd et al. (1994), internal consistencies for

the parental bonding subscales in the current study were high. Cronbach's alpha values were .91 and .93 for the maternal and paternal care subscales and .84 and .88 for the maternal and paternal overprotection subscales, respectively. The PBI subscales were significantly correlated, with expected negative correlations between the care and overprotection scales (see Table 1).

Interpersonal Problem-Solving Skills

Interpersonal problem-solving skills were measured using the Means-Ends Problem-Solving procedure (MEPS; Platt & Spivack, 1975a). According to Platt and Spivack (1975b), the MEPS is a "measure of the ability to conceptualize, in interpersonal problem situations, appropriate and effective means to reach a specified goal" (p. 15). The MEPS consists of 10 stories describing hypothetical interpersonal problems or conflicts (see Appendix D). The respondent is presented with the beginning of the situation and the final outcome and is asked to provide a description of the middle part of the story (how the problem is solved or the conflict is resolved). Based on Platt and Spivack's (1975a) scoring manual, responses are scored in the following categories: (a) the number of effective steps (relevant means) generated; (b) the number of steps that were irrelevant to solving the specific problem (irrelevant means); (c) the number of responses that failed to progress toward the final solution (no means); (d) the number of no responses, when a participant fails to respond to the story; and (e) a relevancy score as measured by the mean ratio of relevant means to total means (sum of relevant means, irrelevant means, and no means). The relevancy score is indicative of the percentage of relevant and effective problem-solving steps.

The adult version of the MEPS has been used with a variety of samples including community samples (Siegel, Platt, & Spivack, 1974), college/university students (Doerfler, Mullins, Griffin, Siegel, & Richards, 1984; Mitchell & Madigan, 1984; Wierzbicki, 1984; Zemore & Dell, 1988), psychiatric patients (Gilbride & Hebert, 1980; Marx, Williams, & Claridge, 1992; Platt & Siegel, 1976; Platt, Siegel, & Spivack, 1975; Platt & Spivack, 1974, 1975a, 1975b), and offenders (McKenzie, 1992; Tweedale, 1990). The MEPS has demonstrated adequate reliability, with test-retest correlations between .43 and .56 and internal consistency coefficients between .80 and .84

Table 1

Intercorrelations Between Subscales of the Parental Bonding Inventory (n=221)

Subscale	1	2	3	4
1. Maternal Care	--	-.34**	.41**	-.23*
2. Maternal Overprotection		--	-.24**	.57**
3. Paternal Care			--	-.45**
4. Paternal Overprotection				--

*$p < .001$. **$p < .0001$.

(Platt & Spivack, 1975a). Scoring of the MEPS is also reliable, with interrater reliability ranging from .80 to .86 (Doerfler et al., 1984; Marx et al., 1992; Mitchell & Madigan, 1984; Tweedale, 1990).

The MEPS correlated significantly with measures of social competence (Ford, 1982; Platt, Scura, & Hannon, 1973; Platt & Siegel, 1976) and behavioural adjustment (Platt & Spivack, 1972; Spivack, Platt, & Shure, 1976). Further, the MEPS was not correlated with measures of intelligence (Platt & Spivack, 1975a). Factor analysis of the MEPS suggests that it is a unidimensional measure of interpersonal problem-solving (Platt & Spivack, 1975b).

Although the MEPS is typically administered as a paper-and-pencil questionnaire, Beveridge and Goh (1987) administered the measure verbally "to eliminate reading problems as distractions from the subject's understanding of story content" (p. 80). Responses were also given verbally and audiotaped for later transcription and scoring. The present research followed this procedure. Depending on their comfort with reading, participants either read the stories themselves or the stories were read to them. All story responses were audiotaped and transcribed for scoring purposes.

After transcription, each story of the MEPS was scored to determine number of relevant means, irrelevant means, no responses, enumerations of means, obstacles, enumerations of obstacles, and references to time. For approximately 20% ($n = 42$) of participants who completed the MEPS, responses to problems were scored by a second rater, unfamiliar with the specific purposes of the current research. Interrater reliabilities for MEPS components were .93 for relevancy, .96 for relevant means, .68 for enumerations, .86 for obstacles, and .86 for time references. Internal consistency coefficients (Cronbach's alphas) across stories were adequate to low (.77 for relevant means, .76 for enumerations, .59 for obstacles, and .38 for time references).

Preliminary analyses of three most commonly used problem-solving measures on the MEPS (relevancy score, number of relevant means, and number of enumerations) indicated high correlations among the three measures (ranging from .50 to .85). Given that number of

enumerations had lower interrater reliability (.68) and had a nonnormal distribution (skewness = 1.91, $p < .001$; kurtosis = 4.38, $p < .001$), it was not used in subsequent analyses related to problem-solving. The relevancy score was also skewed (skewness = -0.67, $p < .001$) and its high correlation with number of relevant means ($r = .85$) suggests that these two scores measure similar constructs. Because most of Platt and Spivack's (1975a, 1975b) research has used number of relevant means as the primary measure of problem-solving skills, this variable was used as the single measure of problem-solving skills in the present research.

Attachment Styles

Attachment styles were measured using the Relationship Scales Questionnaire (RSQ; Griffin & Bartholomew, 1994a) and the Relationships Questionnaire (RQ; Bartholomew & Horowitz, 1991). The RSQ (see Appendix E) is a 30-item self-report questionnaire measuring styles of interaction in close relationships. Each item is rated on a 5-point scale ranging from *not at all like me* (1) to *very like me* (5). The RSQ has four subscales, each representing one of four attachment patterns (secure, fearful, preoccupied, and dismissing). Although self- and other-dimension scores can be calculated by combining subscale scores, the present research used prototype scores. Prototype scores were obtained by adding items from each subscale, resulting in one prototype score for each subscale. Higher prototype scores are indicative of that particular style of attachment in relationships. Bartholomew and Scharfe (1993, cited in Griffin & Bartholomew, 1994a) found that, for men, prototype scores accounted for significantly more variance in relationship satisfaction than did dimension scores.

In past research, internal consistencies for the subscales of the RSQ were variable, with lowest values ranging from .41 to .70 (Griffin & Bartholomew, 1994a). However, Griffin and Bartholomew attribute these low values to the underlying constructs (i.e., the measurement of perceptions of self and perceptions of others) rather than to scale unreliability. Prototype scores of the RSQ show convergent validity, with expected correlations between interview and self-report measures (Griffin & Bartholomew, 1994a). Correlations between RSQ prototypes and prototype

scores on the RQ ranged from .39 to .65 (Dutton et al., 1994). Internal consistencies for the RSQ subscales in the present study were variable and low. Cronbach's alphas were .24, .58, .36, and .36 for the Secure, Fear, Preoccupied, and Dismissing subscales, respectively. Several of the subscales were intercorrelated (see Table 2).

The Relationships Questionnaire (see Appendix F) was used as a second measure of attachment style. This questionnaire was adapted by Bartholomew and Horowitz (1991) from an attachment style measure developed by Hazan and Shaver (1987). The RQ consists of four short paragraphs describing the four attachment patterns (secure, fearful, preoccupied, and dismissing). Respondents rate each paragraph on a 7-point scale (ranging from *not at all like me* to *very much like me*) indicating the degree to which they resemble each of the four patterns. The respondent is also instructed to choose one pattern that best describes him/her. RQ self-ratings correlate significantly with interview measures of attachment style (Bartholomew & Horowitz, 1991; Griffin & Bartholomew, 1994b) and with the RSQ (Dutton et al., 1994). Correlations between RQ ratings and RSQ subscales in the present study ranged from -.42 to .58 (see Table 2).

Male Peer Influences

Influence of male peers was measured using three brief questionnaires (see Appendix G) developed by DeKeseredy (1988b). The first questionnaire measures frequency of participation in activities with other men. Respondents rate seven activities on a 5-point scale ranging from *once a week* (1) to *never* (5). Higher scores reflect more frequent participation with men in social activities. DeKeseredy (1988b) found the reliability of this scale to be adequate (alpha of .69). Cronbach's alpha in the present study was .62.

The second questionnaire measures the extent to which respondents' male peers have engaged in abusive behaviour in dating relationships (DeKeseredy, 1988b). Three scenarios are rated on a 4-point scale ranging from *none of your friends* (1) to *a great many of your friends* (4). In past research, the alpha coefficient for this scale was .62 (DeKeseredy, 1988b). Cronbach's alpha in the present study was .66.

Table 2

Correlations Between the Relationship Scales Questionnaire Subscales and Ratings on the Four Paragraphs of the Relationships Questionnaire (n=235)

Scale	1	2	3	4	5	6	7	8
1. RSQ Secure	--	-.43**	-.20*	-.19*	.39**	-.42**	-.32**	-.04
2. RSQ Fearful		--	.16	.35**	-.35**	.58**	.21*	.09
3. RSQ Preoccupied			--	.23**	-.09	.26**	.43**	-.04
4. RSQ Dismissing				--	.06	.16	-.03	.32**
5. RQ Secure					--	-.37**	-.25**	-.05
6. RQ Fearful						--	.37**	.14
7. RQ Preoccupied							--	-.02
8. RQ Dismissing								--

*$p < .001$. **$p < .0001$.

The third questionnaire measures the type of information male peers have given the respondent about interactions in relationships. Six of the items have a *yes/no* response set, with one item asking what male peers' approval level would be for the behaviour of "showing a date who is boss" (rated on a 4-point scale ranging from *strongly approve* (1) to *strongly disapprove* (4)). Dekeseredy (1988b) found that the reliability for this scale was good (alpha of .74). Internal consistency of this subscale in the current study was adequate (Cronbach's alpha of .70). Past research suggests that these three measures of influences by peers are significantly correlated with abusive behaviour towards women in relationships (DeKeseredy, 1988b).

Sexist Attitudes

The Sexism Scale (SS; Rombough & Ventimiglia, 1981) was used to assess sexist attitudes. The SS (see Appendix H) is a 20-item self-report question focusing on attitudes toward gender roles in areas of family, economics, and perceived sex differences. Respondents answer each item on a 5-point scale ranging from *strongly agree* (1) to *strongly disagree* (5). Higher scores on the SS are indicative of adherence to traditional attitudes about roles of men and women (Rombough & Ventimiglia, 1981).

The SS showed evidence of internal consistency, with alpha of .94 (Rombough & Ventimiglia, 1981). As expected from previous research, men had higher total sexism scores than did women. Item analysis indicated that men and women differed on 17 of the 20 item scores (Rombough & Ventimiglia, 1981). In the present study the scale demonstrated good internal consistency, with Cronbach's alpha of .88.

Psychopathic Personality Style

Psychopathic personality style was measured using the Social Personality Inventory (SPI; Hill & Wong, 1996). The SPI (see Appendix I) is a 46-item self-report questionnaire designed to measure intrapsychic and interpersonal characteristics of psychopathy. Respondents are asked to rate each item on a 7-point scale ranging from *strongly disagree* (1) to *strongly agree* (7). Higher scores on this questionnaire indicate a psychopathic personality style.

The SPI was recently developed based on a large sample of university students (n = 288) and a sample of offenders (n = 177). Results from a second sample of university students (n = 402) indicated good reliability, with an alpha coefficient of .89 (Hill & Wong, 1996). Intrapsychic and interpersonal dimensions had alpha coefficients of .83 and .85, respectively (Hill & Wong, 1996). As expected based on other measures of psychopathy, the two dimensions were significantly correlated (r = .54; Hill & Wong, 1996). The SPI total score and dimensional scores were significantly correlated in expected directions with personality measures focusing on socialization, exploitive characteristics, vanity, impression management, dominance, nurturance, conscientiousness, arrogance, coldness, and agreeableness (Hill, 1999; Hill & Wong, 1996). Correlations with the PCL-R in an offender sample (n = 55) were not significant, although the correlation between the SPI and the personality factor (Factor 1) of the PCL-R approached significance (r = .21; Hill, 1999).

In the present study, the SPI demonstrated good internal consistency. Cronbach's alpha coefficients were .92, .86, and .88 for the total, intrapsychic, and interpersonal scales, respectively. Consistent with Hill and Wong (1996), the two dimensions of the SPI were significantly correlated (n = 235; r = .69, $p < .0001$). The average total scale score for the student sample in the present study (n = 58; M = 174.88, SD = 37.52) was consistent with Hill and Wong's student norms (n = 175; M = 178.89, SD = 29.30). The average total scale score for the offender sample in the present study (n = 177; M = 178.75, SD = 35.91) was higher than the average in Hill's (1999) offender sample (n = 176; M = 151.01, SD = 32.49).

Given that the SPI is a relatively new questionnaire, a subsample of approximately 10% (n = 20) of the offender sample was interviewed and rated using The Hare Psychopathy Check List-Revised (PCL-R; Hare, 1991) in order to explore its relationship to the SPI. The PCL-R is a 20-item rating scale. Based on a semi-structured interview, each item is rated as *no* (0), *maybe* (1), or *yes* (2). The PCL-R also has two factors, reflecting the personality component of psychopathy (callousness, selfishness, manipulativeness) and the lifestyle component of psychopathy (unstable

and antisocial lifestyle). The PCL-R has been widely used and demonstrates good validity and reliability with incarcerated males (Hare, 1991).

In the present study, scores on the PCL-R ranged from 8 to 28 (M = 18, SD = 5.5). The PCL-R demonstrated adequate internal consistency, with Cronbach's alpha coefficients of .76 for the total scale, .78 for the personality component, and .75 for the lifestyle component.The two components of the PCL-R were not significantly correlated. Consistent with Hill (1999), total PCL-R scores were not significantly correlated with total SPI scores in the present research. Further, the personality component of the PCL-R (Factor 1) was not significantly correlated with the SPI. Correlations between the PCL-R and the SPI are presented in Table 3. Given the low sample size for this analysis, the stability of the correlations may be questionable. Further, although the SPI did not correlate with the PCL-R in the present research, previous correlations between the SPI and other personality inventories measuring psychopathic characteristics support the use of the SPI as a measure of psychopathic personality style (Hill, 1999; Hill & Wong, 1996), but not antisocial lifestyle (as measured by the antisocial component of the PCL-R).

Abusive Personality Style

The Propensity for Abusiveness Scale (PAS; Dutton, 1995c) was used to measure abusive personality style. The PAS was derived from several other questionnaires measuring borderline personality style, family relationships, attachment style, trauma symptoms, and anger (Dutton, 1995c). The scale was developed by choosing items with the highest correlations with abusive behaviour based on reports of female partners. The PAS has 29 items (see Appendix J). Twelve items related to interpersonal style are answered on a 5-point scale (*completely undescriptive of you* to *completely descriptive of you*). Ten items focus on abuse by parents and are answered on a 4-point scale (*never occurred* to *always occurred*). Finally, seven items focusing on somatic symptoms are answered on a 4-point scale (*never* to *very often*). Higher scores on the PAS are indicative of an abusive personality style.

In Dutton's research (1995c), the estimate of internal consistency of the PAS was .92 for the

Table 3

Correlations Between the SPI and the PCL-R (n = 20)

Scale	1	2	3	4	5	6
1. SPI Total	--	.91**	.93**	-.05	-.20	.16
2. SPI Intrapsychic		--	.69*	-.12	-.36	.24
3. SPI Interpersonal			--	.01	-.02	.08
4. PCL-R Total				--	.76**	.74**
5. PCL-R Personality (Factor 1)					--	.16
6. PCL-R Behavioural (Factor 2)						--

*$p < .001$. **$p < .0001$.

original sample and .88 for the cross-validation sample. The PAS total score was significantly correlated (.51 and .47) with the two subscales of Tolman's Psychological Maltreatment of Women Inventory in the original sample (Dutton, 1995c). Correlations with psychological abuse in the cross-validation sample were .52 and .45. Total PAS scores also correlated with physical abuse based on female partners' reports. The PAS effectively discriminated between groups of males defined as high and low abusers (Dutton, 1995c). Correlations of the PAS with a measure of social desirability varied depending on the sample (ranging from -.07 for court-referred wife batterers to -.55 for a male control group). In the present study, the PAS demonstrated good internal consistency (Cronbach's alpha = .92).

Abusive Behaviour in Relationships

The Abusive Behaviour Inventory (ABI; Shepard & Campbell, 1992) was used to measure psychological and physical abuse in relationships. The ABI (see Appendix K) is a 29-item questionnaire that can be answered by men or by their female partners. Respondents answer each item on a 5-point scale ranging from *never* (1) to *very frequently* (5). Higher scores on this instrument reflect greater use of abusive behaviours in relationships. The ABI does not set abusive behaviour in the context of family conflict as does the Conflict Tactic Scale (CTS; Straus, 1979). Further, it includes both psychologically and physically abusive behaviour unlike the CTS which primarily focuses on physical abuse or the Psychological Maltreatment of Women Inventory (PMWI; Tolman, 1989) which focuses on psychological abuse.

Shepard and Campbell (1992) found that the ABI was internally consistent, with alpha coefficients ranging from .70 to .92 for four samples of men and women. The standard error of measurement for the four groups was low (ranging from .04 to .12) (Shepard & Campbell, 1992). Although men's reports of abusive behaviours were lower than their female partners' reports, the ABI significantly discriminated between known groups of abusive and nonabusive men, accounting for approximately 25% of the variance between these two groups (Shepard & Campbell, 1992). The ABI also demonstrated good construct validity in that it was correlated with

clinical assessments of abusiveness and arrest records and was not correlated with age and family size (Shepard & Campbell, 1992).

Factor analyses supported the two-dimensional model of abusive behaviour (Shepard & Campbell, 1992). Three items having to do with threats of physical force fit better on the Physical Abuse subscale. One item ("Spanked her") was not correlated with either scale and was subsequently removed from the ABI. Resultant alpha coefficients for the psychological abuse subscale ranged from .76 to .91. Alpha coefficients for the physical abuse subscale ranged from .80 to .92.

In the present study, the ABI demonstrated good internal consistency. Cronbach's alpha coefficients for the total scale, psychological scale, and physical scale were .89, .86, and .79, respectively. The psychological and physical dimensions of the ABI were significantly correlated ($r = .58$, $p < .0001$).

Self-Report of Sexual Aggression

The Sexual Experiences Questionnaire (SEQ) was used to assess self-report of sexually aggressive behaviour. Hanson and Scott (1995) used the original eight-item version of this questionnaire to ask a sample of men from the community about sexually assaultive behaviour toward adults or children. Based on these questions, 28% of men from the community sample admitted to sexual offences. This rate was similar to self-admission of sexual offenses by a sample of offenders not convicted of sexual offences (Hanson & Scott, 1995). In the present study, a five-item version of the questionnaire was used (see Appendix L). Questions focused on sexually assaultive behaviour towards adults, but not children. A general question also asked about "other involvement in unusual or illegal sexual behaviour".

Procedure

Offender Sample

Prior to starting data collection, approval was obtained from the University of Ottawa School of Psychology Ethics Committee and the Ministry of Correctional Services. Superintendents of the

regional detention centre and the medium-security provincial correctional facility gave permission for recruitment of participants from each facility with the following stipulations: 1) recruitment in the regional detention centre would be limited to the minimum security adult male units; and 2) recruitment in the medium-security provincial correctional facility would be limited to the assessment and treatment units.

Men were approached on their units and were provided with information about the research project (for Offender Recruitment Script, see Appendix M). Men who had a criminal history and were interested in participating in the study met with the primary researcher individually. At that time, interested participants were provided with a more detailed description of the nature and purpose of the research and their potential involvement. Participants were told that participation in the research was completely voluntary and they were free to withdraw from the study at any time. Further, participants were told that withdrawal from the study would in no way influence services they were receiving at the correctional institution. The concept of confidentiality was also explained, i.e., that responses on the questionnaires and the interview and any information obtained from their institutional record would be confidential and used for research purposes only. Further, it was explained that the audiotaped portion of the project involved responses to hypothetical stories, with no reference to personal information. Participants were also informed that the tapes would be erased after they were transcribed.

Participants were told that the researcher would not discuss their participation with facility staff and staff at the facilities would not have access to their responses, with the exception of the possibility of psychology staff using the data for research at a later date. Participants were also informed that if the data was used for other research purposes, no identifying information would connect them to the data. Those agreeing to participate in the research project were asked to sign a written consent form (see Appendix N) indicating that they understood the nature and purpose of the study, voluntary participation and freedom to withdraw at any time, and confidentiality. Participants were given a copy of the consent form to keep.

Participants who provided informed consent were interviewed by a graduate student in psychology about their family, employment, and criminal histories. This interview also included questions related to violence in their family of origin and discipline and monitoring practices of their parents. Participants then completed paper-and-pencil questionnaires on an individual basis in the presence of the researcher. If a participant was unable to read, questionnaires were administered orally. Finally, the participants completed the MEPS and their responses to each story were audiotaped.

Participants did not put their names on any of the questionnaires and, upon completion of questionnaires, placed them in an envelope and sealed it. Envelopes were number-coded in order to match them to interview and file information. Audiotapes were also number coded and were erased after transcription. Institutional files of participants were also reviewed in order to obtain information about offence history, family background, and relationship history.

A subsample of participants (n = 20) were asked to participate in a longer interview in order to obtain PCL-R ratings. Although attempts were made to obtain a random subsample of offender participants for this phase of the study, two factors influenced the participant selection: 1) file information was limited for some offenders, particularly those incarcerated at the regional detention centre; given the importance of detailed historical information for the PCL-R, participants with limited file information were not considered for the second phase of the research; and 2) offenders who were transferred or released from the institution prior to recruitment for the second phase of the study could not be considered for this phase. All 20 participants who were asked to participate in the second phase of the study agreed. Participation in this phase of the project involved a 90-minute semi-structured interview with the primary researcher about family background, school and employment history, and offence history. As with the first part of the project, participation was voluntary, all information was confidential, and participants were free to withdraw at any time.

Community Sample

Upon obtaining ethics approval from the University of Ottawa School of Psychology Ethics

Committee, permission was obtained from the Vice-President of Academic Services Office at Algonquin College to post an advertisement on the electronic mail system of students at the college (for Advertisement to Students, see Appendix O). The electronic mail notice was sent to approximately 1000 students (of which approximately 50% were male). Approximately 150 students responded to the notice and were provided with more detailed information about the nature and purpose of the research and their potential involvement (see Student Recruitment Script, Appendix P). Interested participants who had a criminal history or were not heterosexual were told that they did not meet the criteria for the project and were thanked for their interest. An individual meeting time was arranged with those participants who met the screening criteria.

Prior to completing the project, interested participants were told that participation in the research was completely voluntary and they were free to withdraw from the study at any time. They were also told that the research project was in no way connected to Algonquin College and that participation in the project would in no way influence their program of study. The concept of confidentiality was also explained, i.e., that responses on the questionnaires and the interview were confidential and used for research purposes only. Further, participants were told that the audiotaped measure involved responses to hypothetical stories and that after their responses were transcribed, the tapes would be erased. Finally, participants were told they would receive $10 for their participation in the project. Men agreeing to participate were asked to sign a written consent form (see Appendix Q) indicating that they understand the nature and purpose of the study, voluntary participation and freedom to withdraw at any time, and confidentiality. Participants were given a copy of the consent form to keep. Participants were also offered a list of contacts for Community Resources for follow-up if participation in the study caused them distress (see Appendix R).

Student participants were interviewed by a graduate student in psychology about their family, employment, and relationships histories. This interview also included questions related to violence in the family of origin and discipline and monitoring practices of their parents. Participants then

completed paper-and-pencil questionnaires on an individual basis in the presence of the researcher. If a participant was unable to read, questionnaires were administered orally. Finally, the participant completed the MEPS and responses to each story were audiotaped. Participants did not put their names on any of the questionnaires and, upon completion of questionnaires, placed them in a sealed envelope.

Results

All statistical analyses were conducted using the SPSS package (SPSS Inc., 1995). Prior to data analyses, the data were examined for missing items. Very few questionnaire items were missing and in most cases participants were missing only one item. For these participants, missing items were recoded to the appropriate group mean. Two offenders indicated no maternal caregiver and therefore did not complete the maternal scales of the PBI and the maternal abuse items of the PAS. Similarly, one student and eleven offenders reported no paternal caregiver and therefore did not complete the paternal scales of the PBI and the paternal abuse items of the PAS. These participants were not included in analyses related to the PBI or PAS. Forty participants from the offender sample and one student participant chose not to complete the audiotaped problem-solving measure. In addition, four participants were missing responses to two or more of the MEPS stories. These 45 participants were not included in analyses related to the MEPS. An additional eight participants were missing one story on the MEPS. Scores on problem-solving measures for these participants were prorated based on their nine completed stories, allowing these participants to be included in analyses related to the MEPS. Because 45 participants did not complete the MEPS, the sample size for analyses related to problem-solving is substantially smaller. Given this, analyses of problem-solving were conducted univariately.

Analyses of Group Differences

Group analyses included the following: 1) comparison of nonoffenders (students) to offenders with respect to family variables (family violence, harsh discipline, parental monitoring, paternal and maternal care, and paternal and maternal overprotection), attachment styles (secure, fearful, preoccupied, and dismissing subscale of the Relationship Scales Questionnaire), problem-solving skills, and sexist attitudes; 2) comparison of nonviolent offenders to violent offenders with respect to family variables, attachment styles, personality styles (psychopathic personality style and propensity for abuse), and problem-solving skills; and 3) comparison of offenders violent outside of relationships (external violence group), offenders violent within the context of

relationships (domestic violence group), and offenders violent both outside of and within the context of relationships (mixed violence group) in terms of family variables, attachment styles, personality styles, male peer influences, sexist attitudes, and problem-solving skills.

Preliminary analyses were conducted on demographic variables and offence histories in order to assess group comparability and to identify potential covariates (e.g., age, education). Group differences with respect to continuous demographic and offence history variables were analyzed univariately for two reasons: 1) the samples sizes varied depending on the variable and multivariate analyses would have resulted in a significant loss of data; 2) several of the demographic and offence history variables were extremely skewed or kurtotic and univariate analyses are more robust to violations of normality; and 3) several variables violated the assumption of homogeneity of variances and use of the t-test provided the option of evaluating the *t* statistic for unequal group variances. Because several univariate analyses were conducted to examine group comparability on demographics and offence histories, α was corrected based on the number of univariate tests in order to control for experimentwise error (i.e., the Bonferroni correction). Differences on categorical demographic variables were explored using the chi-square statistic (χ^2).

Given that the present study relied on self-report, social desirability was assessed as a possible covariate in all analyses. Once significant covariates were identified, checks for assumptions relevant to multivariate analysis of variance (MANOVA) or multivariate analysis of covariance (MANCOVA) were performed within groups. As recommended by Tabachnick and Fidell (1996), Wilk's Lambda criterion was used to determine overall significance of the multivariate analysis. Effect size was based on η^2, an indicator of the strength of association between the grouping variable and the combination of dependent variables. Follow-up analyses for significant multivariate effects included examination of univariate *F* ratios and discriminant function analyses to determine variables that accounted for the most discrimination between groups. In order to control for experimentwise error, α for all univariate follow-up analyses was

adjusted for the number of univariate tests, based on the Bonferroni correction (i.e. .05 / # of univariate tests).

Comparison of Nonoffenders (Students) to Offenders

Demographic variables. Continuous demographic variables (age, education, number and length of relationships, and number of children) were examined using *t* statistics, with two-tailed tests of significance (corrected α =. 05/5 = .01). Compared to incarcerated males, nonoffenders were younger, with higher education levels and fewer children. The two groups were not significantly different with respect to number and length of relationships (see Table 4).

Chi-square statistics were calculated for categorical demographic variables (corrected α = .02). No significant differences between groups were found for maternal caregiver ($\chi^2(4, N = 235) = 9.63$, $p > .02$), paternal caregiver ($\chi^2(4, N = 235) = 11.15$, $p > .02$), or parental separation in childhood ($\chi^2(3, N = 235) = 7.27$, $p > .05$). Frequencies and percentages for each group are presented in Table 5.

Assessment of demographics variables as potential covariates. Given that nonoffenders and offenders differed with respect to age and education, the linear relationship of these variables with each combination of dependent variables was examined through the within effect of MANCOVA (as recommended by Stevens, 1986). Age and education were not significantly related to family variables, attachment styles, or problem-solving and therefore were not included as covariates.

Family variables. Nonoffenders and offenders were compared on seven family background variables (family violence, harsh discipline, parental monitoring, maternal care, maternal overprotection, paternal care, and paternal overprotection). Social desirability was significantly related to the combination of dependent variables, $F(7, 210) = 3.24$, $p < .01$, and met the assumption of equality of regression slopes (i.e., no interaction between social desirability and group). Based on this, social desirability was included as a covariate.

Data were checked for assumptions relevant to MANCOVA. In the nonoffender group, one

Table 4

Nonoffenders and Offenders Compared on Continuous Demographic Variables

	Nonoffenders (n = 58)		Offenders (n = 177)			
Variable	*M*	*SD*	*M*	*SD*	*t*	*df*
Age (years)	26.40	7.07	30.37	8.43	-3.53*	114
Education (years)	14.34	1.22	10.81	1.22	16.39**	154
# Relationships	2.19	1.60	2.07	1.23	0.60	233
Relationship Length (years)	2.65	4.88	3.95	3.01	-2.41	231[a]
# Children	0.17	0.50	1.18	1.40	-8.13**	231

Note. Degrees of freedom and *t* statistics for age, education, and # children are based on unequal variances for the two samples.

[a]*n=175* for the offender sample.

*$p<.001$. **$p<.0001$.

Table 5

Nonoffenders and Offenders Compared on Categorical Demographic Variables

Variable	Nonoffenders (n = 58)		Offenders (n = 177)	
	Frequency	%	Frequency	%
Maternal Caregiver				
Biological Mother	57	98	149	84
Adoptive Mother	0	0	17	10
Stepmother	1	2	2	1
Other[a]	0	0	7	4
No Maternal Caregiver	0	0	2	1
Paternal Caregiver				
Biological Father	52	90	125	71
Adoptive Father	0	0	17	10
Stepfather	5	8	20	11
Other[b]	0	0	7	4
No Paternal Caregiver	1	2	8	4
Parental Separation before Age 16				
No Separation	38	66	82	46
Separation/Divorce	16	28	65	37
Death of Parent	2	3	14	8
Single Parent from Birth	2	3	16	9

[a]Grandmother, foster mother, or aunt.
[b]Grandfather, foster father, uncle, or brother.

univariate outlier on the family violence variable was excluded from further analyses due to its significant influence on the distribution for that variable. There were no multivariate outliers. Violations of normality were noted on the following variables: family violence (skewness = 1.59, $p < .001$), harsh discipline (skewness = 1.59, $p < .001$ and kurtosis = 2.21, $p < .001$), parental monitoring (skewness = -1.42, $p < .001$), and paternal overprotection (skewness = 1.06, $p < .001$). Although these variables had significant skewness, the absolute skewness values were fairly close to 1. Further, Tabachnick and Fidel (1996) have argued that MANCOVA is robust to violations of normality if they are due to skewness rather than outliers. Visual inspection of random scatterplots suggested linear relationships among the dependent variables. Examination of the correlation matrix did not suggest multicollinearity or singularity; however, given that several correlations were over .30 a multivariate analyses was justified.

In the offender group, there were no univariate outliers. One multivariate outlier was found and was excluded from further analyses. Violations of normality were noted on measures of family violence (skewness = 0.68, $p < .001$) and parental monitoring (skewness = -0.80, $p < .001$); however, the absolute skewness values were close to 1. Visual inspection of random scatterplots suggested linear relationships among the variables in this group. There was no evidence of multicollinearity or singularity. Several correlations between dependent variables were above .30, justifying a multivariate analyses.

Box's M test indicated that the assumption of homogeneity of variance-covariance matrices was violated, F (36, 37823) = 2.71, $p < .0001$. Given that the sample sizes are unequal ($n = 56$ for nonoffenders and $n = 163$ for offenders), MANCOVA may not be robust to this violation. The violation of this assumption may be due to the skewed distributions of several of the dependent variables. Following Tabachnick and Fidel's (1996) recommendation, the variances of the problematic variables were examined. Given that the ratio of group sizes is 3:1 and the variances are larger in the offender group (i.e., the larger group), α for this analysis should remain conservative.

A one-way between-subjects MANCOVA was performed on seven family background variables with social desirability as a covariate. Using Wilk's criterion, nonoffenders and offenders differed significantly on the combination of dependent variables, F (7, 210) = 6.01, $p <$ .0001, $\eta^2 = .17$.

Univariate F ratios were examined using a Bonferroni corrected α of .007 (i.e., .05/7) to control for experimentwise error. Nonoffenders and offenders differed significantly with respect to family violence, harsh discipline, parental monitoring, and paternal overprotection. Univariate Fs and adjusted group means are presented in Table 6. Compared to nonoffenders, offenders reported more experiences of family violence in childhood, harsher discipline, less parental monitoring, and more overprotection by their paternal caregivers. The follow-up discriminant function analysis was consistent with the univariate analyses. Based on the correlations between the variables and the discriminant function, family violence, parental monitoring, and paternal overprotection were the best discriminators between nonoffenders and offenders. Although the correlation between harsh discipline and the discriminant function was high, a low standardized coefficient suggests that harsh discipline was a redundant contributor to group differences. Standardized coefficients and correlations between the variables and the discriminant function are presented in Table 7.

Attachment styles. Nonoffenders (n = 58) and offenders (n = 177) were compared on measures of four adult attachment styles (secure, fearful, preoccupied, and dismissing). Social desirability was included as a covariate as it was significantly related to the linear combination of attachment styles, $F(4, 229) = 5.57$, $p < .0001$, and met the assumption of equality of regression slopes. Assumption checks were completed within each group. There were no univariate or multivariate outliers and assumptions of normality, linearity, multicollinearity, singularity, and homogeneity of variance-covariance matrices were met. Correlations between several of the dependent variables were moderate, justifying a multivariate analysis.

A one-way between-subjects MANCOVA was conducted on four attachment styles with

Table 6

Nonoffenders vs Offenders: Univariate Analyses of Family Variables

Variable	F (1,216)	*Adjusted M* Nonoffenders (n = 56)	*Adjusted M* Offenders (n = 163)
Family Violence	22.56**	6.67	9.39
Harsh Discipline	18.39**	9.18	11.99
Parental Monitoring	13.30**	16.16	14.64
Maternal Care	4.16	26.46	23.89
Maternal Overprotection	2.72	13.01	15.00
Paternal Care	2.66	21.21	18.74
Paternal Overprotection	10.95*	10.30	14.71

*p<.001. **p<.0001.

Table 7

Nonoffenders vs Offenders: Discriminant Function Analysis of Family Variables

Variable	Standardized Coefficient	Correlation between the DV and the Discriminant Function
Family Violence	-.50	-.72*
Harsh Discipline	-.25	-.65*
Parental Monitoring	.65	.55*
Maternal Care	-.07	.31
Maternal Overprotection	-.16	-.25
Paternal Care	-.43	.25
Paternal Overprotection	-.40	-.50*

*Correlations greater than .33 (i.e., at least 10% of overlapping variance) were considered significant.

social desirability as a covariate. Using Wilk's criterion, nonoffenders and offenders differed significantly on the combination of dependent variables, F (4, 229) = 9.33, $p < .0001$, $\eta^2 = .14$.

Univariate F ratios were examined using a Bonferroni corrected α of .01 (i.e., .05/4) to control for experimentwise error. Nonoffenders and offenders differed significantly in terms of secure and fearful attachment styles, with nonoffenders reporting more secure and less fearful attachment styles. No univariate differences were found with respect to preoccupied and dismissing attachment styles. Univariate Fs and adjusted group means are presented in Table 8. Based on the discriminant function analysis, secure and fearful attachment styles were the best discriminators between groups. However, a low standardized coefficient for secure attachment suggests that its contribution to group differences is redundant with the contribution of fearful attachment. Standardized coefficients and correlations between the variables and the discriminant function are presented in Table 9.

Problem-solving skills. Nonoffenders (n = 57) and offenders (n = 133) were compared on a measure of number of relevant means in responses to interpersonal problems. Social desirability was not significantly related to number of relevant means, F (1,187) = 0.24, $p > .05$, and therefore was not included as a covariate. A one-way between-subjects ANOVA was conducted to assess differences between groups with respect to number of relevant means. There were no univariate outliers on the dependent variable and its distribution was normal. The assumption of homogeneity of variances was met. Nonoffenders and offenders differed significantly in terms of number of relevant means, F(1, 188) = 32.82, $p < .0001$, $\eta^2 = .15$. Nonoffenders' responses to problems included significantly more relevant means (M = 14.99) than did offenders' responses (M = 10.16).

Sexist attitudes. Nonoffenders (n = 58) and offenders (n = 177) were also compared on a measure of acceptance of sexist attitudes. Given that social desirability was not significantly related to sexist attitudes, F(1, 232) = 0.07, $p >$. 05, it was not included as a covariate. A one-way

Table 8

Nonoffenders vs Offenders: Univariate Analyses of Attachment Styles

Variable	F (1,216)	*Adjusted M* Nonoffenders (n = 58)	*Adjusted M* Offenders (n = 177)
Secure	8.83*	15.87	14.49
Fearful	28.64**	11.63	14.03
Preoccupied	2.11	12.44	11.84
Dismissing	0.71	17.55	17.92

*p<.01. **p<.0001.

Table 9

Nonoffenders vs Offenders: Discriminant Function Analysis of Attachment Styles

Variable	Standardized Coefficient	Correlation between the DV and the Discriminant Function
Secure	-.27	-.48*
Fearful	.91	.87*
Preoccupied	-.43	-.24
Dismissing	-.15	.14

*Correlations greater than .33 (i.e., at least 10% of overlapping variance) were considered significant.

between-subjects ANOVA was performed with sexist attitudes as the dependent variable. There were no univariate outliers and the dependent variable was normally distributed. The assumption of homogeneity of variances was met. Nonoffenders and offenders differed significantly in terms of sexist attitudes, $F(1, 233) = 8.00$, $p < .01$, $\eta^2 = .03$. Compared to nonoffenders ($M = 42.12$, $SD = 13.08$), offenders were more accepting of sexist attitudes ($M = 46.77$, $SD = 10.06$).

Comparison of Nonviolent Offenders and Violent Offenders

Demographic and offence history variables. Nonviolent offenders and violent offenders (i.e., offenders with at least one violent offence on their record) were compared on continuous demographic variables using *t* statistics, with two-tailed tests of significance (corrected $\alpha = .05/8 = .006$). Nonviolent offenders and violent offenders differed significantly in terms of education level, with nonviolent offenders reporting significantly higher education levels. No differences were found with respect to age, number and length of relationships, number of children, number of nonviolent offences, current sentence length, and aggregate sentence length. Group means and *t* statistics are reported in Table 10. Comparisons of nonviolent and violent offenders on categorical demographic variables with a corrected α of .02 indicated no differences with respect to maternal caregiver ($\chi^2(4, N = 177) = 3.19$, $p > .05$), paternal caregiver ($\chi^2(4, N = 177) = 3.44$, $p > .05$), and parental separation before age 16 ($\chi^2(3, N = 177) = 7.96$, $p > .02$).

Assessment of demographic variables as potential covariates. Because nonviolent and violent offenders differed significantly with respect to education level, the linear relationship of this demographic variable with each combination of dependent variables was examined. Education was not significantly related to family variables, attachment styles, problem-solving skills, or personality styles and therefore was not included as a covariate in these analyses.

Family variables. Violent and nonviolent offenders were compared on seven family background variables (family violence, harsh discipline, parental monitoring, maternal care, maternal overprotection, paternal care, and paternal overprotection). Given that social desirability

Table 10

Nonviolent and Violent Offenders Compared on Demographic and Offence History Variables

Variable	Nonviolent Offenders (n = 45)[a]		Violent Offenders (n = 132)[b]			
	M	*SD*	*M*	*SD*	*t*	*df*
Age (years)	31.02	8.97	30.14	8.27	0.60	175
Education (years)	11.60	1.94	10.53	1.85	3.29*	175
# Relationships	1.82	0.94	2.15	1.31	-1.55	175
Relationship Length (years)	4.62	3.95	3.72	2.60	1.41	56[c]
# Children	1.04	1.24	1.23	1.45	-0.76	175
# Nonviolent Offences	15.47	14.02	13.18	10.75	1.13	173
Current Sentence (months)	9.85	6.84	9.73	7.63	0.10	164
Aggregate Sentence (months)	31.64	31.34	36.05	34.61	-0.71	146

[a]Due to missing data on some variables, *n* varied from 40 to 45 for the nonviolent offender group.

[b]Due to missing data on some variables, *n* varied from 108 to 132 for the violent offender group.

[c]Degrees of freedom and *t* statistics for relationship length are based on unequal variances for the two samples.

*$p<.001$.

was significantly related to the combination of family variables, F (7, 154) = 2.99, $p < .01$, and met the assumption of equality of regression slopes it was included as a covariate.

Data were then checked for assumptions relevant to MANCOVA. No univariate outliers were found in either group. One multivariate outlier was noted in the violent offender group and was subsequently excluded from further analyses. Examination of univariate distributions of variables in the nonviolent offender group (n = 41) suggested no violations of normality. In the violent offender group (n =122), parental monitoring was negatively skewed (skewness = -0.79, $p <$ .001). However, given that group size is large, the absolute skewness value is close to 1, and skewness is not due to outliers, MANCOVA should be robust to this violation of normality. Assumptions of linearity, multicollinearity, singularity, and homogeneity of variance-covariance matrices were met. Several correlations between dependent variables in each group were above .30, justifying a multivariate analyses.

A one-way between-subjects MANCOVA was performed on seven family background variables with social desirability as a covariate. Using Wilk's criterion, nonviolent and violent offenders differed significantly in terms of the combination of family variables, F (7, 154) = 2.98, $p < .01$, $\eta^2 = .12$.

Univariate F ratios were examined using a corrected α of .007 (i.e., .05/7). Nonviolent and violent offenders differed significantly with respect to family violence, F (1, 160) = 8.82, $p <$ .007, and maternal care, F (1, 160) = 8.80, $p < .007$. Compared to nonviolent offenders (*adjusted* M = 7.75), violent offenders reported more experiences of family violence (*adjusted* M = 9.88). Violent offenders also reported less maternal care (*adjusted* M = 22.82) than did nonviolent offenders (*adjusted* M = 27.20). The follow-up discriminant function analysis was consistent with the univariate analyses. As indicated by the correlations with the discriminant function and the standardized coefficients, family violence and maternal care were the best discriminators between groups. Paternal overprotection also contributed uniquely to group discrimination. Although

correlations with the discriminant function were moderate for harsh discipline and paternal care, low standardized coefficients suggest that these variables do not uniquely contribute to group discrimination beyond the contributions of family violence, maternal care, and paternal overprotection. Standardized coefficients and correlations between dependent variables and the discriminant function are presented in Table 11.

Attachment styles. Nonviolent ($n = 45$) and violent offenders ($n = 132$) were compared on measures of four attachment styles (secure, fearful, preoccupied, and dismissing). Social desirability was included as a covariate as it was significantly related to the linear combination of four dependent variables, $F(4, 171) = 4.04$, $p < .01$. Assumption checks were completed within each group. There were no univariate or multivariate outliers. Assumptions of normality, linearity, multicollinearity, singularity, and homogeneity of variance-covariances matrices were met. Several correlations between dependent variables were above .30, justifying a multivariate analysis.

A one-way MANCOVA was conducted to assess differences between nonviolent and violent offenders on measures of four attachment styles. Using Wilk's criterion, nonviolent and violent offenders did not differ on the linear combination of attachment styles, $F(4, 171) = 0.41$, $p > .05$.

Problem-solving skills. Nonviolent and violent offenders were compared in terms of responses to interpersonal problems. Social desirability was not significantly related to number of relevant means, $F(1, 130) = .07$, $p > .05$, and was therefore not included as a covariate. There were no univariate outliers on the dependent variable and its distribution was normal in both the nonviolent offender group ($n = 35$) and the violent offender group ($n = 98$). The assumption of homogeneity of variance was met. A one-way between-subjects ANOVA indicated no differences between nonviolent ($M = 9.38$, $SD = 5.35$) and violent offenders ($M = 10.44$, $SD = 4.82$) with respect to the number of relevant means generated in responses to interpersonal problems, $F(1, 131) = 1.17$, $p > .05$.

Personality styles. Nonviolent and violent offenders were compared with respect to psychopathic and abusive personality styles. Social desirability was included as a covariate as it

Table 11

Nonviolent vs Violent Offenders: Discriminant Function Analysis of Family Variables

Variable	Standardized Coefficient	Correlation between the DV and the discriminant function
Family Violence	-.61	-.64*
Harsh Discipline	.09	-.48*
Parental Monitoring	-.15	.22
Maternal Care	.79	.64*
Maternal Overprotection	.53	.06
Paternal Care	-.18	.34*
Paternal Overprotection	-.53	-.41*

*Correlations greater than .33 (i.e., at least 10% of overlapping variance) were considered significant.

was significantly related to the linear combination of personality styles, F (2, 162) =17.66, $p >$ .0001, and met the assumption of equality of regression slopes. Checks for outliers indicated one univariate outlier on the measure of abusive personality style in the nonviolent offender group. Because of its significant influence on the skewness of this variable, this case was excluded from further analyses. There were no other univariate or multivariate outliers in either the nonviolent offender group (n = 41) or the violent offender group (n = 125). Assumptions of normality, linearity, multicollinearity, singularity, and homogeneity of variance-covariance matrices were met. Multivariate analysis is appropriate given the moderate correlation between the dependent variables.

A one-way between-subjects MANCOVA was conducted on two dependent variables (psychopathic personality style and abusive personality style) with social desirability as a covariate. Using Wilk's criterion, nonviolent and violent offenders differed significantly on the combination of dependent variables, F (2, 162) = 3.24, $p < .05$, $\eta^2 = .04$.

Univariate F ratios were examined (corrected α of .05/2 = .025). Nonviolent offenders differed significantly from violent offenders with respect to abusive personality style, F (1,163) = 6.45, $p < .025$, with violent offenders (*adjusted M* = 79.54) scoring significantly higher than nonviolent offenders (*adjusted M* = 71.40). Groups did not differ significantly in terms of psychopathic personality style, F (1,163) = 0.42, $p > .05$. The follow-up discriminant function analysis was consistent with the univariate statistics in that propensity for abusiveness accounted for the most discrimination between groups (correlation with the discriminant function of .99 and standardized coefficient of .98). Psychopathic personality style was not a significant contributor to group differences (correlation with the discriminant function of .26 and standardized coefficient of .10).

Comparison of Three Violent Offender Groups

Demographic and offence history variables. Analyses of variance were conducted on the three

violent offender groups (external violence, domestic violence, and mixed violence) to examine possible differences with respect to age, education, number and length of relationships, number of children, nonviolent offence history, and lengths of current and aggregate sentence. Using a Bonferroni corrected α of .006 (i.e., .05/8) to control for experimentwise error, the three groups differed significantly in terms of age, $F(2, 129) = 5.86$, $p < .006$, and aggregate sentence, $F(2, 105) = 6.02$, $p < .006$. Post-hoc comparisons indicated that, compared to the external violence group, the domestic violence group was significantly older. Compared to the mixed violence group, the domestic violence group had significantly shorter aggregate sentences in adulthood. No significant group differences were found for education, number of relationships, length of relationships, length of current sentence, number of children, or number of nonviolent offences. Group means and standard deviations are reported in Table 12.

Violent offender groups were also compared in terms of number of offences outside of relationships and number of violent offences within the context of relationships. No differences were found between the external violence and mixed violence groups with respect to number of offences outside of relationships, $t(90) = -0.78$, $p > .05$. Domestic violence and mixed violence groups did not differ in terms of number of violent offences within the context of relationships, $t(90) = 0.63$, $p > .05$. Group means and standard deviations are reported in Table 12.

The three violent offender groups were then compared on categorical variables with corrected α of .01. No significant group differences were found for maternal caregiver ($\chi^2(8, N = 132) = 4.52$, $p > .05$), paternal caregiver ($\chi^2(8, N = 132) = 8.03$, $p > .05$), or parental separation before age 16 ($\chi^2(6, N = 132) = 15.17$, $p > .01$).

Assessment of demographics as potential covariates. Given that the three violent offender groups differed with respect to age and aggregate sentence length, the linear relationship of these variables with each combination of dependent variables was examined. Neither age nor aggregate sentence length were significantly related to family variables, problem-solving skills, attachment

Table 12

Comparisons of External Violence (EV), Domestic Violence (DV) and Mixed Violence (MV) Offender Groups on Demographics and Offence Histories

	EV (*n*=46)		DV (*n*=40)		MV (*n*=46)	
Variable	*M*	*SD*	*M*	*SD*	*M*	*SD*
Age (years)	26.96[a]	7.48	32.48[a]	8.85	31.30	7.66
Education (years)	10.28	1.54	11.18	2.10	10.24	1.79
# of Relationships	1.91	0.94	2.40	1.23	2.17	1.64
Length of Relationships (years)	3.15	2.21	4.39	3.29	3.70	2.18
# Children	0.70	1.01	1.45	1.55	1.57	1.60
# Non-violent Offences	14.48	11.44	9.64	9.18	14.91	10.77
Current Sentence (months)	11.96	8.09	6.97	5.63	9.76	8.01
Aggregate Sentence (months)	37.26	34.62	20.61[a]	20.05	48.42[a]	39.90
# of External Violent Offences	2.33	1.43	--	--	2.65	2.43
# of Domestic Violent Offences	--	--	1.75	1.81	1.54	1.21

[a]Means are significantly different ($p < .01$).

styles, or personality styles. Although aggregate sentence length was not related to sexist attitudes and peer influences, age was significantly related, F (4, 122) = 4.29, $p < .01$ and was therefore included as a covariate in the analysis of sexist attitudes and peer influences.

Family variables. The three violent offender groups were compared on seven family background variables (family violence, harsh discipline, parental monitoring, maternal care, maternal overprotection, paternal care, and paternal overprotection). Social desirability was significantly related to the combination of family variables, F (7, 113) = 2.11, $p < .05$, and met the assumption of equality of regression slopes. Based on this, social desirability was included as a covariate.

Data were checked for assumptions relevant to MANCOVA. There were no multivariate or univariate outliers within the groups. The assumptions of normality, linearity, multicollinearity, singularity, and homogeneity of variance-covariance matrices were satisfied. Several correlations between dependent variables within groups were above .30, justifying multivariate analyses.

A one-way between-subjects MANCOVA was performed on the seven family background variables with social desirability as a covariate.Using Wilk's criterion, the three groups did not differ significantly on the combination of dependent variables, F (14, 226) = 1.50, $p > .05$. Adjusted group means on the seven family variables are presented in Table 13.

Attachment styles. The three violent offender groups were compared on measures of four adult attachment styles (secure, fearful, preoccupied, and dismissing). Social desirability was included in the analysis as it was significantly related to the linear combination of attachment styles, F (4, 125) = 3.35, $p < .05$, and met the assumption of equality of regression slopes. Assumption checks were completed within each group. There were no univariate or multivariate outliers and assumptions of normality, linearity, multicollinearity, and homogeneity of variance-covariance matrices were met. Correlations between several of the dependent variables were above .30, justifying a multivariate analysis.

A one-way between-subjects MANCOVA was conducted on the combination of attachment

Table 13

Adjusted Means of External Violence (EV), Domestic Violence (DV), and Mixed Violence (MV) Groups on Family Variables,[a] Attachment Styles,[b] and Personality Styles[c]

Variable	*Adjusted M*		
	EV	DV	MV
Family Abuse	9.78	9.92	10.41
Harsh Discipline	11.52	12.66	13.69
Parental Monitoring	13.79	15.20	14.57
Maternal Care	20.96	25.02	21.81
Maternal Overprotection	16.13	13.24	16.16
Paternal Care	18.72	17.69	17.23
Paternal Overprotection	13.44	15.71	17.46
Secure Attachment	14.42	13.89	14.45
Fearful Attachment	14.03	14.57	14.22
Preoccupied Attachment	11.73	12.18	12.00
Dismissing Attachment	17.97	17.76	18.15
Psychopathic Personality	182.28	182.10	176.35
Abusive Personality	80.12	80.96	82.47

[a]Sample sizes for analysis of the seven family variables were 42, 39, and 42 for the EV, DV, and MV groups respectively.

[b]Sample sizes for analysis of the four attachment styles were 46, 40, and 46 for the EV, DV, and MV groups respectively.

[c]Sample sizes for analysis of the two personality styles were 43, 39, and 43 for the EV, DV, and MV groups respectively.

styles with social desirability as a covariate. Using Wilk's criterion, the three groups did not differ significantly on the combination of dependent variables, F (8, 250) = 0.32, $p > .05$. Adjusted group means on the four attachment styles are presented in Table 13.

Problem-solving skills. A one-way ANOVA was conducted to assess differences among the three groups in terms of number of relevant means in responses to interpersonal problems. Social desirability was not included as a covariate as it was not significantly related to the dependent variable, F (1, 94) = 0.02, $p > .05$. There were no univariate outliers on the measure of number of relevant means within each group and assumptions of normality and homogeneity of variances were met. Results of the ANOVA indicated no significant differences among the three violent offender groups with respect to number of relevant means, F (2, 95) = 0.73, $p > .05$. Group means were 10.56 (SD = 4.46) for the external violence group, 11.13 (SD = 5.05) for the domestic violence group, and 9.67 (SD = 5.05) for the mixed violence group.

The three violent offender groups were also compared in terms of number of relevant means for stories involving female characters (MEPS stories 2 and 6). Number of relevant means given in responses to these two stories were correlated with total number of relevant means (for 10 stories) in all three groups (correlations ranging from .76 to .87). Assumptions relevant to ANOVA were met. A one-way (external violence vs domestic violence vs mixed violence) between-subjects ANOVA was conducted on a measure of number of relevant means in responses to stories with female characters. The three groups did not differ with respect to number of relevant means given for stories with female characters, F (2,98) = 0.71, $p > .05$. Group means were 2.74 (SD = 2.34) for the external violence group, 2.47 (SD = 2.39) for the domestic violence group, and 2.09 (SD = 2.11) for the mixed violence group.

Personality styles. The three violent offender groups were compared on measures of personality styles (psychopathic personality style and abusive personality style). Social desirability was included as a covariate as it was significantly related to the linear combination of the dependent variables, F (2, 120) =16.83, $p > .0001$. There were no univariate or multivariate outliers within

the groups and assumptions of normality, linearity, multicollinearity, singularity, and homogeneity of variance-covariance matrices were met. Multivariate analysis is appropriate given the moderate correlation between the dependent variables.

A one-way between-subjects MANCOVA was conducted on the combination of two personality styles with social desirability as a covariate. Using Wilk's criterion, the three groups did not differ significantly on the combination of dependent variables, F (4, 240) = 0.29, $p > .05$. Adjusted group means are presented in Table 13.

Sexist attitudes and male peer influences. The three violent offender groups were compared in terms of acceptance of sexist attitudes and influences of male peers (activities with other men, male peers' behaviour on dates, and information from male peers about dating). Both age and social desirability were included as covariates. The covariates were significantly related to the linear combination of sexist attitudes and three scales of peer influence, F (8, 242) = 3.45, $p < .001$. The covariates also met the assumption of equality of regression slopes.

Data were checked for assumptions relevant to MANCOVA. Two univariate outliers were identified in the external violence group (one outlier on the measure of peers' dating behaviour and one outlier on the measure of information from peers) and one outlier on the measure of sexist attitudes was identified in the domestic violence group. Due to the sensitivity of MANCOVA to outliers and the influence of these cases on the distribution of the variables, these three cases were excluded from the analysis. After exclusion of these cases, no other univariate or multivariate outliers were found. Final group sizes were 44, 39, and 46 for the external violence, domestic violence, and mixed violence groups, respectively. Violations of normality were noted on the measure of information from peers (skewness = 1.52, $p < .001$) in the external violence group. Both peers' dating behaviour (skewness = 1.62, $p < .001$) and information from peers (skewness = 1.44, $p < .001$) were significantly skewed in the domestic violence group. Although these problems of normality were noted, transformations were not considered as MANCOVA is robust to violations of normality due to skewness rather than outliers. Visual inspection of random

scatterplots suggested linear relationships among the dependent variables. Assumptions of multicollinearity, singularity, and homogeneity of variance-covariance matrices were met. Correlations between dependent variables were moderate, justifying a multivariate analysis.

A one-way between-subjects MANCOVA was performed on sexist attitudes and three peer influence variables with age and social desirability as covariates. Using Wilk's criterion, the three groups differed significantly on the combination of dependent variables, F (8, 242) = 2.94, $p <$ .05, $\eta^2 = .06$.

Univariate F ratios were examined using a Bonferroni corrected α of .01. The three groups differed significantly in terms of sexist attitudes. Although information from male peers was not significant at $p < .01$, a less stringent probability level (i.e., $p < .03$) suggested possible group differences with respect to this variable. Univariate Fs and group means are presented in Table 14. The follow-up discriminant function analysis was consistent with the univariate analyses. The first discriminant function significantly discriminated between the two groups, F (8, 242) = 2.04, $p <$ .05, accounting for 83% of the variance attributed to both functions. The second discriminant function was not significant, F (3, 122) = 0.92, $p > .05$. Sexist attitudes and information from male peers correlated highly with the first discriminant function, accounting for most of the between group differences. Although the correlation between peers' dating behaviour and the first discriminant function was moderately high, a low standardized coefficient suggests that this variable may be redundant with sexist attitudes or information from peers. Standardized coefficients and correlations between variables and the discriminant functions are presented in Table 15.

A plot of group centroids (i.e., group means on the linear discriminant functions) suggests that the first discriminant function primarily separates the mixed violence group from the domestic violence group (see Figure 1). Follow-up planned comparisons based on Helmert contrasts, testing each group against the average of the remaining groups (Stevens, 1986), were consistent

Table 14

Univariate Analyses and Adjusted Means of External Violence (EV), Domestic Violence (DV), and Mixed Violence (MV) Groups on Sexist Attitudes and Peer Influence Measures

Variable	*F* (2,124)	*Adjusted M*		
		EV (*n* = 46)	DV (*n* = 40)	MV (*n* = 46)
Sexist Attitudes	5.20**	47.75	43.67	50.18
Activities with Men	.74	18.36	18.37	19.47
Peers' Dating Behaviour	2.20	4.36	4.56	5.01
Information from Peers	3.80*	8.55	8.49	9.45

*p<.03. ** p < .01.

Table 15

External Violence (EV), Domestic Violence (DV), and Mixed Violence (MV) Groups: Discriminant Function Analysis of Sexist Attitudes and Peer Influence Variables

	Standardized Coefficient		Correlation between the DV and the discriminant function	
Variable	Function 1	Function 2	Function 1	Function 2
Sexist Attitudes	-.72	.64	-.83*	.45*
Activities with Men	-.18	-.11	-.30	-.28
Peers' Dating Behaviour	.01	-.69	-.44*	-.75*
Information from Peers	-.51	-.28	-.69*	-.55*

Note. Function 2 is not significant and therefore standardized coefficients and correlations with the dependent variable were not interpreted.

*Correlations greater than .33 (i.e., at least 10% of overlapping variance) were considered significant.

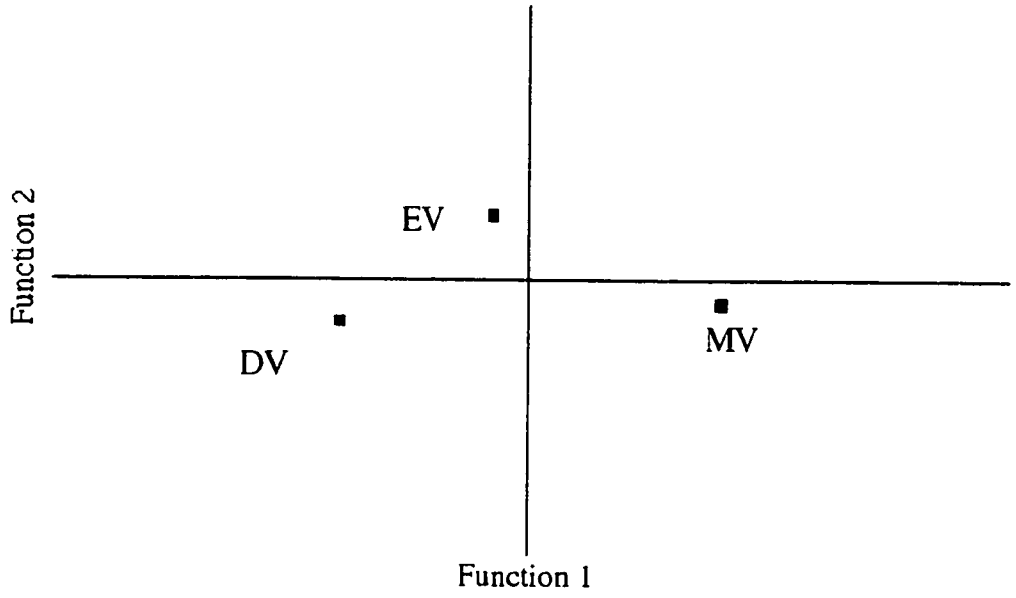

Figure 1. Group centroids for external violence (EV), domestic violence (DV), and mixed violence (MV) groups based on sexist attitudes and male peer influences.

with this. In this case, the first contrast compared the external violence group to the combined domestic and mixed violence groups on the dependent variables. This contrast parallels the second discriminant function (see Figure 1) and was not significant, F (4, 121) = 0.71, $p > .05$. The second contrast compared the domestic violence group to the mixed violence group, as reflected in the first discriminant function (see Figure 1). The two groups were significantly different on the combination of dependent variables, F (4, 121) = 3.39, $p < .05$. Based on the results of the discriminant function analysis and examination of group means, it appears that the mixed violence group was more accepting of sexist attitudes and received more negative information about relationships from male peers than did the domestic violence group.

Summary of Results of Group Analyses

Group analyses were conducted to test differences between nonoffenders and offenders, nonviolent offenders and violent offenders, and three types of violent offenders. Results indicated that nonoffenders (students) and offenders differed in terms of family background variables, with offenders reporting more experiences of violence or witnessing violence, less parental monitoring, and more paternal overprotection. Nonoffenders and offenders also differed in terms of attachment styles, with offenders indicating less secure and more fearful attachment styles. Differences were also found with respect to problem-solving, with offenders providing fewer relevant means in their responses to interpersonal problems. Finally, offenders were more likely to endorse sexist attitudes than were nonoffenders.

Comparisons of nonviolent offenders to violent offenders indicated group differences on family variables, with violent offenders reporting more experiences of violence or witnessing violence, less maternal care, and more paternal overprotection. These two groups also differed in terms of abusive personality style, with a higher propensity for abusiveness in the violent offender group. No group differences were found with respect to attachment styles or problem-solving skills.

The three violent offender groups (external violence, domestic violence, and mixed violence)

did not differ with respect to family background variables, attachment styles, problem-solving skills, and personality styles. Group differences were found in terms of acceptance of sexist attitudes and male peer influences. Further exploration indicated differences between the domestic violence and mixed violence groups with respect to acceptance of sexist attitudes and information from peers. More specifically, compared to the domestic violence group, offenders in the mixed violence group were more likely to endorse sexist attitudes and received more negative information from male peers.

Regression Analyses

Regression analyses were conducted to explore the following: 1) the relationship between parental bonding and attachment styles (predictors) and psychopathic personality style (dependent variable); 2) the relationship between problem-solving (predictor) and abusive behaviour in relationships; and 3) the relationship between family background variables, attachment styles, personality styles, male peer influences, and sexist attitudes (predictors) and abusive behaviour in relationships (dependent variable). Preliminary analyses were conducted prior to each regression analyses in order to check relevant assumptions. Age was significantly correlated with psychopathic personality style (r = -.25, p < .0001) and was therefore entered in the first step of the regression analysis with psychopathic personality as the dependent variable. Age was not significantly correlated with abusive behaviour in relationships (r = .02, p > .05) and, as a result, was not included in analyses with this dependent variable. In each regression analysis, social desirability was entered in the first step in order to determine if predictor variables contributed to the dependent variable beyond the effect of social desirability.

Prior to regression analyses on abusive behaviour in relationships, the validity of this measure was evaluated by determining the ability of the Abusive Behaviour Inventory to discriminate between offenders with no known criminal histories of domestic violence and offenders with known criminal histories of domestic violence. Further, prior to the third regression analyses, a principal components analysis was performed in order to reduce the number of predictor variables

and allow for a more parsimonious regression solution.

Regression of Parental Bonding and Attachment Styles on Psychopathic Personality Style

A hierarchical multiple regression was performed with psychopathic personality style as the dependent variable and social desirability, age, parental bonding, and attachment styles as the independent variables. Social desirability and age were entered in the first step of the analysis. Parental bonding measures (maternal care, maternal overprotection, paternal care, and paternal overprotection) were entered as a block in the second step to determine if they contributed to psychopathic personality style beyond the effect of social desirability and age. Finally, four attachment styles (secure, fearful, preoccupied, and dismissing) were entered as a block in the final step to examine their contribution to psychopathic personality style beyond parental bonding variables.

Fourteen participants (one student and thirteen offenders) did not complete the parental bonding measures due to absence of either a paternal or maternal caregiver. As a result, these participants were not included in the regression analysis. The remaining sample (n = 221) consisted of 57 students and 164 offenders. Data were checked for assumptions relevant to multiple regression analysis. Two univariate outliers were identified: one on age and one on psychopathic personality style. Further, one outlier in the regression solution and two multivariate outliers on the combination of independent variables were identified . Given the large sample size and the potential influence of outliers on the distribution of variables and the overall regression solution, these five outliers were excluded from further analyses. The final sample size after deletion of the five outliers was 216. The ratio of cases to independent variables was 22:1, well above the recommended 15 participants per variable recommended by Stevens (1986) to allow for a reliable regression equation.

The distribution of each independent variable and the dependent variable was checked for normality. Significant skewness was noted with respect to age (skewness = .63, $p < .001$) and maternal overprotection (skewness = .55, $p < .001$); however, given that the sample size is large

and absolute skewness values are less than 1, data were not transformed. All other variables were normally distributed. Assumptions of linearity, multicollinearity, and singularity were met. Correlations between the variables are displayed in Table 16.

Results of the multiple regression analysis, including unstandardized regression coefficients (B) and intercept, standardized regression coefficients (β) and related statistics, squared semipartial correlations (sr^2) after entry of all independent variables, and multiple R, change in R^2, and adjusted R^2 following each step, are displayed in Table 17. Based on the multiple R following the first step, social desirability and age accounted for a significant proportion of variance (14%) in the dependent variable. Inclusion of parental bonding measures in the second step did not result in a significant change in R^2. Similarly, addition of attachment styles in the third step did not result in a significant increment in variance accounted for by the independent variables. Examination of standardized coefficients and squared semipartial correlations also indicated that social desirability and age were the only significant contributors to psychopathic personality style,with higher scores on social desirability and older age associated with lower scores on a measure of psychopathic personality.

Validity of the Abusive Behaviour Inventory

In order to evaluate the validity of the Abusive Behaviour Inventory a discriminant function analysis was performed using abusive behaviour in relationships to predict group membership. The nondomestic group (n = 91) included offenders with no convictions of domestic violence on their criminal records. The domestic group (n = 70) included offenders with at least one conviction of domestic violence on their criminal records. The 16 offenders who self-reported domestic violence (based on the ABI), but had no criminal history of domestic violence were not included in the validity analysis.

Preliminary analyses of assumptions relevant to discriminant analysis indicated a violation of the assumption of homogeneity of variances based on Box's M test, F (1, 71742), $p < .001$.

Table 16

Correlations Between Parental Bonding Measures, Attachment Styles, and Psychopathic Personality Style (n = 216)

Variable	1	2	3	4	5	6	7	8	9	10	11
1. Psychopathy (DV)	--	-.31**	-.25**	-.11	.06	-.10	.05	-.01	.09	.06	-.01
2. Social Desirability		--	.13	.10	-.18*	.24**	-.22**	.16	-.20	-.07	.06
3. Age			--	.08	.04	-.07	.12	-.13	.07	-.06	.06
4. Maternal Care				--	-.31**	.45**	-.24**	.05	-.14	-.06	.03
5. Maternal Overprotection					--	-.25**	.60**	-.13	.05	.06	-.10
6. Paternal Care						--	-.45**	.18	-.28**	-.04	.01
7. Paternal Overprotection							--	-.18	.21*	.11	-.05
8. Secure Attachment								--	-.40**	-.18	-.16
9. Fearful Attachment									--	.14	.34**
10. Preoccupied Attachment										--	.21*
11. Dismissing Attachment											--

*$p < .001$. **$p < .0001$.

Table 17

Hierarchical Regression of Social Desirability, Age, Parental Bonding, and Attachment Styles on Psychopathic Personality Style (n = 216)

Variable	*B*	*β*	*t*	sr^2	*R*	R^2 change	*Adjusted* R^2
Social Desirability	-3.20	-.27	-3.85***	.061	.38***	.141***	.133
Age	-0.99	-.22	-3.34***	.046			
Maternal Care	-0.41	-.10	-1.32	.007			
Maternal Overprotection	0.01	-.00	-0.04	.000			
Paternal Care	0.01	-.00	-0.03	.000			
Paternal Overprotection	-0.03	-.01	-0.09	.000	.39***	.010	.128
Secure Attachment	0.39	.03	0.48	.001			
Fearful Attachment	0.50	.04	0.58	.001			
Preoccupied Attachment	0.26	.02	0.30	.000			
Dismissing Attachment	0.10	.01	-0.12	.000	.39***	.003	.113
Intercept = 219.25							

*$p < .05$. **$p < .01$. ***$p < .0001$

Given that the sample sizes are unequal, the discriminant analysis may not be robust to this violation. Examination of within group variances indicated that the larger variance was in the smaller group (i.e., the domestic group). Based on this and unequal sample sizes, α for this analysis may not remain conservative. In order to ensure robustness of the analysis, 21 cases were randomly deleted from the nondomestic group to equalize sample sizes (i.e., $n = 70$ for each group). No outliers were noted and the predictor variable was normally distributed in each group. The assumption of homogeneity of variances was still violated based on Box's M test, F (1, 57132) = 22.63, $p < .0001$. However, given equal sample sizes, discriminant function analysis is robust to this violation (Tabachnick & Fidell, 1996).

Results of the discriminant analysis indicated that abusive behaviour in relationships significantly discriminated between the two groups, $\chi^2(1) = 41.06$, $p < .00001$, with a moderate effect size ($\lambda = .35$). The classification results indicated that 70% of the cases were correctly classified based on the predictor variable. Examination of the univariate F ratio indicated that the means for the two offender groups were significantly different, $F(1,138) = 48.03$, $p < .00001$. Compared to the nondomestic group ($M = 37.75$), the domestic group reported significantly more abusive behaviour in relationships ($M = 46.79$).

Regression of Problem-solving Skills on Abusive Behaviour in Relationships

A hierarchical multiple regression analysis was conducted, with social desirability entered in the first step and number of relevant means entered in the second step. The dependent variable was abusive behaviour in relationships. All participants who completed the problem-solving measure ($n = 190$) were included in the analysis.

Prior to the main analysis, assumptions relevant to multiple regression were checked. Four univariate outliers on the measure of abusive behaviour were identified. One outlier in the regression solution was also identified. Given the potential influence of these outliers on the regression equation and on the normality of the dependent variable, these five cases were excluded

from further analyses. After exclusion of these cases, no multivariate outliers on the independent variables were identified. The final sample size was 185. With two independent variables, the ratio of cases to predictors is 92:1, well above the recommended 15 cases per variable.

The two independent variables were normally distributed. The dependent variable (abusive behaviour) was significantly skewed (skewness = 1.02, $p < .001$); however given that the sample size is large and the absolute skewness value is close to 1, the variable was not transformed. Assumptions of linearity, multicollinearity, and singularity were satisfied. Correlations between the variables are displayed in Table 18.

Results of the multiple regression analysis, including unstandardized regression coefficients (B) and intercept, standardized regression coefficients (β) and related t statistics, squared semipartial correlations (sr^2) after entry of both independent variables, and multiple R , change in R^2, and adjusted R^2 following each step, are displayed in Table 19. Based on the multiple R following the first step, the relationship between social desirability and abusive behaviour was significant, with social desirability accounting for 13% of the variance in the dependent variable. Inclusion of problem-solving skills in the second step resulted in a significant increment in R^2, with problem-solving skills accounting for an additional 7% of the variance in abusive behaviour. Examination of the standardized coefficients and squared semipartial correlations indicate that both social desirability and problem-solving skills were significant contributors to abusive behaviour in relationships. Higher scores on social desirability were associated with lower scores on a measure of abusive behaviour. Difficulties with problem solving (indicated by fewer relevant means generated in responses to interpersonal problems) were associated with more abusive behaviour in relationships.

Regression of Family Variables, Attachment Styles, Personality Styles, Male Peer Influences, and Sexist Attitudes on Abusive Behaviour in Relationships

Principal components analysis. In order to improve the sample size to variable ratio and to

Table 18

Correlations Between Social Desirability, Problem-Solving, and Abusive Behaviour (n =185)

Subscale	1	2	3
1. Abusive Behaviour (DV)	--	-.35**	-.24*
2. Social Desirability		--	-.09
3. Problem-Solving			--

*$p < .001$. **$p < .0001$.

Table 19

Hierarchical Regression of Social Desirability and Problem-Solving Skills on Abusive Behaviour in Relationships (n = 185)

Variable	*B*	β	*t*	sr^2	*R*	R^2 change	*Adjusted* R^2
Social Desirability	-1.11	-.38	-5.70*	.143	.35*	.126*	.121
Problem-Solving	-0.40	-.27	-4.08*	.073	.45*	.073*	.191
Intercept = 50.55							

*$p < .0001$

reduce correlations among the predictor variables, a principal components analysis was conducted on the 17 independent variables prior to multiple regression analysis. Preliminary analyses were conducted in order to check assumptions relevant to principal components analysis. Four multivariate outliers and four univariate outliers (two on the measure of information from male peers, one on the measure of male peers' dating behaviour, and one on the measure of psychopathic personality style) were identified. These cases were excluded from further analyses given their potential to influence the reliability of the components analysis. As a result, sample size dropped from 221 to 213, leaving a ratio of 12 cases per variable in the analysis. This meets both Stevens' (1986) recommendation of a minimum of five cases per variable and Tabachnick and Fidell's (1996) recommendation of a sample size of at least 200 for principal components analysis.

Evaluation of univariate normality suggested skewness problems for several variables, including family violence (skewness = .90, $p < .001$), harsh discipline (skewness = .84, $p < .001$), parental monitoring (skewness = -.84, $p < .001$), maternal care (skewness = -.60, $p < .001$), maternal overprotection (skewness = .56, $p < .001$), information from male peers (skewness = 1.60, $p < .001$), male peers' dating behaviour (skewness = 1.06, $p < .001$), and propensity for abusiveness (skewness = .65, $p < .001$). However, given that most of the absolute skewness values are less than 1 and the sample size is large, transformations were not considered. Assumptions of linearity, multicollinearity, and singularity were met.

Examination of the correlation matrix of variables revealed several correlations in excess of .30, justifying the use of factor analysis with this set of variables. The factorability of the correlation matrix was further confirmed through examination of the anti-image correlation matrix (with primarily small values in the off diagonals) and Kaiser's measure of sampling adequacy (KMO = .72).

Visual inspection of the scree test indicated that five- through eight-component solutions be examined in order to determine the most parsimonious and meaningful solution. The solutions were evaluated in terms of their statistical adequacy and substantive interpretability. Criteria used to

determine the best possible solution included the percentage of variance explained, the eigenvalues for each component, and the percentage of residuals greater than .05. A summary of the five- through eight-component solutions is provided in Table 20. Interpretability of each solution was evaluated through examination of rotated factor loadings. The critical value for the factor loadings was based on sample size as recommended by Stevens (1986). With a sample size of 213, loadings greater than .35 were considered significant.

Using principal components analysis with varimax rotation, the five-component solution converged in nine iterations, explaining 60% of the variance. Eigenvalues for all five components were greater than 1. Examination of the residuals indicated that 49% were greater than .05 for this solution. Based on the rotated factor matrix three variables (parental monitoring, activities with males, and paternal overprotection) had complex loadings. Both activities with men and paternal overprotection loaded on two components. Parental monitoring loaded on three components. Given the amount of variance accounted for, the high percentage of residuals greater than .05, and the difficulty with interpretability of the components, this solution was not favoured.

The six-component solution converged in nine iterations, explaining 66% of the variance. Eigenvalues for the six components were all greater than 1. Examination of residuals indicated that 47% were greater than .05 for this solution. Based on the rotated factor matrix, six variables had complex loadings. Propensity for abusiveness, paternal care, paternal overprotection, and activities with men loaded on two components. Parental monitoring and maternal care loaded on three components. Given that only 66% of the variance was accounted for, 47% of residuals were greater than .05, six variables loaded on more than one component, and the interpretability of the components was unclear, this solution was not favoured.

The seven-component solution converged in 15 iterations, explaining 71% of the variance. Eigenvalues for the first six components were greater than 1. The eigenvalue for the seventh component was .90. Forty-two percent of residuals were greater than .05. The rotated factor matrix indicated six variables with complex loadings. Propensity for abusiveness and paternal care

Table 20

Summary of Principal Components Analyses (5- through 8- Component Solutions)

Factorial Solution	% Variance Explained	# of Iterations	% Residuals > .05
5-component	60	9	49
6-component	66	9	47
7-component	71	15	42
8-component	76	10	36

loaded significantly on three components. Maternal care, paternal overprotection, preoccupied attachment style, and dismissing attachment style loaded on two components. Because there were six complex loadings and the amount of variance accounted for was less than the 75% recommended by Stevens (1986) for variable reduction, this solution was not favoured.

The eight-component solution converged in 10 iterations, explaining 76% of the variance. Eigenvalues for six of the eight components were greater than 1. The eigenvalues for the seventh and eighth components were .90 and .84 respectively. Based on the rotated factor solution, these two components explained 13% of the variance in the solution. For the eight-component solution, 36% of the residuals were greater than .05. The rotated factor matrix indicated five variables with complex loadings. Propensity for abusiveness loaded on three components. Paternal overprotection, paternal care, maternal care, and preoccupied attachment loaded on two components. Although the eight-component solution had several variables with complex loadings, in most cases the cross-loadings were substantially smaller than the primary loading. Given that retention of a substantial proportion of variable information is critical for the multiple regression (i.e., more than 75% of variance explained) and given that the eight-component solution is interpretable from a theoretical perspective, this solution was determined to be the most favourable. Table 21 displays factor loadings and percentage of variance accounted for by each of the eight components in the rotated solution.

Each of the eight components was named according to the variables that most significantly contributed to the component. The first component, consisting of experiences of family violence in childhood, harsh parental discipline, and propensity for abusiveness, was named *Family Abuse*. The second component, consisting of paternal and maternal overprotection, was named *Parental Overprotection*. Information from male peers and peers' dating behaviour contributed to the third component. This component was named *Peer Influence*. Both fearful and secure attachment contributed to the fourth component. Given that these two attachment styles are negatively correlated, the component was named *Fearful Attachment*, reflecting more fearful and less secure

Table 21

Factor Loadings for the 8-Component Solution

Variable	Component							
	I	II	III	IV	V	VI	VII	VIII
Family Violence	.89							
Harsh Discipline	.86							
Propensity for Abusiveness	.58	(.39)		(.43)				
Maternal Overprotection		.87						
Paternal Overprotection	(.39)	.69						
Information from Male Peers			.85					
Male Peers' Dating Behaviour			.84					
Secure Attachment Style				-.83				
Fearful Attachment Style				.74				
Parental Monitoring					.84			
Maternal Care		(-.45)			.72			
Paternal Care	(-.45)				.46			
Psychopathic Personality						.82		
Sexist Attitudes						.78		
Dismissing Attachment							.78	
Preoccupied Attachment							.69	(.36)
Activities with Men								.84
% Variance Explained	14	12	10	10	9	8	7	6

Note. Loadings presented in parentheses represent cross-loadings.

attachment. The fifth component was named *Parental Care* and consisted of parental monitoring, maternal care, and paternal care. The sixth component consisted of psychopathic personality style and sexist attitudes and was named *Macho Attitudes*. Dismissing and preoccupied attachment styles loaded on component seven, named *Insecure Attachment*. Finally, the eighth component was named based on one variable, *Activities with Men*.

Regression of eight components on abusive behaviour in relationships. A hierarchical multiple regression was performed between abusive behaviour in relationships as the dependent variable and social desirability and the eight component variables (Family Abuse, Parental Overprotection, Peer Influence, Fearful Attachment, Parental Care, Macho Attitudes, Insecure Attachment, and Activities with Men) as the independent variables. Scores on the eight component variables were calculated based on the factor weights from the principal components analysis. Social desirability was entered in the first step of the analysis. The eight component variables were entered as a block in the second step of the analysis to determine their contribution beyond the effect of social desirability.

The sample of participants from the principal components analysis was used in the regression analysis (n = 213). There were four univariate outliers on the dependent variable and six univariate outliers on the component variables (one on each of six components). One outlier in the regression solution was also noted. Given the large sample size and the potential influence of outliers on the univariate distributions of variables and on the final regression equation, these 11 cases were excluded from further analyses. After exclusion of these cases, no multivariate outliers on the independent variables were noted. The final sample size after deletion of outliers was 202, with a ratio of 22 cases per independent variable, well above the 15 cases per variable recommended by Stevens (1986).

The distribution of each independent variable and the dependent variable were checked for normality. Significant skewness was noted on several variables: Family Abuse (skewness = .91, p < .001), Peer Influence (skewness = 1.07, p < .001), Parental Care (skewness = -.66, p < .001),

and abusive behaviour in relationships (skewness = .77, $p < .001$). Given that the sample size is large, absolute skewness values are close to or less than 1, and visual inspection of distributions suggest close to normal distributions, data were not transformed. All other variables were univariate normal. Assumptions of linearity, multicollinearity, and singularity were met. Because the eight component variables were generated from a principal components analysis with varimax rotation, the component variables were uncorrelated.

Results of the multiple regression analysis, including unstandardized regression coefficients (B) and intercept, standardized regression coefficients (β) and related t statistics, squared semipartial correlations (sr^2) after entry of all independent variables, and multiple R, change in R^2, and adjusted R^2 following each step, are displayed in Table 22. Based on the multiple R following the first step, the relationship between social desirability and abusive behaviour in relationships was significant, with social desirability accounting for 11% of the variance in the dependent variable. The inclusion of the eight component variables in the second step resulted in a significant change in R^2, explaining an additional 30.6% of the variance in abusive behaviour. Of the eight component variables, five made significant individual contributions to abusive behaviour. Family Abuse accounted for 11% of the variance, Peer Influence accounted for 9% of the variance, Fearful Attachment accounted for 8% of the variance, Macho Attitudes accounted for 3% of the variance, and Parental Care accounted for 2% of the variance. Given that the component variables are uncorrelated, their contributions to variance in abusive behaviour can be considered unique.

The relationship of each significant predictor with abusive behaviour was examined. Higher scores on social desirability were related to lower scores on a measure of abusive behaviour. Experiences of family violence and harsh discipline, negative influences from male peers, fearful (i.e., less secure) attachment style, acceptance of sexist and antisocial attitudes, and lack of parental care were associated with more abusive behaviour in relationships.

Table 22

Hierarchical Regression of Eight Component Variables on Abusive Behaviour in Relationships (n = 202)

Variable/Component	*B*	*β*	*t*	sr^2	*R*	R^2 *change*	*Adjusted* R^2
Social Desirability	-0.35	-.13	-2.10*	.013	.33***	.112***	.108
Family Abuse	2.77	.33	5.88***	.105			
Parental Overprotection	0.28	.03	0.60	.001			
Peer Influence	2.57	.31	5.47***	.091			
Fearful Attachment	2.31	.29	5.03***	.077			
Parental Care	-1.18	-.15	-2.66**	.021			
Macho Attitudes	1.42	.17	3.09**	.029			
Insecure Attachment	0.11	.01	0.24	.000			
Activities with Men	0.32	.04	0.68	.001	.65***	.306***	.391
Intercept = 41.92							

*$p < .05$. **$p < .01$. ***$p < .0001$

Summary of Regression Analyses

The first multiple regression analysis examined the ability of parental bonding and attachment styles to explain psychopathic personality style. Social desirability and age explained a significant proportion of variance (14%) in psychopathic personality style. However, beyond the effect of age and social desirability, the four parental bonding scales and four attachment styles did not significantly account for variance in psychopathic personality style.

Prior to the use of abusive behaviour in relationships as a dependent variable in regression analyses, the validity of the measure of abusive behaviour was evaluated using a discriminant function analysis. Abusive behaviour in relationships significantly discriminated between a group of offenders with no known criminal histories of domestic violence and a group of offenders with known criminal histories of domestic violence, with reports of more abusive behaviour in the domestic violence group.

A second multiple regression analysis focused on the relationship between problem-solving skills and abusive behaviour towards female partners. Social desirability explained a significant proportion of the variance (13%). When problem-solving skills were added to the analysis, an additional 7% of the variance was explained, with fewer relevant means in responses to interpersonal problems associated with more abusive behaviour in relationships.

A third multiple regression analysis examined the ability of family background variables, attachment styles, personality styles, male peer influences, and sexist attitudes to explain abusive behaviour in relationships. Prior to the regression analysis, a principal components analysis was conducted on the 17 predictors variables in order to reduce the number of predictors. The eight-component solution was selected as the most favourable, explaining 76% of the variance in the principal components solution. The eight components were named: Family Abuse, Parental Overprotection, Peer Influence, Fearful Attachment, Parental Care, Macho Attitudes, Insecure Attachment, and Activities with Men.

The regression analysis included the eight components and social desirability as the predictor

variables and abusive behaviour in relationships as the dependent variable. Social desirability accounted for a significant proportion of variance (11%) in abusive behaviour. The eight component variables explained an additional 31% of the variance, with Family Abuse, Peer Influence, and Fearful Attachment as the most significant contributors. Macho Attitudes and Parental Care also accounted for a significant, albeit less, amount of variance in abusive behaviour. Experiences of family violence, negative influences from peers, fearful attachment style, acceptance of sexist and antisocial attitudes, and lack of parental care were associated with abusive behaviour in relationships.

Self-Reports of Sexual Aggression in Nonoffender and Offender Samples

On the Sexual Experiences Questionnaire, participants answered questions about their sexually aggressive behaviour, including sexual assault (female or male victim) and sexual touching (female victim). Participants were also asked about other "unusual or illegal sexual behaviour" and if they had ever been accused of illegal sexual behaviour or been in trouble with the law because of sexual behaviour. One student participant reported two incidents of sexual assaults against women. This student was excluded from the study. Of the 58 student participants used in the present research, 14 participants (23%) reported sexually touching a woman without her consent. No students reported sexually aggressive behaviour against adult males and one student reported one incident of unusual/illegal sexual behaviour.

The offender sample (n = 177) consisted of incarcerated men who had no known history of sexually aggressive behaviour (known sexual offenders were excluded from the study). One offender (from the domestic violence group) admitted to one incident of sexual assault against an adult female. This sexually aggressive behaviour occurred in the context of other abusive behaviour in an intimate relationship, therefore this offender was not excluded from the study. Seven offenders (4%) admitted to sexual touching of a woman without her consent. No offenders reported sexually aggressive behaviour against adult males. Twelve offenders (7%) indicated that they had engaged in unusual/illegal sexual behaviour and six (3%) indicated being accused of

illegal sexual behaviour. Because of the low percentages of self-reported sexual aggression in both samples, further analyses related to sexually aggressive behaviour were not conducted.

Exploratory Analyses

Comparison of Nonoffenders (Students) and Offenders on Psychopathic Personality Style

Given that the Social Personality Inventory is a relatively new measure of psychopathic personality style and given the lack of differences between offender groups on this measure, an exploratory analysis was conducted to determine if nonoffenders and offenders differed with respect to this measure. Social desirability was included as a covariate as it was significantly related to the dependent variable. Because nonoffenders and offenders differed with respect to age and education, the linear relationship of each of these variables with the dependent variable was also examined. Age, but not education, was significantly related to the dependent variable and was included as a covariate. There was a significant linear relationship between the combined covariates (age and social desirability) and the dependent variable, F (2, 230) = 16.52, $p < .0001$, and the assumption of equality of regression slopes was met, justifying ANCOVA.

Data were checked for assumptions relevant to ANCOVA. One univariate outlier was identified in the nonoffender group and was subsequently excluded from the analysis. After exclusion of this outlier, no univariate or multivariate outliers were found in either group. Final group sizes were 57 for the nonoffender group and 177 for the offender group. The variable distributions in each group were normal with the exception of a skewed distribution with respect to age in the nonoffender group (skewness = 1.25, $p < .001$). Given that ANCOVA is robust to violations of normality due to skewness rather than outliers, transformation of this variable was not considered. Assumptions of linearity and homogeneity of variance-covariance matrices were met.

A one-way between-subjects ANCOVA was performed on psychopathic personality style with age and social desirability as covariates. Nonoffenders (*adjusted M* = 175.07) and offenders (*adjusted M* = 178.56) did not differ with respect to psychopathic personality style, F (1, 230) =

1.31, $p > .05$.

Comparison of Nonviolent and Violent Offenders on Sexist Attitudes

Because of differences on endorsement of sexist attitudes between nonoffenders and offenders and between mixed violence and domestic violence groups, an exploratory analysis was conducted to confirm that nonviolent and violent offenders did not differ with respect to sexist attitudes. Assessment of potential covariates through ANCOVA indicated that age, F (1,174) = .42, $p > .05$, education, F (1,174) = .02, $p < .05$, and social desirability, F (1,174) = .27, $p > .05$, were not significantly related to the dependent variable (sexist attitudes) and therefore were not included as covariates. Assumptions relevant to ANOVA were met. A oneway between-subjects ANOVA was conducted on sexist attitudes. Nonviolent and violent offenders did not differ in terms of acceptance of sexist attitudes, F (1,175) = 3.34, $p > .05$.

Differences Among Four Attachment Styles on Psychopathic Personality Style and Abusive Behaviour in Relationships

Given the low internal consistency of the four attachment scales of the Relationship Scales Questionnaire in the present research (Cronbach's alphas ranging from .24 to .58), the reliability of these measures is questionable. In order to confirm the results of regression analyses that used this measure of attachment, an exploratory analysis was conducted using participants' choice of the attachment style that best described them (from the Relationship Questionnaire). Four attachment style groups (secure, fearful, preoccupied, and dismissing) were formed based on this question. A MANCOVA was then conducted to determine differences among the four attachment style groups in terms of psychopathic personality style and self-reported abusive behaviour in relationships.

Preliminary analyses indicated that the four attachment groups did not differ significantly on the combination of age and education, F (6,460) = 1.67, $p > .05$. However, examination of univariate F tests indicated that there may be group differences on education, F (3,231) = 2.96, $p < .05$. Given this, education as well as social desirability were assessed as potential covariates.

Education and social desirability were related to the combination of dependent variables,

$F(4,452) = 13.02$, $p < .0001$, and met the assumption of equality of regression slopes and were therefore included as covariates. Data were checked within groups for outliers on the dependent variables and covariates. There were two univariate outliers on abusive behaviour in relationships, one in the secure attachment group and one in the dismissing attachment group. Given the potential influence of outliers on the variable distributions, these two cases were excluded. Final sample sizes for the groups were 52, 82, 40, and 59 for the secure, fearful, preoccupied, and dismissing groups, respectively. After deletion of univariate outliers, there were no multivariate outliers. Assumptions of linearity, multicollinearity and singularity were met. Several correlations between the dependent variables within groups were above .30, justifying a multivariate analysis.

Box's M test indicated that the assumption of homogeneity of variance-covariance matrices was violated, F (30, 94.404 = 2.87, $p < .0001$). Given that the group sizes are unequal MANCOVA may not be robust to this violation. The variances of the problematic variable (abusive behaviour in relationships) was examined. The largest variance on this variable was in the smallest group, suggesting that α for this analysis may not be conservative. As a result, this analysis was evaluated at a more conservative α of .01.

A oneway between-subjects MANCOVA was performed on psychopathic personality style and abusive behaviour in relationships with education and social desirability as covariates. Using Wilk's criterion, the four groups differed significantly on the combination of dependent variables, $F(6, 452) = 3.17$, $p < .01$, $\eta^2 = .04$.

Univariate F ratios were examined using a Bonferroni corrected α of .005 (i.e., .01/2). The four groups differed significantly on abusive behaviour in relationships, F (3, 227) = 5.18, $p <$ .005), but not on psychopathic personality style, F (3,227) = 1.38, $p > .05$). Adjusted groups means for each of the dependent variables are displayed in Table 23. The follow-up discriminant function analysis was consistent with the univariate tests, with abusive behaviour in relationships accounting for most of the discrimination among the four groups. A follow-up planned contrast

Table 23

Adjusted Means of Secure, Fearful , Preoccupied, and Dismissing Attachment Groups on Psychopathic Personality Style and Abusive Behaviour in Relationships

	Adjusted M	
Group	Psychopathic Personality	Abusive Behaviour
Secure Attachment (n = 52)	170.40	37.40
Fearful Attachment (n = 82)	177.05	42.22
Preoccupied Attachment (n = 40)	182.09	43.03
Dismissing Attachment (n = 59)	182.68	38.96

compared the secure attachment group to the three other groups combined (i.e., insecure attachment groups). This contrast was significant, F (2, 226) = 4.73, $p < .01$. Compared to the three insecure attachment groups combined, the secure attachment group scored significantly lower on the measure of abusive behaviour in relationships.

In order to explore potential group differences among the three insecurely attached groups, a oneway (fearful attachment vs preoccupied attachment vs dismissing attachment) between-subjects ANCOVA was performed on abusive behaviour in relationships with education and social desirability as covariates. Although the covariates were significantly related to the dependent variable, F (2, 176) = 15.830, $p < .0001$, the three insecure attachment groups did not differ with respect to abusive behaviour in relationships, F (2, 176) = 2.96, $p > .05$.

Regression of Risk Factors on Self-Reported Physical Abuse in Relationships

Given that the eight component variables accounted for a substantial proportion of variance in abusive behaviour in relationships, an exploratory analysis was conducted to determine if a similar predictive model would account for self-reported physical abuse in relationships. A hierarchical multiple regression was performed between the physical abuse subscale of the Abusive Behaviour Inventory as the dependent variable and social desirability and the eight component variables (Family Abuse, Parental Overprotection, Peer Influence, Fearful Attachment, Parental Care, Macho Attitudes, Insecure Attachment, and Activities with Men) as the independent variables. Social desirability was entered in the first step of the analysis. The eight component variables were entered as a block in the second step of the analysis to determine their contribution beyond the effect of social desirability.

The sample of participants from the principal components analysis was used in the regression analysis (n = 213). There were eight univariate outliers on the dependent variable and two outliers in the regression solution. Given the large sample size and the potential influence of outliers on the univariate distributions of variables and on the final regression equation, these 10 cases were excluded from further analyses. After exclusion of these cases, one multivariate outlier on the

independent variables was identified and subsequently excluded. The final sample size after deletion of outliers was 202, with a ratio of 22 cases per independent variable, well above the 15 cases per variable recommended by Stevens (1986).

The distribution of each independent variable and the dependent variable were checked for normality. Significant skewness was noted on Family Abuse (skewness = .86, $p < .001$), Peer Influence (skewness = 1.07, $p < .001$), Parental Care (skewness = -.66, $p < .001$), and physical abuse in relationships (skewness = 1.61, $p < .001$). Given that the sample size is large, absolute skewness values are close to or less than 1, and visual inspection of distributions suggest close to normal distributions, data were not transformed. All other variables were univariate normal. Assumptions of linearity, multicollinearity, and singularity were met. Because the eight component variables were generated from a principal components analysis with varimax rotation, the component variables were uncorrelated.

Results of the multiple regression analysis, including unstandardized regression coefficients (B) and intercept, standardized regression coefficients (β) and related t statistics, squared semipartial correlations (sr^2) after entry of all independent variables, and multiple R, change in R^2, and adjusted R^2 following each step, are displayed in Table 24. Based on the multiple R following the first step, the relationship between social desirability and physical abuse in relationships was not significant. The inclusion of the eight component variables in the second step resulted in a significant change in R^2, explaining 20% of the variance in physically abusive behaviour. Of the eight component variables, only two made significant individual contributions to physically abusive behaviour. Family Abuse accounted for 12% of the variance and Peer Influence accounted for 7% of the variance. Experiences of family violence, harsh discipline, and negative influences from peers were associated with higher frequencies of physical abuse in relationships.

Summary of Exploratory Analyses

Four exploratory analyses were conducted. The first analysis compared nonoffenders and

Table 24

Hierarchical Regression of Eight Component Variables on Physical Abuse in Relationships (n = 202)

Variable/Component	*B*	*β*	*t*	*sr²*	*R*	*R² change*	*Adjusted R²*
Social Desirability	-0.01	-.01	-0.04	.000	.12	.015	.009
Family Abuse	0.87	.35	5.38*	.118			
Parental Overprotection	-0.03	-.01	-0.22	.000			
Peer Influence	0.64	.26	4.03*	.067			
Fearful Attachment	0.21	.09	1.35	.007			
Parental Care	-0.09	-.04	-0.63	.002			
Macho Attitudes	-0.07	-.03	-0.45	.001			
Insecure Attachment	-0.07	-.03	0.44	.001			
Activities with Men	-0.21	-.09	-1.35	.007	.46*	.199*	.391
Intercept = 12.53							

*$p < .0001$

offenders on a relatively new measure of psychopathic personality characteristics, the Social Personality Inventory, and found no differences between these two groups on this measure. Because of differences between nonoffenders and offenders and between mixed and domestic violence groups with respect to sexist attitudes, a second analysis was conducted to explore whether nonviolent and violent offenders differed on this variable. Results indicated no significant differences between these two groups on their endorsement of sexist attitudes.

Given the low internal consistencies of the subscales of The Relationship Scales Questionnaire, the third exploratory analysis was conducted with an alternative measure of attachment. Participants' choice of the paragraph that best described their relationship style on the Relationships Questionnaire was used to divide groups into four attachment styles. Differences on psychopathic personality style and abusive behaviour were then explored. The secure attachment group differed from the combined fearful, preoccupied, and dismissing group on abusive behaviour in relationships, but not on psychopathic personality style. Compared to participants with insecure attachment styles, those with secure attachment styles scored lower on the measure of abusive behaviour. No differences were found among the three insecure attachment groups on abusive behaviour.

A final exploratory analysis examined a predictive model for self-reported physical abuse in relationships. Consistent with the risk model for abusive behaviour in general, the predictor variables accounted for a significant proportion of variance (20%) in physically abusive behaviour. Only two of the component variables (Family Abuse and Peer Influence) were significant individual contributors to physical abuse in relationships.

Discussion

Summary of Results

Social Desirability

Because the present study relied on self-reports of participants, a measure of social desirability was included in order to examine the influence of this response set on the criterion variables. In fact, social desirability significantly affected measures used in this study, including measures of family background, attachment style, personality style, male peer influences, and abusive behaviour in relationships. As a result, social desirability was included as a covariate in group analyses and was the first variable of entry in regression analyses to statistically control for its influence on the measurement of criterion variables.

Hypothesis 1: Comparison of Nonoffenders and Offenders

The first hypothesis was that nonoffenders and offenders would differ with respect to family background variables (experiences of family violence in childhood, parental discipline, parental monitoring, and relationship with parents), attachment styles, interpersonal problem-solving, and acceptance of sexist attitudes. Nonoffenders were younger and had higher education levels than offenders. As hypothesized, offenders reported more experiences of family violence in childhood, harsher discipline by parents, less parental monitoring, and more paternal overprotection than did nonoffenders. Differences were also found with respect to attachment styles, with offenders reporting more fearful and less secure attachment patterns. As predicted, offenders demonstrated more problem-solving deficits and were more accepting of sexist attitudes than were nonoffenders.

Hypothesis 2: Comparison of Nonviolent Offenders and Violent Offenders

It was hypothesized that nonviolent offenders and violent offenders would differ in terms of family background variables (experiences of family violence in childhood, parental discipline, parental monitoring, and relationship with parents), attachment styles, interpersonal problem-solving, and personality styles (psychopathic personality style and propensity for abusiveness). Nonviolent offenders had higher education levels than violent offenders. There were no other

significant differences with respect to demographic variables. As hypothesized, the two groups differed in terms of experiences of family violence, maternal care, and paternal overprotection. Compared to nonviolent offenders, violent offenders reported more family violence in their childhood, more rejection from their maternal caregivers, and more controlling and intrusive behaviour from their paternal caregivers. As expected, the two groups also differed with respect to personality styles; however, only propensity for abusiveness was a significant contributor to group differences, with higher propensity for abusiveness reported by violent offenders. Contrary to the hypothesis, no differences between nonviolent and violent offenders were found with respect to attachment styles or interpersonal problem-solving skills.

Hypothesis 3: Comparison of Violent Offender Groups

It was hypothesized that offenders who are violent outside of the context of relationships (external violence), offenders who are violent within relationships (domestic violence), and offenders who are violent both within and outside of relationship (mixed violence) would differ in terms of family background variables, problem-solving skills, attachment patterns, personality styles, male peer influences, and acceptance of sexist attitudes. The domestic violence group was significantly older than the external violence group. In terms of criminal histories, the domestic violence group had shorter aggregate sentences than the mixed violence group. No other significant differences in terms of demographics were noted.

Overall, the hypothesized differences between violent offender groups were not supported. Contrary to predictions, no significant differences were found with respect to family background variables, attachment styles, interpersonal problem-solving, or personality styles. Differences among groups were found with respect to male peer influences and sexist attitudes; however, the hypothesis that the external violence group would differ from the domestic and mixed violence groups in terms of these measures was not supported. Unexpectedly, the domestic and mixed violence groups differed with respect to male peer influences and sexist attitudes, with more acceptance of sexist attitudes and more negative influences from male peers in the mixed violence

group.

Hypothesis 4: Parental Bonding and Attachment Styles as Predictors of Psychopathy

The hypothesis that bonds with parents and adult attachment patterns would predict psychopathic personality style was not supported by the data.

Hypothesis 5: Prediction of Abusive Behaviour in Relationships

It was hypothesized that experiences of family violence in childhood, harsh parental discipline, lax monitoring, poor relationships with parents, insecure attachment styles, interpersonal problem-solving deficits, abusive and psychopathic personality styles, negative male peer influences, and sexist attitudes would predict abusive behaviour in relationships. First, the validity of the Abusive Behaviour Inventory was evaluated by determining its potential to discriminate between offenders with no known histories of domestic violence and offenders with known histories of domestic violence. In fact, the Abusive Behaviour Inventory did significantly discriminate these two groups, providing support for its validity as a measure of abusive behaviour in relationships.

Because a substantial proportion (19%) of participants did not complete the interpersonal problem-solving measure, its ability to predict abusive behaviour in relationships was evaluated independently. The results provided support for the hypothesis: interpersonal problem-solving deficits were associated with higher frequencies of abusive behaviour in relationships.

Prior to examining the contribution of the other risk factors to abusive behaviour in relationships, a principal components analysis was conducted to reduce the number of predictor variables and to reduce collinearity among the predictors. The eight resultant component variables included family abuse (experiences of family violence in childhood, harsh discipline, and propensity for abusiveness), parental overprotection (maternal overprotection and paternal overprotection), male peer influences (information from peers and peers' dating behaviour), fearful attachment (fearful and less secure attachment patterns), parental care (parental monitoring, maternal care, and paternal care), macho attitudes (psychopathic characteristics and sexism),

insecure attachment (dismissing and preoccupied attachment styles), and activities with other men.

As hypothesized, the eight component variables taken together contributed significantly to the prediction of abusive behaviour in relationships. Risk factors that made individual contributions to the prediction of abusive behaviour included family abuse, male peer influences, fearful attachment, macho attitudes, and parental care. As expected, experiences of family violence in childhood, harsh parental discipline, negative influences from male peers, fearful and less secure attachment styles, adherence to sexist, psychopathic personality characteristics, and lack of parental care were associated with more abusive behaviour in relationships.

Hypothesis 6: Self-reported Sexual Aggression

It was hypothesized that men who self-reported sexual aggression would differ from non-reporters in terms of attachment style, personality style, male peer influences, and sexist attitudes. Only a small proportion of participants admitted to sexually aggressive behaviour. One student reported two incidents of sexual assault. A substantially higher percentage (23%) of students reported sexual touching of a woman without her consent. One offender from the domestic violence group reported one incident of sexual assault that occurred in the context of other domestic violence and 4% of offender participants reported sexual touching of a woman without her consent. No participants in either group reported sexually aggressive behaviour toward adult males. Given the low percentage of self-reported sexual aggression, the sixth hypothesis was not tested.

Theoretical and Empirical Implications

Familial Risk Factors

The coercion training model. The coercion training model proposed by Patterson and his colleagues (Patterson, 1986; Patterson & Bank, 1986; Patterson et al., 1984, 1989, 1991; Snyder & Patterson, 1987) suggests that poor parenting skills combined with children's difficult temperaments places children at risk for developing antisocial behaviour. Further, social skills deficits and aggressive behaviours place children at risk for rejection by prosocial peer groups and

subsequent associations with antisocial peers (Patterson et al., 1989). Research based on this model suggests that harsh and/or inconsistent parental discipline, inadequate parental supervision, and lack of parental involvement are risk factors for the development of antisocial behaviour (Dix & Lochman, 1990; Loeber, 1990; Patterson, 1992; Snyder & Patterson, 1987). Some research has also found that multiple risk factors, rather than individual factors, increase children's risk for antisocial behaviour (Patterson et al., 1991).

Although previous research suggests that familial risk factors are critical in the development of antisocial behaviour, attempts to predict specific types of antisocial behaviour has provided mixed results. Some studies have suggested that aggressive, person-oriented antisocial behaviour may be associated with harsher parental discipline and parental rejection whereas nonaggressive, property-oriented antisocial behaviour may be associated with lack of supervision and parental involvement (Loeber, 1982; Loeber & Schmaling, 1985a; Snyder & Patterson, 1987), and a "versatile" pattern of antisocial behaviour (both person- and property-oriented antisocial behaviour) may be associated with chaotic child-rearing practices (Loeber & Schmaling, 1985b). However, other longitudinal research points to generality in antisocial behaviour, with few differences in risk factors for violence and nonviolence (Capaldi & Patterson, 1996; Farrington, 1991).

The present results are consistent with the coercion training model. Poor parenting practices, including harsh parental discipline, lack of supervision, and controlling, intrusive father figures discriminated offenders from nonoffenders. Further, compared to offenders convicted of nonaggressive crimes, offenders convicted of aggressive, person-oriented crimes were more likely to report childhoods characterized by family violence, controlling and intrusive fathers, and rejecting mothers. These findings support the results of longitudinal research suggesting that harsh parental discipline and parental rejection are risk factors for aggressive antisocial behaviour (Loeber, 1982; Loeber & Schmaling, 1985a; Snyder & Patterson, 1987).

The findings of the present study suggest that experiences of familial violence and poor parenting practices are important factors in the development of antisocial behaviour in general and,

more specifically, violent antisocial behaviour. However, the differences between nonviolent and violent offenders in the present study seem to be related to the degree of family violence and poor parenting, rather than to qualitatively different risk factors. In other words, although family violence and poor parenting may place boys at risk for antisocial behaviour, exposure to greater degrees of these family risk factors may increase the risk of developing *violent* antisocial behaviour. Based on this explanation, the hypothesis of generality of antisocial behaviour, with common developmental pathways to general and violent criminal behaviour (Capaldi & Patterson, 1996; Farrington, 1991) is supported by the present research.

Although the coercion training model does not extend to specific types of violent behaviour, the present study examined differences among violent offender groups with respect to parenting practices and relationship with parents in childhood. Again consistent with the general risk model for antisocial and violent behaviour (Capaldi & Patterson, 1996; Farrington (1991), no differences were found among the violent offender groups in terms of parenting practices and relationship with parents in the present study.

Examining a predictive model for abusive behaviour in relationships, the results of the present study suggest that poor parenting practices (i.e., harsher discipline, poor supervision, parental rejection, and parental control and intrusiveness) are associated with higher frequencies of abusive behaviour in relationships. Although this emphasizes the importance of parenting skills in the development of abusive behaviour in relationships, lack of differences between violent offender groups with respect to these variables leads to the conclusion that poor parenting is a risk factor for general criminality and is not specific to violence in relationships.

Attachment patterns. In addition to parenting practices that reinforce antisocial behaviour in children, insecure attachment bonds with parents are considered to be important in the development of aggressive behaviour. Insecure attachment bonds in infancy have been linked to aggressive and delinquent behaviour in childhood and adolescence (Allen et al., 1996; Loeber, 1990; Lyons-Ruth, 1996). Research on specific attachment patterns suggests links between avoidant or disorganized

infant attachment patterns and aggressive or oppositional behaviour in children (Erikson et al., 1985; Greenberg et al., 1991; Lyons-Ruth et al., 1993). More recently, adult attachment styles have become a focus of research (Bartholomew, 1990; Bartholomew & Horowitz, 1991). The dismissing attachment style, characterized by a cold, competitive interpersonal style, has been associated with antisocial behaviour in adolescents and adults (Allan et al., 1996; Lyons-Ruth, 1996).

Given that attachment bonds are thought to occur only in the context of intimate relationships (Bartholomew, 1990), insecure attachment patterns are now considered to be important in theories of wife battering (Dutton, 1995b). Because batterers demonstrate a controlling interpersonal style that may be combined with fear of rejection, Dutton (1995b) has hypothesized that the fearful or preoccupied attachment patterns would be common in batterers. Holtzworth-Munroe and Stuart (1994) also argue that some batterers ("family-only" and "dysphoric/borderline") are more likely to have preoccupied styles of attachment; however, more generally violent batterers are likely to be characterized by dismissing patterns of attachment. Research linking particular attachment patterns to wife battering has provided some support for these hypotheses (Dutton et al., 1994; Holtzworth-Munroe et al., 1997).

The present study examined two aspects of attachment: childhood bonds with parents and adult attachment styles. Bonds with paternal and maternal caregivers were considered risk factors for antisocial and violent behaviour. The inclusion of independent measures of paternal and maternal bonds in the present study extends previous research on attachment, where the focus has been primarily on the role of mothers in forming attachments to children (IJzendoorn et al., 1992; Lyons-Ruth, 1996; Rosenstein & Horowitz, 1996). Adult attachment patterns were also examined in the present study in order to explore the role of attachment patterns in general criminal behaviour, violence, and, specifically, domestic violence.

The results of the present study related to parental bonds were mixed. Parental rejection (i.e., lack of parental nurturance) did not discriminate between nonoffenders and offenders; however,

consistent with research linking insecure attachment bonds with mother to aggressive behaviour in boys (Egeland et al., 1993; Erikson et al., 1985; Renken et al., 1989), maternal rejection differentiated violent from nonviolent offenders. Controlling and intrusive behaviour by fathers also contributed to differences between nonoffenders and offenders, and between nonviolent offenders and violent offenders in the present study. This extends past research, suggesting that consideration of the roles of both maternal and paternal caregivers is important when examining risk factors for antisocial and violent behaviour. In general, the present study suggests that insecure bonds with parents is important in the development of antisocial and violent behaviour beyond the contribution of family violence and harsh discipline.

Relationships with parents in childhood did not differentiate among types of violent offenders in the present study; however, as already discussed, parental rejection was an important contributor to the predictive model of self-reported abusive behaviour in relationships. Based on this, it can be concluded that parental rejection may be a risk factor for abusive behaviour in relationships, but may also be a more general risk factor for criminality and violence.

In addition to relationships with parents, the present study explored the role of adult attachment styles in antisocial and violent behaviour. Consistent with previous research, (Rosenstein & Horowitz, 1996; Allen et al., 1996), the present study found that, compared to nonoffenders, men convicted of antisocial behaviour tended to have less secure attachment styles. However, in contrast to previous findings that associated dismissing patterns of attachment in adulthood with antisocial and aggressive behaviour (Rosenstein & Horowitz, 1996; Allen et al., 1996), in the present study it was the *fearful* attachment pattern that was associated with general criminal behaviour. The finding that nonoffenders and offenders differed in terms of attachment styles in the present study is consistent with differences found with respect to familial risk factors, i.e., compared to men from nonviolent families with consistent parental attention and discipline, men from violent families with harsh and inconsistent parental practices are less likely to develop secure patterns in adult relationships. More specifically, a pattern of harsh discipline and

controlling parenting, combined with lack of supervision may place boys at risk to develop fearful patterns of attachment in adulthood, characterized by a need for close relationships but a fear of intimacy.

Although theories of wife battering (Dutton, 1994b; 1995b: Dutton et al, 1994; Holtzworth-Munroe & Stuart, 1994) suggest that insecure attachment patterns, particularly fearful and preoccupied attachment, are consistent with the interpersonal style of abusive men, the present research found no differences between men with histories of domestic violence and men with histories of general violence in terms of attachment styles. Further, no differences with respect to attachment patterns were found between nonviolent and violent offenders. These results support the findings of Ward et al. (1996), suggesting that adult attachment patterns, particularly less secure and more fearful attachment styles, may be important contributors to general criminality, but not specifically to violent behaviour or domestic violence.

In the present study, fearful and less secure attachment styles contributed to the predictive model of self-reported abusive behaviour in relationships. This supports correlational research associating fearful and preoccupied attachment patterns with wife battering (Dutton et al., 1994; Holtzworth-Munroe et al., 1997). Although it is important to consider the contribution of adult attachment patterns to abusive behaviour in relationships, the lack of differences with respect to these patterns among offender groups once again calls into question the uniqueness of insecure attachment styles as risk factors for the development of abusive behaviour in relationships, as opposed to general risk factors for antisocial behaviour.

Violence in the family of origin. Witnessing and experiencing violence in the family of origin is thought to be a major risk factor for violence in general and, more specifically, for family violence. According to the intergenerational transmission hypothesis, exposure to family violence in childhood serves as a model for aggressive behaviour and teaches children that violence is an appropriate method of solving interpersonal problems (Cappell & Heiner, 1990; Carter et al., 1988; Jaffe et al. 1990; Kalmuss, 1984). Previous research has linked violence in the family of

origin to violent behaviour in childhood (Carlson, 1990; Jaffe et al., 1988), adolescence (Vissing et al., 1991; Widom, 1989), and adulthood (Jalbert, 1994). Violence in the family of origin has also been associated with wife abuse (Barnett & Hamberger, 1992; Caesar, 1988; Dutton, 1988a; Hamberger & Hastings, 1991; Hanson et al., 1997) and violence towards dating partners (Sugarman & Hotaling, 1989a, 1989b).

The present study provides some support for the intergenerational transmission hypothesis. Experiencing and witnessing violence in childhood discriminated offenders from nonoffenders as well as nonviolent offenders from violent offenders. Thus, family violence is an important contributor to antisocial behaviour, particularly violent behaviour. This is consistent with results of previous studies linking family violence with violent behaviour in adolescence and adulthood (Vissing et al., 1991; Jalbert, 1994). Further, violence in the family of origin was an important contributor to the predictive model of abusive behaviour in relationships, supporting research that has linked violence in the family of origin to violence in relationships (Barnett & Hamberger, 1992; Caesar, 1988; Dutton, 1988a; Hamberger & Hastings, 1991; Hanson et al., 1997). However, given that violent offender groups did not differ in terms of reports of family violence in childhood in the present study, the hypothesis that "family violence begets family violence" is not unequivocally supported. Rather, the general statement that "family violence begets violence" may be more accurate.

Interpersonal Problem-solving Deficits

According to the coercion training model, poor parenting practices affect children's development of prosocial skills (Patterson, 1986; Patterson et al., 1991). Insecure attachment bonds are also thought to inhibit the development of interpersonal skills (Marshall et al., 1993), while modelling of violence may specifically teach violence as a method of dealing with interpersonal problems (Jaffe et al., 1988). Research with children suggests that aggressive boys are less skilled in social problem-solving than their nonaggressive peers (Evans & Short, 1991; Guerra & Slaby, 1989, 1990; Lochman & Lampron, 1986; Rubin et al., 1991). Comparisons of

wife batterers in the community to samples of nonviolent, but maritally distressed men suggest that men who are violent in relationships have problem-solving deficits, particularly in terms of relationship problem-solving (Anglin & Holtzworth-Munroe, 1997; Holtzworth-Munroe & Anglin, 1991; Holtzworth-Munroe & Hutchinson, 1993). However, research with adult offenders points to problem-solving deficits as a general risk factor for criminality (Baxter et al., 1995; Becker et al., 1993; Ross & Fabiano, 1983; Tweedale, 1990).

The findings of the present study support the generality of problem-solving deficits across offender types. Although nonoffenders and offenders differed in terms of their interpersonal problem-solving skills, no differences were found among offender groups. As expected, interpersonal problem-solving deficits were predictive of self-reported abusive behaviour in relationships. Such deficits may place men at risk for abusive behaviour in relationships due to communication difficulties, limited alternatives for coping with interpersonal problems, and hence a tendency to fall back on aggression or dominance in a problem-solving situation. However, these deficits do not appear to be unique to violence in relationships, but rather contribute to criminality in general. Consistent with research suggesting that violence and poor parenting practices contribute to problem-solving deficits (Jaffe et al., 1988; Marshall et al., 1993; Patterson, 1986; Patterson et al., 1991), the interpersonal problem-solving deficits of offenders in the present study may be related to a childhood history of violent, rejecting, and inconsistent parenting practices.

On the other hand, because the offender sample in the present sample was incarcerated, it may be that problem-solving deficits are more characteristic of offenders who are caught, convicted, and sentenced than offenders who are not detected or not incarcerated. Further, the fact that the nonoffender sample consisted of students raises the question of whether differences in problem-solving skills may be explained by educational differences. However, although students and offenders differed in terms of educational level in the present study, education was not correlated with the problem-solving measure. This is consistent with Platt and Spivack's (1975a) finding that responses to the MEPS were not correlated with measures of intelligence.

Personality Characteristics

Psychopathy. In the literature, psychopathy has been defined by both behavioural characteristics (conduct problems, criminal behaviour, impulsivity, and promiscuity) and by personality and interpersonal characteristics (lack of empathy and guilt, callous disregard for others, and grandiose sense of self-worth) (Frisk et al., 1994; Hare et al., 1992). Although psychopathy has been linked to antisocial and violent behaviour (Blackburn & Coid, 1998; Hart & Hare, 1997; Serin & Amos, 1995; Weiler & Widom, 1996), not all offenders are psychopathic and not all psychopaths have criminal records (Hare et al., 1992; Myers et al., 1995). Further, although psychopaths tend to have long criminal histories, research on specific offender groups has failed to identify any association between psychopathy and particular types of criminal behaviour. The interpersonal deficits in psychopathy parallel Bartholomew's (1990) dismissing attachment pattern, i.e., a positive view of self and a negative view of others, with little awareness of one's impact on others. Further, lack of positive relationships with parents in childhood has been associated with lack of empathy in adulthood (Koestner et al., 1990) and has discriminated between low and high psychopathy groups (Walsh et al., 1987). However, the specific links between attachment bonds and psychopathy have not been previously explored.

The present research sought to examine whether types of offender groups differed in terms of psychopathic personality characteristics. In contrast to research that has linked psychopathy with violent criminal behaviour (Salekin et al., 1996; Serin & Amos, 1995; Weiler & Widom, 1996), the results of the present study revealed no differences among offender groups with respect to psychopathic personality characteristics. Exploratory analysis also revealed no differences between nonoffenders and offenders on the measure of psychopathic personality characteristics.

The present study also explored the associations among bonds to parents in childhood, adult attachment patterns, and psychopathy. Contrary to expectations, bonds with parents and adult attachment patterns did not predict psychopathic personality characteristics. Although theories of adult attachment (Bartholomew, 1990) and psychopathy (Hare et al., 1992) suggest that men with

psychopathic personality characteristics would be more likely to have experienced rejection by parents and have dismissing attachment patterns in adulthood, the present research did not support this.

One explanation for the lack of significant results related to psychopathy in the present research may be problems with the instrument used to assess psychopathy. The SPI purports to measure the intrapersonal and interpersonal characteristics of psychopathy whereas most previous research has used the PCL-R, which evaluates both personality and antisocial lifestyle components of psychopathy. Given that the personality factor of the PCL-R has demonstrated weaker predictive power (Hemphill & Hare, 1995; Serin, 1996; Shine & Hobson, 1997), previous findings that differentiate offenders from nonoffenders and violent offenders from nonviolent offenders may be primarily related to the antisocial lifestyle factor of the PCL-R. In a sense, this is a problem because it appears to be little more than a restatement of the finding that "the best predictor of future antisocial behaviour is previous antisocial behaviour." This was the rationale for using the SPI in the present study. However, based on the lack of significant correlations between PCL-R scores and SPI scores for a small subsample of offenders in the present study, it may be that the SPI in its present form is limited in terms of its validity as a measure of psychopathic personality characteristics. On the other hand, preliminary data on the SPI suggests that it is correlated with measures of socialization, exploitiveness, vanity, dominance, nurturance, arrogance, and coldness (Hill, 1999; Hill & Wong, 1996). Further empirical research using the SPI and other measures of psychopathy is required to clarify this issue.

Abusive personality characteristics. According to Dutton and Starzomski (1993) personality characteristics that are common to wife batterers include low self-esteem, intense anger, unpredictability, and instability. Although these characteristics have been identified in research on wife batterers and interviews with battered women (Browne, 1987; Dewhurst et al., 1992; Dutton, 1993; Goldsmith; Hanson et al., 1997; O'Leary et al., 1994; Russell, 1990), comparisons of wife batterers to other violent men have revealed few differences with respect to these characteristics

(Hastings & Hamberger, 1988; Maiuro et al., 1988). Consistent with these findings, the present study found that men who were violent in relationships did not differ from men who were violent outside of relationships in terms of abusive personality characteristics as defined by Dutton (1995c). However, differences on abusive personality characteristics were found between nonviolent offenders and violent offenders as a whole, with violent offenders more likely to have difficulties in interpersonal relationships, abusive family histories, and severe reactions to stress. Given that the measure of abusive personality characteristics is, in part, defined by childhood abuse by parents (Dutton, 1995c), the differences on this measure may be related to violent offenders' more extreme experiences of family violence in childhood. This hypothesis is supported by the principal components analysis in the present study: experiences of violence in childhood, harsh discipline, and abusive personality characteristics formed one component labelled Family Abuse.

Male Peer Influences

Although the family environment is the primary training ground for children, peer relationships are also an important contributor to children's social development. According to the coercion training model, one consequence of poor social skills is often rejection from the normal peer group (Patterson et al., 1989, 1991). Rejection by prosocial peers is a risk factor for involvement in deviant peer groups that may subsequently reinforce antisocial attitudes and behaviour (Patterson et al., 1991). Research on dating relationships has linked negative male peer influences to violence in relationships (DeKeseredy, 1988a, 1988b). Studies of wife batterers and sexual offenders have also tentatively associated negative male peer influences with these offence patterns (Ageton, 1983; Bowker, 1983; Garrett-Gooding & Senter, 1987; Jackson, 1991; Sanday, 1990), although methodological problems make clear interpretations of the link between male peers and violence towards women difficult.

Consistent with past research (DeKeseredy, 1988a, 1988b), the present study found that negative male peer influences contributed to the predictive model of self-reported abusive

behaviour in relationships. However, comparisons between men who were violent outside of relationships and men who were violent within relationships revealed no differences with respect to male peer influences. These results suggest that male peer influences impact on the prediction of violence in relationships, but may not be specific to this type of violence. This is supported by the unpredicted finding that negative male peer influences differentiated offenders with pervasive patterns of violence (i.e., violence both within and outside the context of relationships) from domestically violent offenders. Given that these pervasive offenders also had longer aggregate prison sentences, it may be that more frequent and longer association with a deviant peer group within the prison system is an important factor in the maintenance of violent behaviour, both within and outside the context of relationships.

Cultural Factors

Although cultural attitudes have been considered important in the development and maintenance of woman abuse, the impact of specific attitudes on abusive behaviour in relationships is far from clear. Adherence to traditional sex roles has been linked to sexual aggression (Malamuth, 1986; Scott & Tetreault, 1987) and wife battering (Crossman et al., 1990; Stith & Farley, 1993). However, research with various other comparison groups suggests that the relationship between sexist attitudes and woman abuse is not clear (Dewhurst et al., 1992; Dutton, 1988a; Epps et al., 1993; Hall, 1990; Hotaling & Sugarman, 1986; Sugarman & Hotaling, 1989a, 1991).

Consistent with Crossman et al. (1990) and Stith and Farley (1993), adherence to traditional sex roles was a significant contributor to self-reported abusive behaviour in relationships in the present study. However, the lack of differences among offender groups suggests that adherence to traditional sex roles may be a predictor of antisocial behaviour in general, rather than specifically violent behaviour in relationships. Further, as with negative male peer influences, offenders with pervasive patterns of violence (i.e., both within and outside the context of relationships) differed from other violent offenders in terms of acceptance of sexist attitudes, suggesting that sexist

attitudes may be associated with more pervasive criminal behaviour patterns and extensive integration into the criminal subculture.

Predictive Model of Abusive Behaviour in Relationships

Although domestic violence offenders did not differ from generally violent offenders in terms of familial risk factors, attachment patterns, personality styles, male peer influences, or sexist attitudes, the predictive model of abusive behaviour suggests that the combination of these risk factors is critical to abusive behaviour in relationships. The multivariate predictive model of abuse in relationships in the present research extends previous research that has linked each of these risk factors individually to violence by men in relationships (e.g., Bowker, 1983; Crossman et al., 1990; Dutton, 1995b; Dutton & Starzomski, 1993; Jalbert, 1994; Johnston, 1988). However, as already discussed, lack of differences between domestic violence offenders and other violent offenders with respect to familial risk factors, attachment patterns, personality characteristics, influences from peers, and sexist attitudes calls into question the uniqueness of these risk factors in specifically predicting domestic violence. In other words, since these risk factors did not distinguish between *types* of violence, the predictive models for violence in relationships and violence in general may be similar.

It might be argued that inconsistencies between the group comparisons and the predictive model of abusive behaviour are related to differences in the definition of "domestic violence", i.e., the domestic violence groups were formed based on known criminal histories of physical violence in relationships and/or self-reported *physical* abuse in relationships. In contrast, the definition of abusive behaviour used for the predictive model included both *physical and psychological* abuse towards female partners. Thus, it is possible that familial risk factors, insecure attachment styles, negative influences from peers, abusive personality characteristics, and sexist attitudes hold explanatory value for generally abusive behaviour in relationships, but not more specifically for physically abusive behaviour. On the other hand, an exploratory analysis of the predictive model for self-reported *physical* abuse in relationships indicated that these risk factors *were* important

predictors of physical abuse, suggesting that the models for general (psychological and physical) abuse in relationships and, more specifically, physical abuse in relationships are fairly similar.

Practical Implications

The results of the present study point to the significance of familial factors in the development of criminality and violent behaviour. Consistent with the findings of the Eugene Oregon research group (Patterson, 1986; Patterson & Bank, 1986; Patterson et al., 1991; Snyder & Patterson, 1987), the impact of poor parenting practices on the development of antisocial behaviour suggests a need for more preventative programs. In particular, parent training groups may help unskilled parents develop more effective and less harsh discipline styles and increase their involvement with their children, and in turn may decrease the risk for adult criminal or antisocial behaviour in these children.

Similarly, training in interpersonal problem-solving may be beneficial for both parents and children, equipping them a variety of alternative nonaggressive strategies to deal with interpersonal difficulties, both in the family and outside of the family environment and thus reducing the risks for using aggression as the primary method for interpersonal problem-solving. Given that the majority of offenders in the present study (79%) reported arrests in their youth, early prevention of antisocial behaviour is critical. The development of prosocial skills may also reduce children's risk for antisocial behaviour at an early age, and in turn may increase opportunities for relationships with prosocial peers.

Given that patterns of violence in relationships may also begin early (Dobash & Dobash, 1979; Gamache, 1991), educational groups for adolescents focusing on relationship and communication skills may serve as a preventative factor. One purpose of these groups would be to teach youths alternative strategies for problem resolution in relationships. A second purpose would be to increase awareness of early signs of abusive behaviour (e.g., demands to stop other friendships, jealousy) and increase the victim's ability to leave such relationships before a pattern of physical abuse can begin.

Limitations of the Study

Sampling Issues

Both students and offenders in the present study were volunteers. As a result, both samples represent men who were interested and willing to participate in the present study and may not represent men who were not interested or willing to participate. This sampling bias may affect the generalizability of the results of the present study.

Although attempts were made to select groups that were comparable in terms of demographic variables, the use of a student sample as the nonoffender comparison group makes clear interpretation of differences between nonoffenders and offenders problematical. Compared to offenders, nonoffenders were younger and better educated. Given that the nonoffenders were recruited from college, the educational differences are primarily due to sampling bias and were expected. Because they were older, offenders' may simply have had more opportunity to be violent in close relationships. However, no differences between nonoffenders and offenders were found with respect to number or length of intimate relationships. Further, age was not significantly correlated with self-reported abusiveness in relationships.

An additional sampling problem is that college students may be more likely to come from stable and supportive family backgrounds and therefore may be less likely than other groups of men in the community to report experiences of family violence in childhood, poor parenting, and unstable adult relationships. Unfortunately, attempts to obtain a sample of men from a more comparable population (i.e., unemployed men from the general community) resulted in a low rate of responding and had to be abandoned. Although a general community sample would have been a more appropriate comparison group in terms of demographic factors, Holtzworth-Munroe et al. (1992) argue that violence in relationships committed by men in "nonviolent" control groups (up to 33% of non-maritally distressed men and up to 50% of maritally distressed men) makes it difficult to recruit a community sample of nonviolent men.

Assignment of participants to the four offender groups (nonviolence, external violence,

domestic violence, and mixed violence) was based on criminal histories and self-reported criminal behaviour. Ideally, each group would consist of offenders with a specific offending pattern. Realistically, unreported and undetected criminal activity may have led to the misclassification of some offenders. Further, given that offenders ranged in age from 19 to 54 years, younger offenders may be relatively early in their criminal careers. Although findings of the present study indicated that nonviolent and violent offenders did not differ with respect to age, offenders in the domestic violence group were significantly older than offenders in the external violence group. As a result, offenders in the domestic violence group may have had more opportunity to be violent in relationships. Further, as offenders age, commission of new and potentially different types of offences may result in reclassification into a different offender group.

Finally, other than classification based on the type of violence, the present study did not take into account the severity and frequency of the violent criminal behaviour. As a result, the similarity of offenders in each group may be questionable (e.g., one offender in the external violence group might have three aggravated assault charges, whereas another offender may have had only a single simple assault charge).

Measurement Issues

Measurement issues related to low internal consistencies of the four subscales of the Relationship Scales Questionnaire (RSQ) may have affected the reliability of the results of analyses using this measure. However, use of a second measure of attachment (the Relationships Questionnaire) in an exploratory analysis supported the findings related to attachment patterns as measured by the RSQ. Further, the low internal consistencies in the present study are consistent with data reported by Griffin and Bartholomew (1994a), who argue that the low internal consistencies of the subscales of the RSQ are attributable to the underlying constructs of each subscale (i.e., the measurement of both perceptions of self and perceptions of others), rather than to scale unreliability.

As already discussed, the validity of the Social Personality Inventory (SPI) as a measure of

psychopathic personality characteristics is questionable. Although the SPI focuses on intrapersonal and interpersonal characteristics of psychopathy, it was not significantly correlated with the personality component (Factor 1) of the PCL-R. The small sample size for the comparison of the PCL-R to the SPI may limit the reliability of these correlations. The lack of differences between nonoffenders and offenders on the SPI was also unexpected. It may be that the personality characteristics of psychopathy are as common in the general population as they are in the offender population. Alternatively, similarity between nonoffenders and offenders on the SPI may be due to psychometric validity issues.

A general measurement issue in the present study is the reliance on self-reports of participants. Given that many of the questionnaires are face valid and ask about personal information, participants may have a tendency to present themselves in a favourable manner. For example, although offenders in the domestic violence groups had known histories of violence in relationships, they may have under-reported physical abuse in relationships on the Abusive Behaviour Inventory. Although the inclusion of a social desirability measure helped to statistically control for biased responding, the results may still be influenced by more "sophisticated" respondents who answer in a more honest manner on less personal questionnaires (that may include the measure of social desirability) but have a tendency to be biased on questionnaires focusing on more personal information (e.g., sexual experiences, violence in relationships).

Reliance on self-report for family background variables creates an additional methodological problem. The current psychological state of adult individuals or intervening circumstances could conceivably alter perceptions of childhood experiences. Positive relationships with family members in adulthood may positively bias perceptions of family relationships in childhood; likewise, negative relationships with family members or a search for explanations for negative life circumstances may negatively bias perceptions of family in childhood. On the other hand, although retrospective accounts may be unreliable at times, one can argue that current perceptions of childhood events can have as much impact on our current psychological state as actual events in

childhood. Given this, retrospective accounts may be biased in a way that reflects their impact on the participants' current functioning. However, because this bias may not occur in a similar fashion for all respondents, reliance on retrospective accounts may be problematic (Widom, 1989).

Design Issues

Although the present study includes a "predictive model" of abusive behaviour, caution in interpreting causality in the present study is warranted. Given that the predictive model is correlational in nature, it may be that self-reported abusive behaviour in relationships impacts on predictor variables (i.e., self-reports of family violence and relationship with parents, self-perceptions of attachment patterns in relationships, relationships with male peers, and attitudes related to gender roles). Further, variables that were not measured in the present study (e.g., alcohol and drug use, anger, need for power) may also be influencing both the predictor variables and the criterion variable (i.e., abusive behaviour in relationships). Similar problems arise in the group analyses. In addition, the discussion of "risk factors" for general and violent criminal behaviour must be interpreted with caution. Although the present research suggests group differences between nonoffenders and offenders and between nonviolent offender and violent offenders, delineation of causal pathways for general criminality and violent behaviour should be confirmed with longitudinal designs.

A second design issue relates to issues of power in the present study. This is most relevant for the group analyses, which relied on small samples of domestic violence offenders. Obtaining a sample of "pure" domestic violence offenders (i.e., with no other convictions of violence) was challenging. This may be a reflection of conviction and sentencing rates for charges of domestic violence. Historically, men charged with domestic violence have had lower rates of conviction than other types of violent crimes, and men convicted of domestic violence have tended to be referred to community treatment programs rather than sentenced to prison (Schechter, 1982). Although larger sample sizes may have influenced the findings of the present study, the small effect sizes in the analyses of differences among violent offender groups suggest that, even with a larger sample,

finding significant group differences among violent offender groups would have been unlikely.

A third design issue in the present study is the problem of experimentwise error. Although corrections were made to the alpha level for multiple univariate analyses, the number of multivariate analyses across the experiment is problematic in terms of Type I error rates. The alternative of conducting fewer analyses, with more variables in each analysis, would have substantially decreased power and reduced interpretability of the results. Given that the Type I error probability in most of the multivariate analyses in the present study was conservative (i.e., less than .01), it is hoped that the problem of experimentwise error was minimized. Although adjusting the Type I error probability to a more conservative level may also result in a decrease in power, the statistical power in the present study was appropriate to detect the small effect sizes in most of the analyses.

A final design issue is related to generalizability. Nonoffender participants in the present study were recruited from a community college and, therefore, generalization to men in the general community warrants caution. In addition, given that the offender sample was recruited from Canadian, and more specifically, Ontario provincial correctional facilities, results may not be generalizable to offender samples from other types of correctional facilities (e.g., federal institutions), to offender samples referred to the community, or to samples from correctional facilities with different demographic mixes (e.g., another region of Canada).

Future Directions

Given that the measure of psychopathic personality characteristics in the present study was relatively new, further investigation examining the links between psychopathy and attachment styles may prove interesting. In addition, exploration of the differences among various types of violent offenders on alternative measures of psychopathy (e.g., the Interpersonal Measure of Psychopathy recently developed by Kosson et al., 1997) may help to clarify the findings of the present research.

Longitudinal research focusing on the development of domestic violence would provide

further insight into the causal pathways for violence in relationships and would confirm whether these pathways are indeed the same as pathways to general violence. Multivariate research on abusive behaviour patterns in relationships of adolescent boys may also increase our understanding of the developmental processes related to abusive behaviour in relationships.

Research on violent offenders from other correctional populations may increase the generalizability of the present findings. In particular, research on offenders incarcerated in maximum security institutions would provide an understanding of the role of familial factors, attachment patterns, personality characteristics, male peer influences, and attitudes in more extreme violent behaviour (e.g., murder) or more persistent and pervasive violence. Further, comparisons of incarcerated domestic violence offenders to a sample of men in treatment for domestic violence from the community would provide insight into possible differences between these two samples of men with known histories of domestic violence.

Given that incarcerated sexual offenders may be a unique group in terms of offending patterns (i.e., sexual aggression outside the context of an intimate relationship) and levels of violence, a sample of incarcerated sexual offenders was not included in the present research. However, comparisons of incarcerated sexual offenders to other types of violent offenders would increase our understanding of risk factors for sexual aggression and help clarify whether the development pathways for this offending pattern are similar to other types of violence. Because incarcerated sexual offenders tend to have more extreme patterns of offending, more extremely violent comparison groups (e.g., offender from maximum security institutions) may be more appropriate. An alternative strategy to investigate risk factors for sexual aggression and physical aggression in dating relationships is to survey large samples of college and university students and to compare men who self-report sexual aggression to those who self-report physical violence in relationships.

Future research focusing on other variables that were not included in the present study may also prove interesting. More specifically, exploration of the role of alcohol use, drug use, power and control issues, anger, depression, self-esteem, and jealousy may increase our understanding

of specific types of violent behaviour, particularly domestic violence.

Finally, the purpose of the present research was to investigate *group* differences that may increase our understanding of antisocial and violent behaviour. Although this quantitative approach provides a overall picture of risk factors for criminal behaviour, individual differences within groups are not evaluated. Future research may benefit from distinguishing types of batterers, as suggested by Holtzworth-Munroe and Stuart (1994). Further, although qualitative research has disadvantages, the combination of quantitative and qualitative research methods may provide further information on risk factors for violence in individual men and may help to direct future research.

Conclusion

The purpose of this study was to explore risk factors for aggression and, more specifically, aggression in the context of relationships. The findings of the present study suggest that family violence in childhood, poor bonds with parents, interpersonal problem-solving deficits, insecure attachment patterns in adult relationships, abusive personality characteristics, negative influences from male peers, and sexist attitudes are important predictors of aggression in relationships. These risk factors also differentiated nonoffenders from offenders. However, the lack of differences among offender groups on these predictors points to a more general model of criminality, consistent with results of longitudinal studies with violent and nonviolent offenders. The findings of the present study have important implications for children and youths who are at risk (i.e., have violent family backgrounds, unskilled parents, and social skills deficits) and suggest the need for early prevention in order to alter the developmental path for these children.

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Appendices

Appendix A

Poster Advertisement (Community Sample)

Relationships Study

- **Men - 20 to 35 years old**
- **Are you interested in participating in a research project examining family and personal relationships?**
- **Your involvement would include a short interview and answering several short questionnaires. Participation would involve between one and two hours of your time.**
- **Participation is voluntary and all information will be kept confidential.**
- **You will be paid $10 for your participation.**
- **For more information, please contact Shelley Jordan, Graduate Student in Psychology, University of Ottawa.**
- **Phone: 741-3253 (Please leave a message)**

Étude portant sur les relations interpersonnelles

- **Hommes âgés de 20 à 35 ans**
- **Seriez-vous interessé de participer à un projet d'étude examinant les relations familiales et interpersonnelles?**
- **On vous demandera premièrement de participer à une brève entrevue et ensuite de compléter quelques courts questionnaires.**
- **Ceci vous demandera environ une à deux heures de votre temps.**
- **Votre participation est volontaire et confidentielle.**
- **On vous offrira une rénumération de 10$ pour votre participation.**
- **Pour plus d'informations, veuillez communiquer avec Shelley Jordan, étudiante diplômée en psychologie, de l'Université d'Ottawa**
- **Tél.: 741-3253 (Prière de laisser un message)**

Appendix B

Interview

Background Information

1. Age: _____

2. Ethnic Background: _____

3. Education Level: _____

4. Primary Caregivers: (biological mother, biological father, adopted mother, adopted father, other): _____

5. Educational Level of Primary Caregivers: _____

6. Employment of Paternal Caregiver: _____

7. Employment of Maternal Caregiver: _____

8. Number and sex of siblings: _____

9. Offence History:
   - Age and type of first arrest: _____
   - Type and number of offenses: _____
   - Institutional Offenses: _____

10. Work History:
    - Type and number of jobs: _____

11. Relationship History:
    - Number of Live-in Relationships: _____
    - Number of Steady Relationships: _____
    - Number of Casual Relationships: _____
    - Children: _____

Family Violence Questions

1. Did you experience physical abuse in childhood by your father? **No** **Yes**
   If so, how often? Never (1) to Very Frequently (5)

   1 2 3 4 5

2. Did you experience physical abuse in childhood by your mother? **No** **Yes**
   If so, how often? Never (1) to Very Frequently (5)

   1 2 3 4 5

3. How frequently did your parents fights when you were growing up?
   Never (1) to Very Frequently (5)

   1 2 3 4 5

4. How often did your father hit your mother? Never (1) to Very Frequently (5)

   1 2 3 4 5

5. How often did your mother hit your father? Never (1) to Very Frequently (5)

   1 2 3 4 5

Note. From Malamuth, N. M., Linz, D., Heavey, C. L., Barnes, G., & Acker, M. (1995). Using the confluence model of sexual aggression to predict men's conflict with women: A 10-year follow-up study. *Journal of Personality and Social Psychology, 69,* 353-369.

Harsh Discipline Scale

Never		About Half of the Time		Always
1	2	3	4	5

1. When you did something wrong, how often did your dad/mom lose his/her temper and yell at you?

   1 2 3 4 5

2. When you did something wrong, how often did your dad/mom spank or slap you?

   1 2 3 4 5

3. When punishing you, did your dad/mom ever hit you with a belt, paddle, or something else?

   1 2 3 4 5

4. When you did something wrong, how often did your dad/mom tell you to get out or lock you out of the house?

   1 2 3 4 5

5. When you think about times you spent with your dad/mom as an adolescent, how often did your interactions involve your dad/mom hitting, pushing, grabbing, or shoving you?

   1 2 3 4 5

Note. From Simons, R. L., Whitbeck, L. B., Conger, R. D., Chyi-In, W. (1991). Intergenerational transmission of harsh parenting. *Developmental Psychology, 27,* 159-171.

Parental Monitoring Scale

	Never 1	Sometimes 2	Always 3			
1.	Did your parents expect you to tell them when you would be home?			1	2	3
2.	Were you expected to leave a note about where you were going?			1	2	3
3.	Did your parents check in with you after school?			1	2	3
4.	When you arrived home after school, was someone at home?			1	2	3
5.	Did you know how to reach your parents when they were out?			1	2	3
6.	Did your parents ask you about your daily plans?			1	2	3

Note. From Dishion, T. J., Patterson, G. R., Stoolmiller, M., & Skinner, M. L. (1991). Family, school, and behavioural antecedents to early adolescent involvement with antisocial peers. *Developmental Psychology, 27,* 172-180. Copyright 1995 by the American Psychological Association. Adapted with permission.

Appendix C

Parental Bonding Instrument

This questionnaire lists various attitudes and behaviours of parents. As you remember your Father/Paternal Caregiver (Mother/Maternal Caregiver) in your first 16 years would you circle the most appropriate number next to each question.

Very Unlike 0	Moderately Unlike 1	Moderately Like 2	Very Like 3

1.	Spoke to me with a warm and friendly voice *(CARE)*	0	1	2	3
*2.	Did not help me as much as I needed *(CARE)*	0	1	2	3
*3.	Let me do things I like doing *(OP)*	0	1	2	3
*4.	Seemed emotionally cold to me *(CARE)*	0	1	2	3
5.	Appeared to understand my problems and worries *(CARE)*	0	1	2	3
6.	Was affectionate to me *(CARE)*	0	1	2	3
*7.	Liked me to make my own decisions *(OP)*	0	1	2	3
8.	Did not want me to grow up *(OP)*	0	1	2	3
9.	Tried to control everything I did *(OP)*	0	1	2	3
10.	Invaded my privacy *(OP)*	0	1	2	3
11.	Enjoyed talking things over with me *(CARE)*	0	1	2	3
12.	Frequently smiled at me *(CARE)*	0	1	2	3
13.	Tended to baby me *(OP)*	0	1	2	3
*14.	Did not seem to understand what I needed or wanted *(CARE)*	0	1	2	3
*15.	Let me decide things for myself *(OP)*	0	1	2	3
*16.	Made me feel I wasn't wanted *(CARE)*	0	1	2	3
17.	Could make me feel better when I was upset *(CARE)*	0	1	2	3
*18.	Did not talk with me very much *(CARE)*	0	1	2	3
19.	Tried to make me dependent on him(her) *(OP)*	0	1	2	3

20.	Felt I could not look after myself unless he(she) was around *(OP)*	0	1	2	3
*21.	Gave me as much freedom as I wanted *(OP)*	0	1	2	3
*22.	Let me go out as often as I wanted *(OP)*	0	1	2	3
23.	Was overprotective of me *(OP)*	0	1	2	3
*24.	Did not praise me *(CARE)*	0	1	2	3
*25.	Let me dress in any way I pleased *(OP)*	0	1	2	3

*Items are reverse-scored.

CARE denotes items from the Care Subscale.
OP denotes items from the Overprotection Subscale.

Note. From Parker, G., Tupling, H., & Brown, L. B. (1979). A Parental Bonding Instrument. *British Journal of Medical Psychology, 52,* 1-10. Copyright 1979 by The British Psychological Society. Reprinted with permission.

Appendix D

Means-Ends Problem Solving Test (MEPS)

Instructions: In this procedure we are interested in your imagination. You are to make up some stories. For each story you will be given the beginning of the story and how the story ends. Your job is to make up a story that connects the beginning and the ending. In other words, you will make up the middle of the story.

1. Mr. A. was listening to the people speak at a meeting about how to make things better in the neighbourhood. He wanted to say something important and have a chance to be a leader too. The story ends with him being elected leader and presenting a speech. You begin the story at the meeting where he wanted to have a chance to be leader.

2. H. loved his girlfriend very much, but they had many arguments. One day she left him. H. wanted things to be better. The story ends with everything fine between him and his girlfriend. You begin the story with his girlfriend leaving him after an argument.

3. Mr. P. came home after shopping and found that he had lost his new watch. He was very upset about it. The story ends with Mr. P. finding his watch and feeling good about it. You begin the story where Mr. P. found that he had lost his watch.

4. Mr. C. had just moved in that day and didn't know anyone. Mr. C. wanted to have friends in the neighbourhood. The story ends with Mr. C. having many good friends and feeling at home in the neighbourhood. You begin the story with Mr. C. in his room immediately after arriving in the neighbourhood.

5. During the Nazi occupation a man's wife and children were viciously tortured and killed by an SS trooper, and the man swore revenge. The story begins one day after the war, when the man enters a restaurant and sees the ex-SS trooper. The story ends with the man killing the SS trooper. You begin when he sees the SS trooper.

6. One day Al saw a beautiful girl he had never seen before while eating in a restaurant. He was immediately attracted to her. The story ends when they get married. You begin when Al first notices the girl in the restaurant.

7. Bob needed money badly. The story begins one day when he notices a valuable diamond in a shop window. Bob decides to steal it. The story ends when he succeeds in stealing the diamond. You begin when he sees the diamond.

8. John noticed that his friends seemed to be avoiding him. John wanted to have friends and be liked. The story ends when John's friends like him again. You begin where he first notices his friends avoiding him.

9. One day George was standing around with some other people when one of them said something very nasty to George. George got very mad. George got so mad he decided to get even with the other person. The story ends with George happy because he got even. You begin the story when George decided to get even.

10. Joe is having trouble getting along with the foreman on his job. Joe is very unhappy about this. The story ends with Joe's foreman liking him. You begin the story where Joe isn't getting along with his foreman.

Note. From Platt, J. J., & Spivack, G. (1975). *Means-ends problem-solving: The MEPS procedure manual.* Philadelphia: Department of Mental Health Sciences, Hahnemann University.

Appendix E

Relationship Scales Questionnaire

Please circle the number that <u>best describes you</u> for each of the following statements.

Not At All Like Me 1 | Not Like Me 2 | Somewhat Like Me 3 | Like Me 4 | Very Like Me 5

1.	I find it difficult to depend on other people. *(FEAR)*	1	2	3	4	5
2.	It is very important to me to feel independent. *(DIS)*	1	2	3	4	5
3.	I find it easy to get emotionally close to others. *(SEC)*	1	2	3	4	5
4.	I want to merge completely with another person.	1	2	3	4	5
5.	I worry that I will be hurt if I allow myself to become too close to others. *(FEAR)*	1	2	3	4	5
6.	I am comfortable without close emotional relationships. *(DIS, PRE*)*	1	2	3	4	5
7.	I am not sure that I can always depend on others to be there when I need them.	1	2	3	4	5
8.	I want to be completely emotionally intimate with others. *(PRE)*	1	2	3	4	5
*9.	I worry about being alone. *(SEC)*	1	2	3	4	5
10.	I am comfortable depending on other people. *(SEC)*	1	2	3	4	5
11.	I often worry that romantic partners don't really love me.	1	2	3	4	5
12.	I find it difficult to trust others completely. *(FEAR)*	1	2	3	4	5
13.	I worry about others getting too close to me.	1	2	3	4	5
14.	I want emotionally close relationships.	1	2	3	4	5
15.	I am comfortable having other people depend on me. *(SEC)*	1	2	3	4	5
16.	I worry that others don't value me as much as I value them. *(PRE)*	1	2	3	4	5
17.	People are never there when you need them.	1	2	3	4	5
18.	My desire to merge completely sometimes scares people away.	1	2	3	4	5

19.	It is very important to me to feel self-sufficient. *(DIS)*	1	2	3	4	5
20.	I am nervous when anyone gets too close to me.	1	2	3	4	5
21.	I often worry that romantic partners won't want to stay with me.	1	2	3	4	5
22.	I prefer not to have other people depend on me. *(DIS)*	1	2	3	4	5
23.	I worry about being abandoned.	1	2	3	4	5
24.	I am uncomfortable being close to others. *(FEAR)*	1	2	3	4	5
25.	I find that others are reluctant to get as close as I would like. *(PRE)*	1	2	3	4	5
26.	I prefer not to depend on others. *(DIS)*	1	2	3	4	5
27.	I know that others are there when I need them.	1	2	3	4	5
*28.	I worry about having others not accept me. *(SEC)*	1	2	3	4	5
29.	Romantic partners often want me to be closer than I feel comfortable being.	1	2	3	4	5
30.	I find it relatively easy to get close to others.	1	2	3	4	5

*Items are reverse-scored.

SEC denotes items from the Secure Subscale.
FEAR denotes items from the Fearful Subscale.
PRE denotes items from the Preoccupied Subscale.
DIS denotes items from the Dismissing Subscale.

Note. From Griffin, D. W., & Bartholomew, K. (1994). The metaphysics of measurement: The case of adult attachment. In K. Bartholomew & D. Perlman (Eds.), ***Attachment processes in adulthood*** (pp. 17-52).

Appendix F

Relationships Questionnaire

Rate each of the following paragraphs in terms of close relationships in your life:

1. 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. *(SECURE)*

Not At All Like Me						Very Much Like Me
1	2	3	4	5	6	7

2. 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. *(FEARFUL)*

Not At All Like Me						Very Much Like Me
1	2	3	4	5	6	7

3. 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. *(PREOCCUPIED)*

Not At All Like Me						Very Much Like Me
1	2	3	4	5	6	7

4. 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. *(DISMISSING)*

Not At All Like Me						Very Much Like Me
1	2	3	4	5	6	7

Of these 4 paragraphs, choose the one that <u>BEST</u> describes you:

____ Paragraph 1 ____ Paragraph 2 ____ Paragraph 3 ____ Paragraph 4

Note. From Griffin, D. W., & Bartholomew, K. (1994). The metaphysics of measurement: The case of adult attachment. In K. Bartholomew & D. Perlman (Eds.), *Attachment processes in adulthood* (pp. 17-52). Copyright 1994 by Jessica Kingsley Publishers. Reprinted with permission.

Appendix G

Male Peer Influences Questionnaires

I. Participation

The next questions are about your participation in various recreational, school, or work activities with other men. Indicate how many times you engaged in each activity with other men ***in the last 12 months***.

1 = never
2 = once or twice a month
3 = once a week
4 = two or three times a week
5 = four to six times a week

1.	worked on school assignments	1	2	3	4	5
2.	ran, exercised or played sports	1	2	3	4	5
3.	attended sports events as a spectator	1	2	3	4	5
4.	went to bars or nightclubs	1	2	3	4	5
5.	went to movies or plays	1	2	3	4	5
6.	went out for dinner or lunch	1	2	3	4	5
7.	worked for wages (a part-time or full-time job)	1	2	3	4	5

II. Friends' Dating Relationships

The next questions are about your male friends' dating relationships. For each of the following questions please indicate how many of your friends have engaged in each behaviour:

1. It has been noted that in the course of men's and women's sexual lives together, some men on occasion make physically forceful attempts (e.g., holding her down, twisting her arm, etc.) at sexual activities that are disagreeable and offensive enough that the women responds in an offended manner such as crying, fighting, screaming, pleading, etc. How many of your male friends would you estimate have engaged in such behaviour in the last 12 months?

None	A Few	Some	A Great Many
1	2	3	4

2. Some men occasionally resort to physical force (e.g., holding her down, twisting her arm, etc.) in order to resolve conflicts with their girlfriends or to make them fulfill some demand. How many of your friends would you estimate have engaged in such behaviour in the last 12 months?

None	A Few	Some	A Great Many
1	2	3	4

3. It has been noted in the course of a dating relationship, some men insult women, swear at them, and/or withhold affection. How many of your male friends would you estimate have engaged in such behaviour in the last 12 months?

None	A Few	Some	A Great Many
1	2	3	4

III. Information From Friends

The next questions are about the information your male friends may have provided in the last 12 months concerning how to deal with problems in dating relationships:

1. Did any of your male friends tell you that you should respond to your dates' or girlfriends' challenges to your authority by using physical force (e.g., holding her down, twisting her arm, etc.)?
   1. Yes
   2. No

2. Did any of your male friends tell you that you should respond to your dates' or girlfriends' challenges to your authority by insulting them?
   1. Yes
   2. No

3. Did any of your male friends tell you that it is alright for a man to hit his date or girlfriend in certain situations?
   1. Yes
   2. No

4. Did any of your male friends tell you that your dates or girlfriends should have sex with you when you want?
   1. Yes
   2. No

5. Did any of your male friends tell you that if a man spends money on a date, he should receive sexual favours in return?
   1. Yes
   2. No

6. Did any of your male friends tell you to respond to your dates' or girlfriends' sexual rejections by using physical force (e.g., twisting her arm, holding her down, etc.) to receive sexual rewards?
   1. Yes
   2. No

7. To what extent would your male friends approve of you showing your date or girlfriend who was the boss:

Strongly Approve	**Approve**	**Disapprove**	**Strongly Disapprove**
1	**2**	**3**	**4**

Note. From DeKeseredy, W. S. (1988). *Woman abuse in dating relationships: The role of male peer support.* Toronto: Canadian Scholars' Press. Copyright 1988 by W. S. DeKeseredy. Reprinted with permission.

Appendix H

Sexism Scale

Strongly Disagree	**Disagree**	**No Opinion**	**Agree**	**Strongly Agree**
SD	**D**	**N**	**A**	**SA**

Please circle the response that best describes how you feel about each of the following statements:

*1.	The job of plumber is equally suitable for men and women.	SD	D	N	A	SA
*2.	It's all right for the woman to have a career and the man to stay home with the children.	SD	D	N	A	SA
3.	Men make better engineers than women.	SD	D	N	A	SA
4.	Working women are too independent.	SD	D	N	A	SA
*5.	Women should not be discriminated against in getting manual labour jobs.	SD	D	N	A	SA
*6.	Driving a truck is equally suitable for men and women.	SD	D	N	A	SA
7.	It is more important for a wife to help her husband than to have a career herself.	SD	D	N	A	SA
8.	A woman should willingly take her husband's name at marriage.	SD	D	N	A	SA
9.	The husband should make the major decisions.	SD	D	N	A	SA
10.	The husband should handle money.	SD	D	N	A	SA
11.	A woman should wait until her children are out of school before she goes to work.	SD	D	N	A	SA
12.	A woman's purpose in life should be to take care of her family.	SD	D	N	A	SA
13.	Women should stay home and care for the children.	SD	D	N	A	SA
14.	The major responsibility of the wife is to keep her husband and children happy.	SD	D	N	A	SA

*15.	Women should have the same sexual freedom as men.	SD	D	N	A	SA
16.	Men are more emotionally suited for politics than are women.	SD	D	N	A	SA
*17.	Young girls are entitled to as much independence as young boys.	SD	D	N	A	SA
18.	Men are better leaders than women.	SD	D	N	A	SA
19.	Women are more envious than men.	SD	D	N	A	SA
20.	Women have more intuition than men.	SD	D	N	A	SA

*Items are reverse-scored.

Note. From Rombough, S., & Ventimiglia, J. C. (1981). Sexism: A tri-dimensional phenomenon. *Sex Roles, 7,* 747-755. Copyright 1981 by Plenum Publishing. Reprinted with permission.

Appendix I

Social Personality Inventory

This questionnaire examines people's attitudes about themselves and others. There is no correct answer, simply decide the extent to which you agree or disagree with the statement. Do not spend too much time thinking about your answer, just go with your first choice.

Rate your answer from 1 (Strongly Disagree) to 7 (Strongly Agree).

1	**2**	**3**	**4**	**5**	**6**	**7**
STRONGLY DISAGREE	DISAGREE	SLIGHTLY DISAGREE	NEITHER AGREE NOR DISAGREE	SLIGHTLY AGREE	AGREE	STRONGLY AGREE

1.	Planning things ahead of time takes away from excitement. *(INTRA)*	1	2	3	4	5	6	7
2.	If someone pushes me, I'll push right back. *(INTER)*	1	2	3	4	5	6	7
3.	I can get people to do what I want without them finding out. *(INTER)*	1	2	3	4	5	6	7
4.	Sometimes it seems trouble finds me. *(INTRA)*	1	2	3	4	5	6	7
5.	I can usually bend people to my will. *(INTER)*	1	2	3	4	5	6	7
6.	I can get what I want, when I want it. *(INTER)*	1	2	3	4	5	6	7
7.	No matter how hard I try, I get into trouble. *(INTRA)*	1	2	3	4	5	6	7
8.	I can get most people to eat out of my hand. *(INTER)*	1	2	3	4	5	6	7
9.	I'd rather tell a lie than explain myself to others. *(INTRA)*	1	2	3	4	5	6	7
*10.	I like to think things through before I do anything. *(INTRA)*	1	2	3	4	5	6	7
11.	Even though I get into trouble, I keep doing the same things. *(INTRA)*	1	2	3	4	5	6	7
12.	Most people are followers. *(INTER)*	1	2	3	4	5	6	7
13.	It's OK to use someone to get what you want. *(INTER)*	1	2	3	4	5	6	7
14.	Eventually people agree with me when I argue. *(INTER)*	1	2	3	4	5	6	7
15.	Sometimes you have to hurt other people's feelings. *(INTRA)*	1	2	3	4	5	6	7
*16.	Step-by-step planning makes things easier. *(INTRA)*	1	2	3	4	5	6	7

17.	If I'm not interested in something I think it's a waste of time. *(INTRA)*	1	2	3	4	5	6	7
18.	I'm a leader not a follower. *(INTER)*	1	2	3	4	5	6	7
19.	Everybody is out for themselves. *(INTRA)*	1	2	3	4	5	6	7
20.	I can ignore tense situations. *(INTRA)*	1	2	3	4	5	6	7
21.	Sometimes it seems people are asking to be used. *(INTER)*	1	2	3	4	5	6	7
22.	When I have a lot of things to do I tend to do something exciting. *(INTRA)*	1	2	3	4	5	6	7
23.	Stretching the truth doesn't really hurt anybody. *(INTRA)*	1	2	3	4	5	6	7
24.	Many people like to be told what to do. *(INTER)*	1	2	3	4	5	6	7
25.	People get hurt because of their own stupidity. *(INTRA)*	1	2	3	4	5	6	7
26.	People complain about their lives too much. *(INTRA)*	1	2	3	4	5	6	7
27.	It's alright to lie sometimes. *(INTRA)*	1	2	3	4	5	6	7
28.	If you are strong you don't cry. *(INTRA)*	1	2	3	4	5	6	7
29.	I tend to be the Life-of-the-Party. *(INTER)*	1	2	3	4	5	6	7
30.	If someone is being nice, they probably want something. *(INTER)*	1	2	3	4	5	6	7
31.	People are easy to convince. *(INTER)*	1	2	3	4	5	6	7
32.	I view myself as a rebel. *(INTER)*	1	2	3	4	5	6	7
33.	Only saints tell the truth all the time. *(INTRA)*	1	2	3	4	5	6	7
34.	I can be very convincing in an argument. *(INTER)*	1	2	3	4	5	6	7
35.	I don't feel obligated to anyone. *(INTER)*	1	2	3	4	5	6	7
36.	I always come out on top. *(INTER)*	1	2	3	4	5	6	7
*37.	I like to have things planned out. *(INTRA)*	1	2	3	4	5	6	7
38.	People are easy to control. *(INTER)*	1	2	3	4	5	6	7
39.	Everybody stretches the truth sometimes. *(INTRA)*	1	2	3	4	5	6	7
40.	Most people will do what you want if you treat them right. *(INTER)*	1	2	3	4	5	6	7

41.	It's OK to lie to someone to get what you want. *(INTRA)*	1	2	3	4	5	6	7
42.	In arguments, I'm always right. *(INTER)*	1	2	3	4	5	6	7
43.	Most people would rather tell a lie than explain themselves. *(INTRA)*	1	2	3	4	5	6	7
44.	I'm not afraid of an argument. *(INTER)*	1	2	3	4	5	6	7
45.	It's alright to lie as long as nobody gets hurt. *(INTRA)*	1	2	3	4	5	6	7
46.	I'd rather have fun than do something serious. *(INTRA)*	1	2	3	4	5	6	7

*Items are reverse-scored.

INTRA denotes items from the Intrapsychic Subscale.
INTER denotes items from the Interpersonal Subscale.

Note. From Hill, J. K., & Wong, S. (1996). *Social Personality Inventory (Version 1.1): Manual.* Unpublished manuscript, University of Saskatchewan.

Appendix J

Propensity for Abusiveness Scale

Please circle the number that best describes you for each of the following statements:

Not At All Like Me	Not Like Me	Somewhat Like Me	Like Me	Very Like Me
1	2	3	4	5

1.	I can make myself angry about something in the past just by thinking about it.	1	2	3	4	5
2.	I get so angry, I feel that I might lose control.	1	2	3	4	5
3.	If I let people see the way I feel, I'd be considered a hard person to get along with.	1	2	3	4	5
4.	I see myself in totally different ways at different times.	1	2	3	4	5
5.	I feel empty inside.	1	2	3	4	5
6.	I tend to feel things in a somewhat extreme way, experiencing either great joy or intense despair.	1	2	3	4	5
7.	It is hard for me to be sure about what others think of me, even people who have known me very well.	1	2	3	4	5
8.	I feel people don't give me the respect I deserve unless I put pressure on them.	1	2	3	4	5
9.	Somehow, I never know quite how to conduct myself with people.	1	2	3	4	5
10.	I find it difficult to depend on other people.	1	2	3	4	5
11.	I worry that I will be hurt if I allow myself to become too close to others.	1	2	3	4	5
12.	I am somewhat uncomfortable being close to others.	1	2	3	4	5

Beside each statement please write in the number of the response listed below (1-4) that best describes how often the experience happened to you with your mother (or female guardian) and father (or male guardian). If you had more than one mother/father figure, please answer for the persons who you feel played the most important role in your upbringing.

1	2	3	4
Never Occurred	Occasionally Occurred	Often Occurred	Always Occurred

		Father/ Male Guardian	Mother/ Female Guardian
1.	My parent punished me even for small offenses.	_____	_____
2.	As a child I was physically punished or scolded in the presence of others.	_____	_____
3.	My parent gave me more corporal punishment than I deserved.	_____	_____
4.	I felt my parent thought it was *my* fault when he/she was unhappy.	_____	_____
5.	I think my parent was mean and grudging toward me.	_____	_____
6.	I was punished by my parent without having done anything.	_____	_____
7.	My parent criticized me and told me how lazy and useless I was in front of others.	_____	_____
8.	My parent would punish me hard, even for trifles.	_____	_____
9.	My parent treated me in such a way that I felt ashamed.	_____	_____
10.	I was beaten by my parent.	_____	_____

How often have you experienced each of the following in *the last two months?*

Please circle the appropriate number.

	0 Never	1 Occasionally	2 Fairly Often			3 Very Often
1.	Insomnia (trouble getting to sleep)		0	1	2	3
2.	Restless sleep		0	1	2	3
3.	Nightmares		0	1	2	3
4.	Anxiety attacks		0	1	2	3
5.	Fear of women		0	1	2	3
6.	Feeling tense all the time		0	1	2	3
7.	Having trouble breathing		0	1	2	3

Note. From Dutton, D. G. (1995). A scale for measuring propensity for abusiveness. *Journal of Family Violence, 10,* 203-221.

Appendix K

Abusive Behaviour Inventory

In relationships people interact in a variety of ways. Below is a list of things that you might have done in relationships with wives/girlfriends.

Circle the appropriate number for each item.

1 = NEVER
2 = RARELY
3 = OCCASIONALLY
4 = FREQUENTLY
5 = VERY FREQUENTLY

1.	Called her a name and/or criticized her *(PSY)*	1	2	3	4	5
2.	Tried to keep her from doing something she wanted to do (example: going out with friends, going to meetings) *(PSY)*	1	2	3	4	5
3.	Gave her angry stares or looks *(PSY)*	1	2	3	4	5
4.	Prevented her from having money for her own use *(PSY)*	1	2	3	4	5
5.	Ended a discussion with her and made the decision yourself *(PSY)*	1	2	3	4	5
6.	Threatened to hit or throw something at her *(PHY)*	1	2	3	4	5
7.	Pushed, grabbed, or shoved her *(PHY)*	1	2	3	4	5
8.	Put down her family and friends *(PSY)*	1	2	3	4	5
9.	Accused her of paying too much attention to someone or something else *(PSY)*	1	2	3	4	5
10.	Put her on an allowance *(PSY)*	1	2	3	4	5
11.	Used her children to threaten her (example: told her that she would lose custody, said you would leave town with the children) *(PSY)*	1	2	3	4	5

12.	Became very upset with her because dinner, housework, or laundry was not ready when you wanted it or done the way you thought it should be *(PSY)*	1	2	3	4	5
13.	Said things to scare her (examples: told her something "bad" would happen, threatened to commit suicide) *(PSY)*	1	2	3	4	5
14.	Slapped, hit, or punched her *(PHY)*	1	2	3	4	5
15.	Made her do something humiliating or degrading (example: begging for forgiveness, having to ask your permission to use the car or do something) *(PSY)*	1	2	3	4	5
16.	Checked up on her (examples: listened to her phone calls, checked the mileage on her car, called her repeatedly at work) *(PSY)*	1	2	3	4	5
17.	Drove recklessly when she was in the car *(PSY)*	1	2	3	4	5
18.	Pressured her to have sex in a way that she didn't like or want *(PHY)*	1	2	3	4	5
19.	Refused to do housework or childcare *(PSY)*	1	2	3	4	5
20.	Threatened her with a knife, gun, or other weapon *(PHY)*	1	2	3	4	5
21.	Told her she was a bad parent *(PSY)*	1	2	3	4	5
22.	Stopped her or tried to stop her from going to work or school *(PSY)*	1	2	3	4	5
23.	Threw, hit, kicked, or smashed something *(PSY)*	1	2	3	4	5
24.	Kicked her *(PHY)*	1	2	3	4	5
25.	Physically forced her to have sex *(PHY)*	1	2	3	4	5
26.	Threw her around *(PHY)*	1	2	3	4	5
27.	Physically attacked the sexual parts of her body *(PHY)*	1	2	3	4	5
28.	Choked or strangled her *(PHY)*	1	2	3	4	5

29.	Used a knife, gun, or other weapon against her *(PHY)*	1	2	3	4	5	

PSY denotes items from the Psychological Abuse Subscale.
PHY denotes items from the Physical Abuse Subscale.

Note. From Shepard, M. F., & Campbell, J. A. (1992). The Abusive Behaviour Inventory: A measure of psychological and physical abuse. *Journal of Interpersonal Violence, 7,* 291-305.

Appendix L

Sexual Experiences Questionnaire

The following are things that some people have done. Please circle the answer that best describes what you have done.

1a. Have you ever had sexual intercourse with an adult female against her will?

never once twice 3-5 times 6 or more times

1b. How many different females?

none 1 2 3-5 6 or more

2a. Have you ever had sexual contact other than intercourse with an adult female against her will (e.g., touched her breasts, rubbed against her)?

never once twice 3-5 times 6 or more times

2b. How many different females?

none 1 2 3-5 6 or more

3a. Have you ever had sexual contact with an adult male against his will?

never once twice 3-5 times 6 or more times

3b. How many different males?

none 1 2 3-5 6 or more

4. Have you ever had any involvement (not as a victim) in any other unusual or illegal sexual behaviour?

never once twice 3-5 times 6 or more times

5. Have you ever been in trouble with the law because of your sexual behaviour (or because someone accused you of illegal sexual behaviour)?

never once twice 3-5 times 6 or more times

Note. Unpublished questionnaire by R. K. Hanson (1995). Adapted and reprinted with permission from R. K. Hanson.

Appendix M

Recruitment Script (Offender Sample)

My name is Shelley Jordan. I am a doctoral student in psychology at the University of Ottawa. I would like to invite you to participate in a research project examining family background and experiences in close relationships. The primary goal of this research is to explore how people learn patterns of interacting in close relationships.

If you choose to participate in this project, I will conduct a short interview with you (approximately 30 minutes) to find out more about your background and your family relationships. Following this interview, you will be asked to answer several short paper-and-pencil questionnaires focusing on your relationships, your personality style, your attitudes, and your criminal history. Finally, I will read parts of stories to you and ask you to continue the stories. I will audiotape your stories. Participation in this project will take between one and two hours of your time. With your permission, I will also briefly review your institutional file to obtain further background information about you.

Some of you may be asked to take part in a second phase of the project. This would involve a 90-minute interview about family background, school and employment history, and offence history. Participation in this second phase is voluntary.

Participation in this research project is completely **voluntary**. If you agree to participate, you have the **right to withdraw** from this project at any time. All information will be strictly **confidential** and your name will not appear on any questionnaires. Information collected during the course of this study will be used for **research purposes only**.

This research project has been approved by the Human Research Ethics Committee of The School of Psychology at the University of Ottawa and the Ministry of Correctional Services. If you have any questions or concerns about your participation in this study at any time, you may contact me or my thesis supervisor (Dr. David J. Baxter) at the School of Psychology, University of Ottawa.

Appendix N

Consent Form (Offender Sample)

Ms. Shelley Jordan
School of Psychology
University of Ottawa
(613) 562-5800 Ext. 4304

Dr. David J. Baxter
Rideau Correctional
and Treatment Centre
(613) 269-4771 Ext. 308

I am interested in participating in the research project being conducted by Ms. Shelley Jordan, Doctoral Student in Clinical Psychology, School of Psychology, University of Ottawa, under the supervision of Dr. David J. Baxter. This research has been approved by the Ministry of Correctional Services and the Human Research Ethics Committee of The School of Psychology at the University of Ottawa. The main purpose of this project is to examine family background and experiences in relationships in order to explore how people learn certain ways of interacting in close relationships.

If I agree to participate, my participation will consist of answering questions about my background and my family relationships in an interview with Ms. Shelley Jordan. This interview will last approximately 30 minutes. Following this interview, I will be asked to answer several paper-and-pencil questionnaires focusing on my relationships with my parents, the ways I interact in relationships, my personality style, my attitudes about gender roles, and my past criminal activity. I understand that the primary researcher or a research assistant will be present while I complete these questionnaires in order to answer any questions I may have or to read questions orally if I have difficulty. Finally, I understand that I will be asked to tell some stories about hypothetical situations. These stories will not involve personal information and will be audiotaped. Participation in this project will take between 1 and 2 hours of my time.

I understand that participation in this project includes a review of my institutional file in order to obtain information about my background and criminal history.

I understand that I have the **right to withdraw from this research study at any time.** I also understand that choosing not to participate, choosing not to answer particular questions, or withdrawing from the study will not affect the services I am currently receiving at the institution in any way.

I am aware that the information I will share will remain strictly **confidential.** I will not put my name on any questionnaires and I will place my questionnaires in a sealed envelope that will be number-coded. Further, no identifying information will be on the audiotaped portion of the project and these tapes will be erased after they are transcribed. In addition, no identifying information will appear on the interview or file information forms. These forms will also be number-coded.

I understand that information collected during the course of this study will be used for **research purposes only** and that **no** information obtained in this research study will become part of my institutional file. I also understand that there is a possibility that other psychologists may access the information collected during this research project for other **research** purposes.

I understand that some of the questions asked during this research project are of a personal nature. Given this, there is a possibility that I may feel slightly upset during or following participation in this project. Any concerns that I may have during my participation in the project can be addressed at that time with Ms. Shelley Jordan. Although it is unlikely that I will need further counselling, if necessary, counselling will be made available through the correctional institution.

If, at any time, I have questions about my participation in this research project I may contact Ms. Shelley Jordan or Dr. David Baxter.

If I agree to participate, I understand that the primary researcher will keep one copy of this signed consent form. I may keep the second copy.

Participant's Signature: _____ Date: _____

Researcher's Signature: _____ Date: _____

Appendix O

Electronic Mail Advertisement (Student Sample)

Relationships Study

- **Men** only
- Are you interested in participating in a research project examining family and personal relationships?
- Your involvement would include a short interview and answering several short questionnaires. Participation will take approximately one hour of your time.
- Participation is voluntary and all information will be kept confidential.
- You will be paid **$10** for your participation.
- For more information or to book an appointment, please contact **Shelley Jordan**, Graduate Student in Psychology, University of Ottawa.
- E-mail: **myaddress@internet.com**
- Phone: **741-3253** (Please leave a message)

Appendix P

Telephone/E-mail Recruitment Script (Student Sample)

Thank you for calling (writing). My name is Shelley Jordan. I am a doctoral student in psychology at the University of Ottawa. I would like to invite you to participate in a research project examining family background and experiences in intimate relationships. The primary goal of this research is to explore how people learn patterns of interacting in close relationships.

If you choose to participate in this project, I will conduct a short interview with you to find out more about your background and your family relationships. Following this interview, you will be asked to answer several short paper-and-pencil questionnaires focusing on your relationships, your personality style, and your attitudes. Finally, I will read parts of stories to you and ask you to continue the stories. I will audiotape your stories. Participation in this project will take approximately one to two hours of your time.

Participation in this research project is completely **voluntary**. If you agree to participate, you have the **right to withdraw** from this project at any time. All information will be strictly **confidential** and your name will not appear on any questionnaires. You will be paid $10 for your participation.

This research project has been approved by the Human Research Ethics Committee of The School of Psychology at the University of Ottawa and the Ministry of Correctional Services. If you have any questions or concerns about your participation in this study at any time, you may contact me or my thesis supervisor (Dr. David J. Baxter) at the School of Psychology, University of Ottawa.

To participate in this project, you must be a heterosexual man, with no criminal history. If you meet these criteria and are still interested in participating, we can set up an individual appointment for you to complete the study.

Appendix Q

Consent Form (Student Sample)

Ms. Shelley Jordan
School of Psychology
University of Ottawa
(613) 562-5800 Ext. 4304

Dr. David J. Baxter
Rideau Correctional
and Treatment Centre
(613) 269-4771 Ext. 308

I am interested in participating in the research project being conducted by Ms. Shelley Jordan, Doctoral Student in Clinical Psychology, School of Psychology, University of Ottawa, under the supervision of Dr. David J. Baxter. This research has been approved by the Ministry of Correctional Services and the Human Research Ethics Committee of The School of Psychology at the University of Ottawa. The main purpose of this project is to examine family background and experiences in relationships in order to explore how people learn certain ways of interacting in close relationships.

If I agree to participate, my participation will consist of answering questions about my background and my family relationships in an interview with Ms. Shelley Jordan. This interview will last approximately 20 minutes. Following this interview, I will be asked to answer several paper-and-pencil questionnaires focusing on my relationships with my parents, the ways I interact in relationships, my personality style, and my attitudes about gender roles. I understand that the primary researcher or a research assistant will be present while I complete these questionnaires in order to answer any questions I may have or to read questions orally if I have difficulty. Finally, I understand that I will be asked to tell some stories about hypothetical situations. These stories will not involve personal information and will be audiotaped. Participation in this project will take between 1 and 2 hours of my time. I understand that I will be paid $10 for my participation in this project.

I understand that I have the **right to withdraw from this research study at any time.**

I am aware that the information I will share will remain strictly **confidential.** I will not put my name on any questionnaires and I will place my questionnaires in a sealed envelope that will be number-coded. Further, no identifying information will be on the audiotaped portion of the project and these tapes will be erased after they are transcribed. In addition, no identifying information will appear on the interview form. This form will be number-coded to match my questionnaire envelope.

I understand that some of the questions asked during this research project are of a personal nature. Given this, there is a possibility that I may feel upset during or following participation in this project. I will be provided with a list of resources in the community that I can contact if I would like to further address any personal concerns.

If, at any time, I have any questions about my participation in this research project I may contact Ms. Shelley Jordan or Dr. David Baxter. If I agree to participate, I understand that the primary researcher will keep one copy of this signed consent form. I may keep the second copy.

Participant's Signature: _____ Date: _____

Researcher's Signature: _____ Date: _____

Appendix R

Community Resource List

Crisis Phone Lines

Ottawa Distress Centre (24-hour crisis line)	238-3311
Crisis Counselling - Ottawa YMCA (24-hour crisis line)	788-5063
Salvation Army General Information (24-hour information)	241-1573

Counselling Centres

Family Service Centre of Ottawa Carleton 119 Ross Avenue Ottawa, Ontario (sliding fee scale)	725-3601
Catholic Family Service 200 Isabella Street Ottawa, Ontario (sliding fee scale)	233-8478
Centre for Psychological Services University of Ottawa 11 Marie Curie Private, 6th Floor Ottawa, Ontario (sliding fee scale)	562-5289