

Running Head: IMPACT OF CHILD SEXUAL ABUSE...

Impact of Child Sexual Abuse, Abuse Severity and  
Social Support on Attachment

by

Chantal L. MacDonald

A Thesis submitted to the Faculty of Graduate Studies

In Partial Fulfillment of the Requirements for the Degree of

MASTER OF ARTS

Department of Psychology

University of Manitoba

Winnipeg, Manitoba

**THE UNIVERSITY OF MANITOBA**  
**FACULTY OF GRADUATE STUDIES**  
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## Abstract

One hundred eighty undergraduate students were sampled to test this studies hypotheses that 1) adult child sexual abuse survivors would demonstrate significantly lower attachment security and significantly higher attachment fearfulness, than their non-abused counterparts; 2) within the adult child sexual abuse group, current social support would predict current attachment security and abuse severity would function to moderate this relationship and; 3) within the adult child sexual abuse group, abuse severity would predict current attachment fearfulness and social support would function to moderate this relationship. Statistically significant findings were demonstrated for the first two hypotheses. Interestingly, while this study failed to find statistical support for the third hypothesis, ad-hoc analysis revealed support for a reversal of the hypothesis. Specifically, within the adult child sexual abuse group, current social support was found to significantly predict current attachment fearfulness and this relationship was significantly moderated by abuse severity. The results from this study represent an encouraging new direction to the child sexual abuse research base.

### Impact of Child Sexual Abuse, Abuse Severity and Social Support on Attachment

It has been estimated that 1 in 4, to 1 in 5 females and 1 in 10 males have been, or will be abused before his or her 18<sup>th</sup> birthday (e.g., Cosentino, Meyer-Bahlburg, Alpert, Weinberg, & Gaines, 1995; Friedrich, 1998; Webster, 2001). For example, Finkelhor (1994), in reviewing 19 studies throughout the United States and Canada, concluded that 20% was a reasonable estimate of abuse for females and that 5%-10% was a reasonable estimate of abuse for males (as cited by Leventhal, 1998). Finkelhor wisely cautioned however, that due to systematic variations in the samples studied, response rates, method of data collection, definitions of child sexual abuse used, as well as accuracy of and willingness to share often painful memories, the exact prevalence of child sexual abuse is unknown.

#### *Child Sexual Abuse*

As was mentioned by Finkelhor (1994), definitional ambiguity hampers the study of child sexual abuse prevalence. Indeed Haugaad (2000) noted that while the child sexual abuse research base has grown considerably over the last few decades, this growth has occurred in the absence of a universally agreed-upon definition of what actually constitutes child sexual abuse.

While the task of defining child sexual abuse, at face value, would seem to be a relatively easy task, little consensus has been reached as to how to define each of the three words making up the espoused construct. Firstly, the word "child" has been defined as an individual under the age of 18 (Wyatt, 1985), an individual under the age of 17 (Fromuth, 1986), and an individual under the age of 16 (Wurr & Partridge, 1996). Secondly, disagreement remains as to what constitutes a "sexual" act. Clearly, some acts, such as penetration, are recognized as sexual, other acts, such as

inappropriate looking (e.g., voyeurism), are not so easily recognized. Lastly and similarly, the word “abuse” has been equally difficult to define.

For purposes of this study, child sexual abuse was defined as (a) sexual contact (fondling, oral-genital contact, or intercourse) between a child age 15 years or younger and an individual who was 5 or more years older than the victim; (b) sexual contact between a child (15 years or younger) and a perpetrator who may not be 5 or more years older than the victim, but who used force or threats to ensure the victim’s compliance; (c) sexual contact at any age younger than 15, with someone of any age, if the experience was viewed by the individual as child sexual abuse (Roche, Runtz, & Hunter, 1999).

#### *Adult Negative Sequelae*

Adult survivors of child sexual abuse are at a higher risk for the manifestation of serious, and potentially long-lasting psychological distress, when compared to their non-abused cohorts (Coffey, Leitenberg, Henning, Turner, & Bennett, 1996).

As with the extremely varied symptom presentation seen in child survivors of sexual abuse, the documented sequelae of adult survivors is equally varied (Jonzon & Lindblad, 2004; Koopman, Gore-Felton, & Spiegel, 1997). For example, difficulties with impulse control, somatization, affect regulation, socialization, cognitive distortions, and an impaired sense of self are quite common in adult, child sexual abuse survivors, irrespective of psychological diagnosis (Putnam, 2003).

Common diagnoses made in the population of adult survivors are mood and anxiety disorders (e.g., dysthymia, major depression, social anxiety, etc.), drug addictions, posttraumatic stress disorder (PTSD), eating disorders such as bulimia, and a variety of personality disorders (e.g., borderline, histrionic, avoidant personality

disorder etc.; Fassler, Amodeo, Griffin, Clay, & Ellis, 2003; Owens & Chard, 2003; Putnam, 2003). To illustrate the often profound residual impact of child sexual abuse in adulthood, Owens and Chard found concluded that of their sample of female survivors of child sexual abuse met the diagnostic criteria for PTSD.

Given the complexity of the above mentioned sequelae observed in adult survivors of child sexual abuse, Putnam (2003) proposed that the best conceptual classification to encapsulate such variation is “disorders of extreme stress not otherwise specified” (DENOS). DENOS is typically characterized by (1) altered affect regulation, such as a preoccupation with suicide, explosive or inhibited anger, and persistent dysphoria; (2) transient alterations of consciousness, such as flashbacks and dissociative episodes; (3) altered self-perceptions, including helplessness, guilt, shame and self-blame; (4) altered relationships with others, such as persistent distrust, rescuer fantasies, withdrawal; (5) altered systems of meanings, including hopelessness, loss of faith, despair; and (6) somatization (Herman, 1992; Putnam, 2003).

Attachment theory allows for a further simplification to the DENOS classification. Specifically, the four adult attachment styles result from an interaction between internal working-model/schema of self (positive or negative) and internal working-model of generalized other (positive or negative) (Alexander, 1992; Roche et al., 1999). Given its simultaneous emphasis on interpersonal and intrapersonal functioning, attachment theory provides a means to further simplify criteria 3 and 4 of DENOS, with respect to adult survivors of child sexual abuse.

*Adult Attachment.* The psychological research pertaining to the effects of child sexual abuse on adult adjustment has burgeoned within the last three decades.

This increase however has occurred in the relative absence of a coherent and empirically based, relational conceptualization of sexual abuse and subsequent sequelae (Alexander, 2003; Leifer, Kilbane, & Skolnick, 2002). Attachment theory emphasizes the importance of both intrapersonal and interpersonal functioning. Given that these two areas of functioning are frequently and adversely impacted by child sexual abuse (recall points 3 and 4 of the DENOS classification), attachment theory is an excellent theoretical framework to understand child sexual abuse and its ramifications (Alexander, 1999, 2003; Roche et. al., 1999).

A revolutionary paradigm shift in the understanding of human behaviour resulted from John Bowlby's conceptualization of attachment (Bacon & Richardson, 2001). Bowlby (1982) conceived attachment to be an evolutionarily adaptive and biologically based bond that assures a child's proximity to his or her caregiver, especially during periods of perceived stress, danger/threat and fear (Bacon & Richardson). In response to the consistency and quality of the caregiver's responses to the child's proximity seeking behaviours, the child develops a set of "internal working models," or mental schemata of both self and generalized other. Model of self and other do appear relatively stable across time. For example, longitudinal research has found support for the stability of internal working-models, and hence attachment classification, in 72% of the infant/adult classifications studied (Waters, Merrick, Treboux, Crowell, & Albersheim, 2000).

Described by Bartholomew (1990, 1993), the models of self, in child and adulthood may be dichotomized as either positive (e.g., positive self-concept, sense of self as worthy of love and attention) or negative (e.g., negative self concept, sense of self as unworthy of love and attention). Similarly, models of other, in both child and

adulthood can be dichotomized as positive (e.g., perceiving others as trustworthy, caring and available) or as negative (e.g., perceiving others as uncaring, rejecting, and distant). When these models of self and other are made to interact, four styles of child and adult attachment emerge. Given that this study is concerned with adult attachment, descriptions of the personality characteristics associated with each of the four attachment classifications will be restricted to the adult population.

Those individuals with a “secure” attachment in adulthood (also known as the “secure” attachment in childhood), possess a positive internal working-model of both self and other. These individuals tend to have high self-esteem, are confident, trusting of others, and value interpersonal relationships (Alexander, 1992; 2003). Those who have a positive model of self and a negative model of other are said to have a “dismissing” attachment classification in adulthood (termed an “avoidant” attachment style in childhood). Dismissingly attached adults report an avowed lack of need for intimate relationships, are reticent to discuss topics of attachment and appear to be “more normal than normal” (Alexander, 2003, p. 345-346). That is, dismissingly attached individuals tend to be highly defensive and hence, often project an overly inflated sense of self-esteem. Adults demonstrating a “preoccupied” attachment style (termed “anxious-ambivalent” in childhood) have a positive model of other and a negative model of self. These individuals display a passive or angry preoccupation with attachment figures, and offer superfluous, confusing, and irrelevant information when discussing attachment figures. Adults with a preoccupied attachment style also tend to be clingy, lonely, have low self-esteem, and view conflict as a strategy for attaining intimacy (Alexander, 1992, 2003). Finally, and most severe, adults who possess a “fearful” attachment style (known as the “disorganized” attachment style in

childhood), have several contradictory models of self and other, which average out to a negative model of both self and other. According to attachment theory, childhood maltreatment and abuse are thought to be environmental precursors to the disorganized attachment in childhood (Alexander, 2003). If the childhood maltreatment is not resolved prior to adulthood, the disorganized attachment experienced in childhood is likely to manifest as the fearful attachment in adulthood. Borderline personality disorder, and various dissociative disorders are common to the population of fearfully attached adults (Alexander, 2003). Also analogous with the commonly reported symptoms of child sexual abuse, individuals with a fearful attachment are characterized by a fundamental sense of mistrust, badness and/or shame (Alexander, 2003).

While the empirical literature base connecting attachment theory to child sexual abuse related phenomena is burgeoning (e.g., Bolen, & Lamb, 2004; Green, A, 1998; Haapasalo, Puupponen, & Crittenden, 1999; Leifer, Kilbane, Skolnick, 2002; Longo, 2005) there is little published evidence to date, that sexual abuse can be specifically linked to any one pattern of insecure attachment (Bacon & Richardson, 2001). However, one published study was located where adult, female, sexual abuse survivors reported significantly less attachment security and significantly more attachment fearfulness than their non-abused counterparts (Roche et al., 1999). The authors of this study also found that adult attachment moderated the relationship between child sexual abuse and psychological adjustment in adulthood. While an isolated set of findings, the study by Roche et al. does seem to support the theoretical postulate that child sexual abuse has the potential to devastate both child and adult

attachment by lowering the positivity of both internal working model of self and other.

Indirect evidence supporting the relationship between adult child sexual abuse survivors and the fearful attachment can be generated by referencing the literature on both the interpersonal and intrapersonal functioning of adult child sexual abuse survivors. For example, DiLillo and Long (1999) found that adult sexual abuse survivors suffered from poorer communication, less relationship satisfaction, and lower levels of trust in their partners, than their non-abused counterparts. Similarly, Alexander, Schaeffer, Young and Kretz (unpublished manuscript cited by Alexander, 2003) found that sexual abuse history uniquely predicted marital dissatisfaction, low family cohesion and high family conflict in their sample of young mothers. Coupled with the previously mentioned intrapersonal difficulties associated with child sexual abuse (e.g., feelings of shame, badness and low self-esteem; Alexander, 2003; Banyard, Williams & Siegel, 2002; Guelzow, Cornett, Dougherty, 2002; Jonzon & Lindblad, 2004), this symptom presentation is strikingly similar to the characteristics of the fearful attachment described previously (Alexander, 1999, 2003; Glasser, 2001). In addition to the commonality of general interpersonal and intrapersonal difficulties, dissociation and dissociative disorders are also common to both groups of adults. (Alexander, 1992; Alexander, 2003; Koopman, Gore-Felton & Spiegel, 1997; Roche et al., 1999; Twaite & Rodriguez-Srednicki, 2004). As both fearfully attached adults and adult child sexual abuse survivors demonstrate similar covert and overt behaviours (e.g., interpersonal and intrapersonal difficulties), these two groups of adults should be related. Specifically, these findings indirectly suggest that if



childhood sexual abuse is not resolved, it may manifest as the fearful attachment presentation in adulthood.

### *Factors Moderating the Effects of Child Sexual Abuse*

The effects of child sexual abuse are wide ranging and highly variable. Indeed, some children do not manifest symptoms of child sexual abuse. For example, Caffaro-Rouget, Lang and van Santen (1989) found that 49% of sexually abused children in their sample (219 girls and 21 boys) were symptom-free at evaluation. Similarly, Conte and Schuerman (1987) found that 21% of sexually abused children in their sample were symptom-free at evaluation. While some researchers maintain that these children are truly "symptom-free," others suspect that this lack of symptomology reflects a phase of denial and shock. Consistent with this interpretation are findings of the "sleeper effect" or the presentation of abuse related symptoms months or even years after the abuse has subsided. For example, Webster (2001) noted that while one third of children show no immediate effects, as many as 30% of this "no effects" group show a progressive deterioration in emotional, psychological and social adjustment over time. This finding suggests that while sleeper effects do exist, some children (70% of one third, or 23%) truly are resilient, remaining symptom free over time.

Given the variability of child sexual abuse symptomatology and phenomena such as resiliency and sleeper effects, the goal of many research projects has been to identify variables that moderate the effects of child sexual abuse. While many variables have been isolated and examined to date, this study examined the effects of abuse severity and current social support on the attachment of adult survivors of child sexual abuse.

### *Abuse Severity*

Research has shown that child sexual abuse severity may be related to later psychological well-being. Haugaard (2000) loosely defined abuse severity as an index encapsulating variables such as *frequency* of abuse, abuse *duration*, whether or not *force* was involved, the degree of *pain* involved, and finally, the *type* of sexual activity. Elaborating on the type of sexual activity, Leventhal (1998) classified vaginal/anal intercourse or oral sex as very serious, digital penetration or genital contact as serious, and sexual touching of clothed genitals as least serious. Illustrating the importance of penetration as a severity variable, Webster (2001) noted that approximately two-thirds of sexually abused children who have experienced penetration evidence symptoms of PTSD. Similarly, Costentino et al. (1995) found that sexual abuse involving intercourse was associated with marked sexual behaviours in young female survivors of child sexual abuse. Additionally, and leading to a severity variable not outlined by Haugaard, Costentino et al. found sexual behaviours to be inversely related to *relationship to the abuser* ( $r = -.60, p = 0.005$ ). That is, children who had close relationships with their abuser (e.g., parent or other family member) exhibited more sexualized behaviours than those who were not as close to their abuser (e.g., a babysitter or a stranger). It is thought that personal familiarity is related to later functioning/adjustment because betrayal and role-confusion increase as a function of familiarity with, or closeness to the abuser (Webster). Other severity variables suggested are *age of abuse onset* (Merrill et al., 2001; Webster), *number of perpetrators* (Merrill et al.), *number of total child sexual abuse incidents* (similar to Haugaard's notions of duration and frequency; Merrill et al.), and *violence and fear* (similar to Haugaard's notions of pain and force; Webster).

Overall, the empirical findings relating the effects of child sexual abuse to abuse severity are mixed. However, this ambiguity within the literature is not surprising given that abuse severity represents a composite measure and hence depends largely on precisely *how* a researcher defines abuse severity (Merrill et al.).

### *Social Support*

As with abuse severity, social support is another highly intuitive and frequently studied child sexual abuse moderating variable. Cobb (1976) defined social support as “information leading the individual to believe that he or she is cared for, loved, esteemed and valued and is a member of a network of communication” (p.300). Additionally, social support has been postulated to impact psychological adjustment in one of two ways. Firstly, the *main effect model* of social support posits that social support *directly* impacts well-being/adjustment. That is, social support provides positive affect, a sense of predictability and stability and a recognition of self-worth, independent of the situation (Sarason, Sarason, & Pierce, 1990). Conversely, the *buffer model* posits that social support *indirectly* influences well-being, either when, or especially when an individual encounters a substantial amount of stress (Sarason et al.). While the majority of research has focused on social support as a main effect, the general consensus is that child sexual abuse victims with positive family environments and high levels of social support suffer less-extreme long-term symptoms and experience better short and long-term adjustment (Merrill et al., 2001; Tremblay, Hebert, & Piche, 1999).

In addition to positive family environments, social support is a particularly salient resiliency factor within the population of sexually abused individuals (Friedrich, 1998; Webster, 2001). How a child’s social support system responds to

that individual's disclosure of sexual abuse may either exacerbate the negative impact of child sexual abuse on psychological functioning, or foster resiliency and promote healing within the child. For example, Webster (2001) noted that parents who were loving, accepting and protective upon disclosure have a calm and reassuring effect on the child. Conversely, parents who minimized the abuse, discredited the child, were accusatory, angry, and/or aggressive intensified the negative effects of the abuse by fostering shame and guilt within the child.

While the majority of extant research focuses on the relationship between childhood social support and child survivors of sexual abuse, social support should theoretically be a resiliency factor in adult survivors of child sexual abuse. For example, Jonzon and Lindblad (2005) compared the psychological adjustment of 123 adult female child sexual abuse survivors to: 1) the degree of support given in response to abuse disclosure in childhood; 2) the degree of support given in response to abuse disclosure in adulthood, and; 3) the actual characteristics of the abuse (e.g., abuse severity). The goal of this project was to determine if adult disclosure impacts psychological well-being to a similar degree as childhood disclosure and to determine which factor, abuse severity or disclosure support, was the more salient predictor of psychological well-being in adult survivors of child sexual abuse. Results revealed that disclosure related support demonstrated a stronger relation to the long-term consequences of child sexual abuse than abuse severity characteristics. Further, and contrary to past findings, Jonzon and Lindblad found that only adulthood abuse disclosure characteristics were significantly related to psychological and psychosomatic symptoms in adulthood.

Further supporting the relationship between adult social support and the functioning of adult survivors of child sexual abuse, Bagley and Young (1998) demonstrated that the social work group therapy gains reported by 28 adult, female survivors of child sexual abuse were maintained six years six years after the therapy program commenced. McMillen and Zuravin's (1998) study of 154 adult, female survivors of child sexual abuse demonstrated that general perceived social support in adulthood was related to a decrease in self-blame for the abusive events. Koopman, et al., (1997) found that adult social support inversely predicted the acute stress symptoms, such as dissociation, of 32 adult, female survivors of child sexual abuse. Banyard, et al., (2002) found that perceived adult social support was a protective factor against the re-traumatization of 80 women who reported a history of child sexual abuse. Finally, Guelzow, et al., (2002) found significant and direct relations between paternal, friend and campus social support and the global self-worth of 44 adult female survivors of child sexual abuse.

### *Hypotheses*

The first research question addressed by this study was "do adult survivors of child sexual abuse demonstrate a different type of attachment pattern than non-adult child sexual abuse survivors?" More specifically, adult childhood sexual abuse survivors were hypothesized to score significantly lower on measures of attachment security and significantly higher on measures of attachment fearfulness, than their non-abused counterparts.

The second and third sets of hypotheses were structured to test a variety of models relating adult social support, and abuse severity to the attachment security and fearfulness of adult survivors of child sexual abuse. More specifically, main effect

models were compared to moderation (interaction) models. For each hypothesis, the moderation model was predicted rather than the main effect model. That is, in the second hypothesis, social support was expected to predict attachment security, and abuse severity was proposed to moderate this relationship. In the third hypothesis, abuse severity was expected to predict adult attachment fearfulness and social support was expected to moderate that relationship.

## Method

### *Participants*

One hundred eighty undergraduate students were recruited from three intersession Introductory Psychology courses at the University of Manitoba. All subjects received 1 course credit for their voluntary participation and alternative assignments were made available for students who did not wish to participate in this study. Participants were required to be 18 years of age or older in order to give informed consent. Further, while not required to speak English as their first language, participants were limited to those individuals fluent in English.

### *Procedure*

Four questionnaire administration sessions were conducted in two administration days. Administration sessions were two-hours in length and participants were welcomed into the session anytime within the two hour time period. To ensure the participant's privacy, administration sessions were conducted in a large lecture theatre. Informed consent was gained by having students read and sign a consent form (Appendix A) prior to completing the questionnaire. The tasks to be completed were outlined on the consent form and the participants were informed that if they chose not to participate or felt uncomfortable at any time during the

administration session, they were free to leave the session and still receive course credit.

Along with the consent form, participants received a questionnaire booklet to record their answers. The time required to complete the questionnaire was approximately 15 minutes and upon completion, participants received a debriefing handout which outlined the exact nature of the study (Appendix B). Further, due to the nature of this study telephone numbers for counseling resources were listed on the debriefing handout. Students were strongly encouraged to contact these resources if assistance was required. Finally, students were provided with information on how to report their experiences of child sexual abuse to the proper authorities if they had not already done so.

### *Measures*

In this study, attachment style (defined as security and fearfulness) was defined as the dependent variable for all three sets of hypotheses. For the first set of hypotheses, the independent variable was child sexual abuse. For the second and third sets of hypotheses, the independent variables were social support and abuse severity.

*Attachment.* The Relationship Questionnaire (RQ; Appendix D) was created by Bartholomew and Horowitz (1991; cited by Griffin & Bartholomew, 1994) and is comprised of four short paragraphs, each describing a prototypical attachment pattern as it applies in close adult peer relationships. Participants are asked to rate on a 7-point scale, each paragraph according to how well they resembled each prototype. Participants are also asked to identify which paragraph best describes them. However, as this study defines attachment as a *continuous* variable, as opposed to a

*discrete* variable, this portion of the questionnaire was excluded. Griffin and Bartholomew (1994) demonstrated the convergent validity of the RQ by noting that when reduced to its component factors, (e.g., model of self and model of other) the RQ model of self significantly correlated with both a peer interview ( $r = .41$ ) and friend report ( $r = .34$ ). The RQ model of other also significantly correlated with a peer interview ( $r = .48$ ) and friend report ( $r = .42$ ). The discriminant validity of the RQ was also demonstrated by a correlation of .12 between RQ model of self and model of other. Finally, Griffin and Bartholomew concluded that the RQ also demonstrates considerable predictive validity by finding a significant correlation between RQ model of self and an independent measure of self concept ( $r = .64$ ) and between RQ model of other and an independent measure of interpersonal orientation ( $r = .69$ ).

In addition to utilizing the RQ, or the measure used by Roche et al (1999), the Relationship Scale Questionnaire (RSQ; Appendix D) was also administered and served as a replication questionnaire. The RSQ was created by Griffin and Bartholomew (1994) and consists of 30 short statements. On a 5-point scale, participants rate the extent to which each statement best describes their characteristic style in close relationships. Of the 30 short statements, 5 items measure security (Appendix D; items 3, 7 [reverse code], 8, 10, 17 [reverse code]), 4 items measure insecure-preoccupation (Appendix D; items 5 [reverse code], 6, 11, 15), 5 items measure insecure-avoidance (Appendix D; items 2, 5, 12, 13, 16) and 4 items measure insecure-fearfulness (Appendix D; items 1, 4, 9, 14). As scoring utilizes 17 of the 30 questions (item 5 is scored twice, with the second scoring being reverse coded), for simplicity, this study omitted questions not scored. Concerning the



reliability of the RSQ, Ward, Hudson, and Marshall (1996) noted that internal consistencies of each of the RSQ attachment scales are variable (alphas ranging from .41 for the secure pattern to .70 for the dismissing pattern) because of the two orthogonal dimensions (self-model and other-model) being combined to create each pattern (e.g., secure attachment reflects positive self model and positive other-model quadrant and so forth). Despite this conceptual complexity, convergent validity has been demonstrated across the RQ, RSQ, and interview ratings (Griffin & Bartholomew, 1994; Reis & Grenyer, 2002). For example, Reis and Grenyer demonstrated the convergent validity for the RSQ by finding highly significant associations between RQ items and the four corresponding subscales of the RSQ. Further, discriminant validity was demonstrated by the finding that correlations were consistently higher for the relationship between corresponding rather than noncorresponding subscales. Similarly, when reduced to its orthogonal components (e.g., model of self and model of other), Griffin and Bartholomew found significant correlations between RSQ model of self and a peer interview ( $r = .50$ ) and partner-report ( $r = .49$ ) of female subjects. RSQ model of other also significantly correlated with a peer interview ( $r = .47$ ) and a partner report ( $r = .39$ ) in the same sample of females. Finally, discriminant validity was demonstrated by a small correlation of .14 between RSQ model of other and model of self, indicating that the RSQ does indeed measure two distinctive dimensions.

*Social support.* While this study could have assessed global, childhood social support, in general, or social support in response to child sexual abuse disclosure (either in adulthood or childhood) in specific, a global definition of adult support was chosen as most appropriate for this study. That is, given the relative lack of child

sexual abuse research on global, adult social support, a global measure of adult social support was determined to be most appropriate for this study.

To measure adult social support, Zimet, Dahlem, Zimet & Farley's (1988; as cited by Ponizovsky, Grinshpoon, Sasson & Levav, 2004) found) Multidimensional Scale of Perceived Social Support (MSPSS) was administered. The MSPSS (Appendix F) is a 12- item self-report measure used to assess an individual's level of satisfaction with support provided from three sources: family, friends and significant others (e.g., physician, social worker). This measure describes individuals the respondent would turn to if he/she had problems of a personal, health, or family nature, as well as financial and job or employment problems (e.g., "I get the emotional help and support I need from my family," or "I have friends with whom I can share my joys and sorrows," or "There is a special person who is around when I am in need"). Responses are scored on a 7-point scale from 1 ("completely disagree") to 7 ("completely agree"). MSPSS scores range from 12-84, with higher scores indicating greater satisfaction with the total support network. Concerning psychometric properties, Ponizovsky, Grinshpoon, Sasson and Levav (2004) found internal reliability coefficients (Cronbach's alpha) of the MSPSS dimensions ranging from 0.69 for significant other to 0.90 for support from friends. Slightly higher internal reliability coefficients were found by Dahlem, Zimet and Walker (1991) who reported a Cronbach alpha of .91 for the entire scale and .90, .94, and .95 for the family, friends and significant other subscales respectively. To investigate the factorial validity of the MSPSS, Dahlem et al., performed a principal components factor analysis. Consistent with past research, three factors were identified which together accounted for 83.9% of the variance. Further, items loaded

very strongly on their designated subscales (average loading = .864) and with minimal cross-loading (average cross-loading = .19). Cecil, Stanley, Carrion, and Swann (1995) demonstrated the convergent validity of the MSPSS by correlating MSPSS scores with the Network Orientation Scale (NOS). The NOS is a psychometrically sound 20-item self-report scale which measures a person's propensity to utilize his or her social support network. Moderate correlations were found between NOS total and MSPSS total ( $r = .31, p = .0006$ ) and between NOS total and MSPSS subscale scores: Family ( $r = .27, p = .002$ ), Friends ( $r = .30, p = .0009$ ) and Significant Other ( $r = .19, p = .04$ ). Taken together, the findings suggest that the MSPSS is a psychometrically-sound instrument.

*Child sexual abuse.* Consistent with the definition of child sexual abuse noted in the literature review portion of this paper, child sexual abuse survivors were identified as those individuals who answered "yes" to one or more of the following questions: (1) "have you ever had sexual contact (fondling, oral-genital contact, or intercourse) before the age of 15, with an adult who was 5 or more years older than you?" (2) "Have you ever had sexual contact, prior to the age of 15, with an individual who wasn't 5 or more years older than you, but who used force or threats to ensure your compliance?" (3) "Have you ever had sexual contact, prior to the age of 15, with someone of any age that you regarded as abusive?" A copy of these questions may be found in Appendix G.

*Abuse severity.* To assess abuse severity for those individuals answering positively to the child sexual abuse qualifying questions, an abuse severity index was created based on characteristics of abuse that research suggests are related to severity. This measure (Appendix H) indexes the following 11 abuse-specific characteristics:

number of sexual encounters, number of abuse perpetrators, age of abuse onset (reverse coded), duration, frequency, pain, force, coercion (e.g., trickery, bribery), threat, trust and closeness to the person initiating the sexual activity, penetration (digital, vaginal, anal), and a subjective measure of severity. Severity questions 2, 3, 4, 5 and 6 are direct questions measured by asking subjects to circle 1 of 5 possible responses (with the exception of question 4 which has 4 possible responses). Higher response values to each of these questions (with the exception of questions 3 and 5, which are reverse coded) indicates greater levels of abuse severity. Questions 6 to 12 are written in the form of statements (e.g., “the sexual encounter(s) was/were physically painful”) and subjects are asked to rate, on a 7-point likert scale, the degree to which they agree with the statements (1 – “Strongly disagree,” 5 – “Neutral,” 7 – “Strongly agree”). The abuse severity total score was then calculated by summing the response values associated with each of the 11 severity questions. The scores of the abuse severity index ranged from 11 to 73, with higher scores being associated with greater levels of abuse severity. Finally, questions 1 (e.g., gender of abuser) and 7 (e.g., “do you believe the sexual activity to be abusive?”) were incorporated into the index for exploratory purposes.

*Non-Child Sexual Abuse Related Trauma.* As trauma in general is thought to be associated with lowered levels of security and heightened levels of fearfulness, analysis of the first set of hypotheses may be confounded if other forms of trauma are allowed to vary. Thus, the Childhood Traumatic Events Questionnaire (CTES) was administered to reduce this possibility. The CTES (Appendix E) was constructed by Pennybaker and Susman (1988) and consists of six items relating to the death of a close family member, separation or divorce of parents, rape, molestation, or victim of

other violence, major illness in childhood, and any other major upheaval that may have shaped a person's life significantly, such as parental alcoholism. For purposes of this study, the rape and molestation portion of the CTES has been omitted as these events are assessed elsewhere in the study. Each item is scored for presence or absence of trauma ("yes/no"), age of the trauma onset, and the intensity/severity of trauma (1 = not at all traumatic to 7 = extremely traumatic). Pennebaker and Susman used the CTES to study a group of 204 employees of a large Texas corporation who were asked to complete a series of questionnaires about their health problems. A significant finding from that study was that early childhood traumatic experiences were related more to negative health problems than were recent traumas. In another study, Barsky, Wool, Barnett, and Cleary, (1994) used the CTES to differentiate hypochondriacal from non-hypochondriacal patients in a general medical outpatient clinic. For this study, a trauma index was created by adding the "no/yes" responses (scored 0 and 1 respectively) to the presence of each of the 5 traumatic events, resulting in a total which ranges from 0-5.

## Results

### *Psychometric Assessment of Measures*

*Multidimensional Scale of Perceived Social Support (MSPSS).* To assess the reliability of the MSPSS Cronbach alphas ( $\alpha$ ) were computed for the total MSPSS scale, as well as for the family, friends and significant other sub-scales. Consistent with the reliability statistics found in the literature, results revealed excellent reliability statistics with  $\alpha$  equaling .880, .850, .864 and .903 for each scale/sub-scale respectively.

*Relationship Scales Questionnaire (RSQ)*. To assess the reliability of the security and fearfulness scales of the RSQ, Cronbach alphas ( $\alpha$ ) were computed. The fearfulness scale was most reliable ( $\alpha = .65$ ) and the security scale suffered from relatively low reliability ( $\alpha = .31$ ). Exploratory Cronbach alphas were also computed for the dismissing and preoccupied scales. The dismissing scale had moderately low reliability ( $\alpha = .40$ ) and the preoccupied subscale had very low reliability ( $\alpha = .12$ ). While 3 of 4 RSQ attachment scales were associated a Cronbach alpha of less than 0.65 (e.g., the minimum alpha for reliable test administration), as Griffen & Bartholomew (1994) demonstrated substantial predictive validity between the RSQ and partner/peer interviews, the RSQ was maintained as one of two measures of attachment in this study. See Table 2 for a review of the RSQ reliability statistics.

*Relationship Questionnaire (RQ)*. The content validity of the RQ was assessed by correlating each RQ subscale with the corresponding RSQ subscale (e.g., convergent validity) as well as correlating each RQ subscale with the non-corresponding subscales of the RSQ (e.g., discriminant validity). Convergent validity was demonstrated by finding highly significant associations between each RQ subscale and its corresponding subscale on the RSQ. Discriminant validity was demonstrated by finding that correlations were consistently higher for the relationship between corresponding, rather than non-corresponding subscales. For example, the average correlation between corresponding subscales was 0.54 (e.g., convergent validation), and the average correlation between non-corresponding subscales was 0.02 (e.g., discriminant validation). See Table 2 for a review of these statistics.

*Abuse Severity Index (ASI)*. To assess the association between each item on the ASI and the total severity score, item-total correlations were computed for each

item in the index. Consistent with expectation, each item was found to correlate significantly with the total severity score. For example, the average item-total correlation was 0.61 and the highest correlation was between the total and the subjective severity item ( $r = .82$ ). Next, the subjective severity question was removed from the index and correlated with each item in the index. Results revealed a significant relationship between all items and the severity measure, except for the age of onset and threat. Slightly smaller than the average item-total correlation, the average item-severity correlation was 0.46.

#### *Preliminary Analysis*

*Missing data.* To avoid missing data, participants were told during recruitment, the importance of reading the questionnaire very carefully and answering all questions relevant, as openly and honestly as possible. All questionnaires were inspected for missing values as they were entered into the computer. Questionnaires with missing data were flagged and dealt with after the completion of the data entry phase. Heeding the precautionary instructions, the majority of participants answered all relevant questions and very little missing data were encountered. One subject failed to complete the Relationship Questionnaire (RQ) and hence was removed from the data set, bringing the total number of participants to 179, as opposed to the original 180. Another subject failed to answer one of the questions on the Relationship Scale Questionnaire. To remedy this missing value, a neutral score of "3" was entered into the data set. While a total of 34 participants reported child sexual abuse in their histories, two subjects did not complete the abuse severity index, and hence were excluded from the sample used to test the second and third sets of hypotheses. However, as the subjects did complete all other attachment-related

questions they were included in the sample used to test the first set of hypotheses. Two other child sexual abuse subjects failed to answer one of the likert scale abuse severity questions. To remedy these missing values, a neutral score of "4" was entered into the data base. Finally, one of the child sexual abuse victims did not indicate his/her gender. While this slightly muddies the child sexual abuse prevalence rates reported in this study, as this subject answered all other questions, his/her data were utilized in the study.

*Outliers.* To assess outliers, boxplots were created for the entire data set, the adult, child sexual abuse group and the non-child sexual abuse group, on social support and both the RQ and RSQ measures of adult security, fearfulness, preoccupation, and dismissal. Further, boxplots were created and assessed for outliers for the child sexual abuse group on the abuse severity measure. These boxplots, coupled with an outlier definition of observations deviating more than 1.5 times the value of the interquartile range either above the upper quartile or below the lower quartile, were utilized to identify outliers (Glass & Hopkins, 1996). Accordingly, one outlier was found for a child sexual abuse subject on the social support measure. This subject's data was double checked for data entry errors and scores on all other variables pertinent to this study were inspected to see if the subject had any other outlying scores. No data entry errors were made and all other scores for this subject were non-outlying values. As this subject was an outlier on only one variable (e.g., social support total) and given the rather small child sexual abuse sample size, this subject's scores were not removed from the data set.

*Normality.* To assess normality, skew statistics, boxplots, stem and leaf plots, as well as histograms were created for the entire data set, the child sexual abuse-



group and the non-child sexual abuse group, on social support and both the RQ and RSQ measures of security, fearfulness, preoccupation, and dismissal. This descriptive procedure was also conducted for the child sexual abuse group on the abuse severity measure. The boxplots, stem and leaf plots and histograms were visually inspected for the appearance of normality and the skew statistics were consulted for a more refined measure of normality (e.g., skew statistics close to zero indicate normality). Accordingly, all distributions, except social support, were sufficiently normal. The slightly negative skew found for social support was not unexpected given the previously-mentioned outlying value was not removed from the data set. Given that the skew was mild and the robust nature of the t-test to violations of the normality assumption, the social support distribution was not transformed in an attempt to achieve normality.

### *Descriptive Statistics*

Of the 179 participants, 145 subjects did not report a history of child sexual abuse. Females comprised 62.15% of this non-child sexual abuse sample and 37.9% were male. The four most-reported ethnicities were Asian (49.7%), English (9%), German (6.2%), and French (4.8%). The remaining 30.3% of subjects were distributed across 14 other ethnic classifications. On average (66.9%) the non-child sexual abuse group were undergraduates and 21.61 years of age (standard deviation = 3.40). The majority of the non-child sexual abuse group was single (86.9%), first year undergraduates (66.9%) and reported living at home with their parent(s) (42.8%). 40% of the non-child sexual abuse group were only children, and concerning familial social activity, 50.3% were raised in homes that were somewhat outgoing. The majority of subjects (39.3%) reported a family of origin income

greater than \$40,000 per year and 71% were raised in cities with populations greater than 300,000.

The remaining 34 subjects reported a history of child sexual abuse. Consistent with the non-child sexual abuse group, the majority of the child sexual abuse group were female (76.5%). Males comprised 20.6% of the sample. One subject failed to report his/her gender. An aggregate child sexual abuse prevalence of 18.99% was found, which is remarkably close to the 18.33% predicted. More specifically, in this study 22.40% of females and 11.29% of males reported a history of child sexual abuse. Again, these findings are quite similar to the predicted gender-specific prevalence rates of 20-25% for females and 10% for males. The top four ethnicities reported for the child sexual abuse group were Asian (36.4%), Ukrainian (12.1%), German (9.1%), and Scottish (9.1%). The remaining 33.3% of subjects were distributed across 14 other ethnic classifications. The child sexual abuse group was, on average, older than the non-child sexual abuse group with a mean age of 23.82 years (standard deviation = 5.18). Similarly, while the majority of the child sexual abuse group were single (76.5%), a greater proportion of the child sexual abuse group were either married, or separated/divorced. For example, 11.8% of the child sexual abuse group were married (versus 5.5% for the non-child sexual abuse group) and 5.9% were separated/divorced (versus 0% for the non-child sexual abuse group). Finally, while the majority of the non-child sexual abuse group reported living with parents, the majority of the child sexual abuse group lived either alone (32.4%) or with family/friends (32.4%). This finding, as with marital status, appears to be congruent with the fact that the child sexual abuse group was older, on average, than the non-child sexual abuse group. As with the non-child sexual abuse group, the

majority of child sexual abuse subjects were in their first year of university (64.7%) and were raised in cities with a population greater than 300,000 (97.1%). While the majority of non-child sexual abuse subjects reported being only children, 29.4% of the child sexual abuse subjects reported being the youngest child and 26.5% reported being middle children. A considerable proportion of the child sexual abuse group (38.2%) reported a family of origin income level greater than \$40,000, a finding similar to the non-child sexual abuse group. What was unique, however, was that a much greater proportion of the child sexual abuse group (41.2%) reported a family of origin income between \$10-19,000 (versus 15.2% of the non-child sexual abuse group). Finally, while the majority of the child sexual abuse sample were raised in homes that were somewhat outgoing (38.2%), a greater proportion of the child sexual abuse sample reported to have been raised in homes that were either somewhat isolated (8.8%; versus 2.8% of the non-child sexual abuse sample) or very isolated (8.8%; versus 1.4% of the non-child sexual abuse sample). These and a variety of additional descriptive statistics can be found in Table 4.

Of the 34 individuals identifying a history of child sexual abuse, 32 completed the abuse severity index. With a maximum score of 73, the average abuse severity score was moderate with a mean of 37.53 (standard deviation = 13.24). 68.75% of the 32 individuals were sexually abused by a male, 28.1% were abused by a female and 3.1% were abused by both a male and a female. The majority of subjects were abused by either one or two perpetrators (65.6% and 21.9% respectively) and most (68.8%) experienced between 1-5 sexual encounters. The modal age of abuse onset was between 10 to 15 years (43.8%), however a large proportion of the subjects (21.9%) reported an onset between 4 to 6 years. Half of the subjects reported that the

abuse lasted between 1 to 7 days, however, 28.1% reported that the abuse lasted more than 1 year. Similarly, while most (43.8%) reported that the abuse was an isolated event, 34.4% of the subjects reported that the abuse occurred a few times a week. Finally, 62.5% of individuals reporting a history of child sexual abuse indicated that the event(s) was/were abusive and 37.5% reported the opposite. These descriptive statistics can be found in Table 5. Table 6 presents the mean and standard deviation for the likert scale section of the abuse severity index. The mean for the coercion, trust and subjective severity measures indicated that subjects felt neutral, with slight agreement that these severity variables were present in their past encounter with sexual abuse (e.g., means equaling 4.44, 4.47 and 4.19 respectively). The mean for the pain and penetration variables indicated that subjects felt neutral, with slight disagreement that these severity variables were present in their past encounters with sexual abuse (e.g., means equaling 3.97 and 3.91 respectively). Finally, the mean for the force and threat variables indicated that subjects disagreed slightly that these severity variables were present in their past encounter with sexual abuse (e.g., means equaling 3.31 and 2.75 respectively).

#### *Independent t-tests*

*Controlling for general trauma.* Prior to testing the first set of hypotheses, an attempt was made to control for general trauma, which was a potential confound in this study. The rationale behind exerting this control was that as attachment theory posits, trauma in general could set the occasion for the disorganized/fearful attachment style. Allowing general trauma to vary in this study could confound the analysis of hypotheses set one. The first step was to determine whether general trauma indeed exerted a significant influence on attachment style.

This possibility was tested in the non-child sexual abuse group. This group was divided into two sub-groups utilizing the Childhood Traumatic Events Scale (CTES). Those non-child sexual abuse participants scoring “0” on the CTES total (e.g., 0 = the absence of childhood trauma) were defined as the “no trauma” group. Those scoring 1 or greater on the CTES total were defined as the “other trauma” group. Next, both sub-groups (e.g., the “no trauma” sub-group and the “other trauma” sub-group) were compared, by means of two-tailed t-test, on both RQ/RSQ security and fearfulness.

The plan was that if any of the tests were to reveal a significant difference, the first set of hypotheses would be tested by comparing the means of the child sexual abuse group to the means of the non-abused/ “no trauma” sub-group on the dependent measures. If the tests were not to reveal a significant difference, however, the non-child sexual abuse/“no trauma” sub-group and the non-child sexual abuse /“other trauma” sub-group would be combined into a more general “non-child sexual abuse” group. That is, the original “non-child sexual abuse” group would be reconstituted, and compared to the “child sexual abuse group”.

The results of these analyses (see Table 7) indicated that the “no trauma group” ( $n = 37$ ) did not differ significantly from the “other trauma group” ( $n = 108$ ) on the four measures of attachment (i.e., RSQ security,  $t(143) = -.63, p = > .05$ ; RSQ fearfulness,  $t(143) = , p > .05$ ; RQ security,  $t(143) = - 1.30, p = >.05$ . and ; RQ fearfulness,  $t(143) = 1.22 , p = >.05$ ). Hence, the two non-child sexual abuse sub-groups were collapsed into a single and more general “non-child sexual abuse” group ( $n = 145$ ).

*Testing hypotheses set one.* To test the hypothesis that child sexual abuse participants would score significantly lower than non-child sexual abuse participants on attachment security and significantly higher on attachment fearfulness, four one-tailed independent t-tests were conducted (e.g., two utilizing the RQ and two utilizing the RSQ). First, the homogeneity of variance assumption was tested and satisfied for all comparisons utilizing the Levene test.

Consistent with prediction, child sexual abuse participants were found to be significantly less secure than their non-child sexual abuse counterparts ( $t(177) = 2.60, p = .01$ ), as measured by the RQ. Further bolstering this finding, when the RSQ was utilized as the measure of security, child sexual abuse participants were again found to be significantly less secure than their non-child sexual abuse counterparts ( $t(177) = 3.11, p = .01$ ).

The results for fearful attachment were less definitive. Child sexual abuse participants scored higher on fearful attachment using the RQ than their non-child sexual abuse counterparts, but this difference was not statistically significant ( $t(177) = -1.20, p = .11$ ). When the RSQ was used as the measure of attachment however, the child sexual abuse group was significantly more fearful than the non-child sexual abuse group ( $t(177) = -1.64, p = .05$ ). These statistics, as well as means and standard deviations are reported in Table 8.

To further explore the relationship between child sexual abuse and attachment security and fearfulness, effect sizes (Cohen's  $d$ ) were calculated for all four independent-group t-tests. Cohen's  $d$  is a standardized measure of the absolute difference between two group means on a dependent variable (Cohen, 1988). That is, Cohen's  $d$  is computed by dividing the absolute difference in two group means by the

pooled standard deviation of both groups. Moderate effect sizes were found for both RQ and RSQ security ( $d = .50$  and  $.44$  respectively) and smaller effect sizes were found for both RQ and RSQ fearfulness ( $d = .23$  and  $.31$  respectively).

### *Simple Regression Analysis*

To assess the four models associated with the second and third sets of hypotheses, a series of simple regression analysis were employed. First, the dependent variables (e.g., RQ/RSQ security and fearfulness subscales) and independent variables (social support and abuse severity) were standardized. An interaction term was computed by multiplying the standardized independent variables together. The main effect models were tested by regressing each standardized independent variable against each standardized dependent variable (see Figure 1). Confirmation of a main effect was indicated if the p-value associated with the un-standardized beta coefficient generated by the simple regression was significant. The interaction models were tested by regressing the standardized interaction term against the standardized dependent variables (see Figure 2). Confirmation of an interaction was indicated if the p-value associated with the un-standardized beta coefficient generated by the simple regression was significant.

According to Baron & Kenny (1986), moderation implies that the potentially causal relation between two variables changes as a function of the moderator variable. For example, if a significant main effect was found between social support and adult attachment security, along with a significant abuse severity X social support interaction, and if there is not a main effect between abuse severity and secure attachment, it may be concluded that abuse severity moderates the relationship between social support and secure attachment. That is, the relationship between adult

social support and adult secure attachment would be said to change as a function of abuse severity: as abuse severity increases, the relationship between social support and secure attachment becomes progressively weaker. Results from this analysis may be represented in a path diagram. Example of main effect and interaction path diagrams may be found in Figures 1 and 2.

*Testing hypotheses set two.* The second set of hypotheses purported that the social support network reported by adult survivors of child sexual abuse would predict adult attachment security, and that this relationship would be moderated by abuse severity. This was assessed by comparing two models of adult attachment, a main effect model and an interaction model. Using two simple regression procedures, the main effect model was tested by regressing the standardized independent variables (e.g., adult social support and abuse severity) against the standardized dependent variables (e.g., RQ and RSQ security).

When the RQ was employed as the measure of adult attachment security, this study failed to find a significant main effect for both adult social support ( $b = .19, p = .29$ ), and abuse severity ( $b = .22; p = .23$ ). Hence, neither social support nor abuse severity exerted main effects on attachment security as measured by the RQ. Failing to find a main effect for social support, it was not necessary to test for an interaction or moderation effect.

The same procedure was repeated using the RSQ as the measure of adult security. A significant main effect was found between adult social support and adult RSQ security ( $b = .59, p < .01$ ), but not between abuse severity and RSQ security ( $b = .00, p > .05$ ) (See Table 10 and Figure 5). To test the interaction model, the standardized social support X abuse severity variable was regressed against the



standardized RSQ security variable. Adult social support and abuse severity were found to significantly interact when predicting adult attachment security as measured by the RSQ ( $b = .48, p < .05$ ). Hence, and consistent with prediction, as a significant main effect was found between adult social support and adult security, as well as a significant social support X abuse severity interaction, it was concluded that adult social support predicted adult RSQ security and this relationship was moderated by abuse severity. The effect of these relationships (i.e., the  $R^2$  values) are also tabulated in Table 10.

*Testing hypotheses set three.* The third set of hypotheses proposed that abuse severity would predict adult levels of attachment fearfulness, and that social support reported by adult survivors of child sexual abuse would moderate this relationship. This was assessed by comparing a main effect model of fearfulness to an interaction model. Using two simple regression procedures, the main effect model was tested by regressing the standardized independent variables (i.e., abuse severity and adult social support) against the standardized dependent variables (i.e., RQ and RSQ fearfulness).

When the RQ was employed as the measure of adult fearful attachment, a significant main effect was not found between abuse severity and attachment fearfulness ( $b = .11, p > .05$ ). Since no main effect had been observed for abuse severity on level of reported attachment fearfulness, it was not necessary to test for interaction effect between abuse severity and social support.

An ad hoc analysis revealed a main effect between social support and adult fearful attachment ( $b = .40, p < .05$ ), but not between abuse severity and fearful attachment when using the RQ. A significant interaction was found between adult social support X abuse severity and adult fearful attachment as measured by the RQ

( $b = -.32, p < .05$ ). Hence, while the results failed to support the third set of hypotheses, they suggest instead that abuse severity is the moderator variable rather than social support. That is, social support exerts a main effect on adult fearful attachment, and abuse severity moderates that relationship.

The model testing procedure was repeated using the RSQ as the measure of adult fearful attachment. A significant main effect was not found for abuse severity on adult attachment fearfulness ( $b = .00, p > .05$ ). Since no main effect had been observed for abuse severity on level of reported attachment fearfulness, it was not necessary to test for interaction effect between abuse severity and social support.

Again, an ad hoc analysis was pursued to test whether the social support reported by adult survivors of child sexual abuse would predict adult attachment fearfulness (as measured by RSQ), and whether that relationship would be moderated by abuse severity. A main effect was found between adult social support and adult fearful attachment ( $b = .59, p < .01$ ). Social support and abuse severity were found to significantly interact when predicting adult fearful attachment ( $b = .48, p < .01$ ). Hence, while the results failed to support the third set of hypotheses, they suggest instead that abuse severity is the moderator variable rather than social support. That is, social support exerts a main effect on adult fearful attachment, and abuse severity moderates that relationship.

#### *Exploratory Analysis*

Exploratory two-tailed t-tests were conducted comparing the child sexual abuse group to the non-child sexual abuse group on two additional measures of attachment, namely, preoccupation and dismissal. Prior to the comparison of means,

Levene tests were again conducted and the homogeneity of variance assumption was found to be satisfied in all instances.

Utilizing both the RQ and RSQ as the measures of attachment, it was observed that the adult child sexual abuse group were not significantly different from non-child sexual abuse group on both RQ and RSQ measures of preoccupation (i.e.,  $t(177) = -1.60, p > 0.05$  and  $t(177) = -.99, p < .05$ , respectively). Results also failed to demonstrate significant differences on both the RQ and RSQ measures of dismissal ( $t(177) = -.58, p > .05$ , and  $t(177) = -1.04, p > .05$ , respectively). These statistics, as well as means and standard deviations are presented in Table 7.

The degree to which this study was free from confounding variables and hence, its internal validity, was assessed. First, rather than child sexual abuse predicting a decrease in adult secure attachment and an increase in adult fearful attachment, it could be argued that lower levels of social support in child sexual abuse victims accounted for the attachment differences. Second, it could be argued that attachment differences found between the abused and non-abuse groups could be due to the child sexual abuse group having a disproportionate amount of non-child sexual abuse related trauma; these other forms of trauma may have accounted for the differences found and not child sexual abuse per se.

To explore these possible confounds, two tailed t-tests were computed comparing the child sexual abuse group to the non-child sexual abuse group on social support (see Table 8) and on frequency and percentage of previous trauma (Table 12). Prior to conducting these t-tests, the homogeneity assumptions were tested and satisfied utilizing the Levene test.

Results failed to reveal a significant difference between child sexual abuse and non child sexual abuse groups in level of reported adult social support ( $t(177) = 1.06, p > .05$ ). Hence it is highly unlikely that the attachment differences found between child sexual abuse and non-child sexual abuse groups were due to differences in social support between those groups. Hence, the reported level of adult social support did not serve to confound findings in this study.

Next, the child sexual abuse group was compared to the non-child sexual abuse group on the frequency of the five non-sexual childhood traumas, by means of five chi square ( $\chi^2$ ) tests of independence. The statistics for the “parental upheaval”, “violence” and “other trauma” variables were found to be significant, indicating that these variables were not independent of child sexual abuse status. That is, the frequency of these traumas was directly related to whether or not the subject was sexually abused in childhood. Thus, the attachment differences found between the child sexual abuse and non-child sexual abuse groups may reflect one of these non-child sexual abuse related traumas (in particular, parental upheaval, violence and other trauma).

To further assess the possibility outlined above, the entire sample was divided among those who were and were not victimized by violence, those who experienced and did not experience parental upheaval, and those who did and did not experience some “other” form of trauma, irrespective of child sexual abuse status. Exploratory two-tailed t-tests were then conducted to compare participants on these three variables (e.g., experienced violence/ did not experience violence, parental upheaval/ no parental upheaval, and other trauma/ no other trauma). The dependent variables were the fearfulness and security subscales of the RQ and the RSQ. Significant

differences were found between the violence and non-violence groups in secure attachment on both RQ and RSQ. More specifically, the non-violence group was significantly more securely attached than the violence group ( $n=27$ ) on both the RQ and RSQ ( $t(177) = 1.90, p < .05$ ;  $t(177) = 2.49, p \leq .01$ , respectively). Furthermore, the results indicated significant differences in the fearful attachment, as measured by the RSQ, between the violence group and their non-violence counterparts ( $t(177) = -2.47, p \leq .01$ ). No differences were observed using the RQ measure of fearful attachment ( $t(177) = -1.21, p > .05$ ). Also, no significant differences in RQ and RSQ measures of attachment security and fearfulness were observed for the parental upheaval and “other” traumas. Hence, it is highly unlikely that parental upheaval and “other” traumas confounded findings. However, given the significant differences found between the violence and non-violence group on security and fearfulness, it is quite probable that violence did function as a confounding variable for hypotheses set one. For a detailed review of these statistical tests, consult Tables 14 and 15.

### Discussion

This study set out to answer two primary research questions: (1) is child sexual abuse related to attachment in adulthood? (2) Within the adult, child sexual abuse population, how are social support and abuse severity related to secure and fearful attachment in adulthood? Concerning the first research question and consistent with attachment theory and the research findings of Roche et al (1999), it was hypothesized that adult-participants who had experienced child sexual abuse would be significantly less secure and significantly more fearful in their attachment than their non-abused counterparts. As social support is thought to set the occasion

for security and protect against fearfulness (Alexander, 2003), adult social support was hypothesized to predict secure attachment in adulthood. Further, as childhood trauma is thought to set the occasion for the disorganized attachment in childhood and the fearful attachment in adulthood, abuse severity was hypothesized to predict fearful attachment within the adult, child sexual abuse population. Finally, the predictive relationship between adult social support and adult secure attachment was hypothesized to be moderated by abuse severity. Also, the predictive relationship between abuse severity and adult fearful attachment was hypothesized to be moderated by adult social support. That is, the predictive relationship between social support and secure attachment was expected to vary as a function of abuse severity. For example, the relationship between adult social support and secure attachment was expected to be strongest when abuse severity was low. As severity increased however, the relationship was expected to become progressively weaker. Similarly, the predictive relationship between abuse severity and fearful attachment was expected to vary as a function of adult social support. For example, the relationship between abuse severity and the fearful adult attachment was expected to be strongest when adult social support was low. As support increased however, the relationship was expected to become progressively weaker.

### *Overview of Findings*

Adult child sexual abuse survivors were found to be significantly less securely attached than their non-abused counterparts. This statistically significant attachment difference was captured using both the RQ and RSQ as the measure of secure attachment. Adult child sexual abuse survivors were also found to score significantly greater on fearful attachment than their non-abused counterparts. This statistically

significant attachment difference was captured utilizing the RSQ as the measure of fearful attachment. The RQ failed to capture such a significant attachment difference.

A statistically significant main effect was found between adult social support and the secure attachment presentation of adult survivors of child sexual abuse. Abuse severity was found to significantly moderate this relationship. Hence, support was found for the moderation model of secure attachment of adult, child sexual abuse survivors, proposed by this study. However, support for this model was found utilizing the RSQ as the measure of adult attachment security, and not the RQ.

This study failed to find a statistically significant main effect between abuse severity and the adult fearful attachment of child sexual abuse survivors. These non-significant findings were generated utilizing both the RQ and the RSQ as the measure of adult fearful attachment. Hence, the proposed moderating role of adult social support was not supported. Interestingly however, ad hoc analysis, utilizing both measures of adult attachment, revealed that a converse model of fearful attachment was more appropriate. Specifically, adult social support was found to significantly predict the fearful attachment of adult child sexual abuse survivors and abuse severity significantly moderated this relationship.

#### *Interpretation of Findings*

Consistent with prediction, adult survivors of child sexual abuse were found to be significantly less secure in their attachments than their non-abused counterparts. Bolstering the first finding, the relationship between child sexual abuse and the secure attachment in adulthood was replicated using an additional measure of attachment. Together, these findings suggest that adult survivors of child sexual abuse may have

compromised attachment styles, and this may impair their ability to form productive and rewarding relationships in adulthood.

The relationship between adult fearful attachment and child sexual abuse was less robust. Specifically, the RSQ measure of fearful attachment captured a significant effect, whereas the RQ failed to do so. Hence, this study suggests that the relationship between adult fearful attachment and child sexual abuse is unstable. This finding was surprising given well documented abuse specific negative sequelae, such as low self-esteem and interpersonal difficulties associated with child sexual abuse. It is likely that the failure of this study to replicate the relationship between child sexual abuse and adult attachment fearfulness may have been due to the lack of sensitivity of the RQ to fully capture the attachment fearfulness construct. A possible factor that may have contributed to the lack of consistently significant findings was the high Asian population in this study. The replication attachment scale may not have been sensitive enough to capture subtle cultural differences between Asian and North American cultures on the fearfulness variable. Also, it may not be culturally acceptable to strongly admit to fearful attachment in this population of upwardly mobile Asian students, and that is why this measure, namely the RQ, did not capture it.

It is important to stress that while mean attachment differences were found between the adult child sexual abuse group and their non-abused counterparts, causal conclusions may not be generated. That is, due to a lack of experimental control, while child sexual abuse may reduce secure attachment in adulthood or reinforce/restructure an already insecure one, it may also be that the attachment differences reflected in this study resulted from the confounding function of one or



more uncontrolled third variables, and not child sexual abuse per se. Further illustrating why causal conclusions may not be generated, the direction of the relationships found in this study are unknown. For example, perhaps those adult individuals with lowered security and heightened fearfulness may have manifested a similar attachment structure in childhood (e.g., reduced security and heightened disorganization) prior to the sexual abuse. This initial childhood attachment structure may then have placed the child at an increased risk for sexual abuse, as children who manifest an insecure attachment, especially the insecure-disorganized attachment, are particularly vulnerable to the manipulations of sexual predators (Alexander, 1992, 2003). Or, perhaps both causal scenarios are valid. When looking at such naturally occurring groups, the direction of the relationship between the variables (i.e., child sexual abuse and adult attachment) is speculative at best. Given the complicated and dense causal web of human behaviour, a reciprocal or bi-directional relationship between child sexual abuse and adult attachment seems most likely.

As with the interpretation of the significant findings generated for the first set of hypotheses, significant findings generated for the second and third hypothesis may not be causally interpreted. Given that an experimental design was not employed in this study, interpretations must be limited to statements of association rather than cause.

The second part of this study assessed the relationship between adult social support, abuse severity, and adult secure attachment. Adult social support was expected to predict the adult secure attachment, and abuse severity was expected to moderate this relationship. Results of this study supported this set of hypotheses using one measure of adult attachment (RSQ) but not using the other measure (RQ).

The results suggest that in populations abused as such, the level of social support may mitigate the impact on the attachment system, but the strength of this relationship is influenced by the degree of abuse severity. However, these results suggest that the relationship between social support, abuse severity and the attachment security of adult survivors of child sexual abuse may be unstable. Furthermore, the statistical difference between the proportion of variance accounted for by the social support main effect model of adult secure attachment and the abuse severity X social support interaction model of adult secure attachment was statistically negligible. As previously indicated, causal conclusions cannot be generated from these findings.

A critical discussion point concerning hypotheses set two is whether the moderating effect of abuse severity in the relationship between social support and secure attachment is clinically valid. That is, although statistically significant, adding abuse severity as a moderator, did not appear to contribute to a large increase in effect size in the prediction of adult secure attachment. Rather, social support seemed to be the critical and most salient predictor of adult secure attachment. However, despite the negligible statistical difference between the size of the main effect model and the interaction/moderation model of adult secure attachment, abuse severity may still function as a clinically significant moderator.

The third hypothesis of this study was concerned with identifying the relationship between adult social support, abuse severity and adult fearful attachment, among adult child sexual abuse survivors. More specifically, abuse severity was expected to directly relate to adult fearful attachment, and adult social support was expected to moderate this predictive relationship. Neither adult attachment measures were able to capture the relationships predicted in this study. The results revealed

that abuse severity did not predict adult fearfulness and hence, adult social support could not function as a moderator. In an ad hoc analysis, adult social support significantly predicted adult fearful attachment, and abuse severity was identified as the moderator of this relationship. Thus, while support was not found for hypotheses set three, an alternative and theoretically plausible predictive/moderator scenario was evidenced. Further bolstering this alternative predictive/moderator scenario, a replication of these findings was achieved using the additional measure of adult attachment. As with the results of hypothesis two, statistical difference between the main effect and moderation models of attachment fearfulness were negligible. However, the clinical or practical significance of the moderation finding is unknown and hence should be subject of future research.

#### *Measuring Adult Attachment*

This study employed both the RQ and the RSQ as the primary measures of secure and fearful attachments. The purpose of including the two measures of attachment was to attempt to determine which of the two measures was more sensitive in terms of identifying the association between child sexual abuse and adult attachment.

While both the RQ and RSQ were able to capture differences in secure attachment between adult survivors of child sexual abuse and their non-child sexual abuse counterparts, the RQ was found to capture a larger effect. Conversely, the RSQ (but not the RQ) was found to capture a difference in adult fearful attachment between child sexual abuse survivors and their non-child sexual abuse counterparts. Concerning model testing in the second set of hypotheses, the RSQ, and not the RQ, was able to capture significant prediction and moderation findings. With respect to

the ad-hoc analysis associated with the third set of hypotheses, significant main effect and moderations findings were generated with both the RQ and RSQ.

Thus it seems that determining which attachment measure is superior depends on the goals of the researcher. If a researcher wishes to generally compare attachment, the RSQ would be most preferable as it was found to capture significant differences for both adult secure attachment and adult fearful attachment. Conversely, if researchers were interested in observing the strength of the effect in secure attachment between adult child sexual abuse survivors and their non-abuse counterparts, the RQ would be the preferred measure, as it was associated with a larger effect size. If a researcher wished to replicate the second set of hypotheses, the RSQ would be preferred as the RQ was unable to isolate one or more significant relationships. Finally, if a researcher wished to find an association between abuse severity, adult social support and adult fearfulness, within the adult child sexual abuse population, either the RQ or RSQ would be sufficient.

In sum, as the RSQ was able to capture more significant findings than the RQ, the RSQ does seem to be the more sensitive and hence, the more superior measure of attachment. Psychometrically, the RSQ suffers from relatively low reliability statistics. However, it should be recalled that the limited reliability of the RSQ is the result of two orthogonal dimensions (e.g., self and other models of self) being combined to create each attachment style (Marshall, 1996).

### *Limitations*

This study suffers from two primary limitations. (1) With respect to internal validity, a lack of experimental control prevents the generation of causal conclusions.

(2) With respect to external validity, the findings of this study cannot be generalized to the general population of adult survivors of child sexual abuse.

Concerning the degree to which this study is free from confounding variables or internal validity, while preliminary control was gained utilizing the CTES, a variety of additional variables have been identified following analysis and may serve to confound findings. That is, in addition to the experience of childhood violence, the current marital status of participants, their current living arrangements, the number of children in their family of origin, their birth order, the income of their family of origin, and the social activity level of their family of origin, may all be confounding variables (Table 4). For example, given that a larger proportion of the child sexual abuse group was either separated or divorced, the current marital status of participants may have confounded findings. Similarly, the current living arrangements of participants may be a third variable as a larger proportion of non-child sexual abuse participants was found to live at home, and a larger proportion of the child sexual abuse group were found to live alone. Concerning the number of children in the family of origin, a greater percentage of child sexual abuse participants were found to come from homes with three or more children and hence this variable may function as a confound. Interestingly, this finding might also suggest that child sexual abuse is more likely to occur to children raised in larger families. Birth order may also confound findings, as a larger portion of the non-child sexual abuse participants were only children and a larger portion of the child sexual abuse participants were middle children. With respect to the income of the family of origin, a greater proportion of child sexual abuse participants were raised in homes with annual incomes less than \$19,000 and hence socio-economic status may function as a third variable.

Furthermore, while a greater proportion of the non-child sexual abuse group were raised in homes that were either somewhat to very outgoing, a greater proportion of the child sexual abuse group were raised in homes that were either somewhat to very isolated. Hence, the level of social activity within the childhood home may also serve to confuse findings. In addition to potentially serving as an alternate explanation for the attachment differences found between the child sexual abuse and non-child sexual abuse groups, these variables may also account for the significant relationship found between social support, abuse severity and adult attachment styles observed within the child sexual abuse group. Finally, a variety of variables not assessed in this study, such as temperament, introversion/extraversion, intelligence, social acumen, may also function as third variables and hence prevent the generation of any causal conclusions.

Concerning the issue of external validity, or the degree to which the findings may generalize to the general population, this study sampled undergraduate, introductory psychology students and hence findings generated from this sample cannot be generalized beyond this population. To further compromise external validity, it is a well-documented observation that intersession students at the University of Manitoba systematically differ from regular session students. More specifically, a greater proportion of intersession students are foreign exchange students or students who have emigrated from another, typically Asian, country. Hence, in addition to the findings not generalizing to the general public, it is unlikely that they generalize to the regular session intersession students.

In addition to suffering from relatively low internal and external validity, this study suffers from a variety of additional methodological shortcomings. For

example, as mentioned the self-report attachment questionnaires may not have been sensitive to cultural differences in the expression of attachment. Further, the RQ measure of attachment suffers from a restriction of range which compromised the ability of this study to test associations between attachment security, social support and abuse severity. Given the small size of the child sexual abuse group ( $n= 34$ ), the failure of this study to capture a significant difference between the sexually abused and non-abused participants on fearful attachment, as measured by the RQ may reflect compromised power. Finally, although a basic understanding of English was necessary for someone to participate in this study, the ability to speak English as a primary language was not a stipulated condition for participation in this study. Hence, subtle nuances in the language of the questionnaire may have been lost in translation. The limitations outlined above suggest that the results of this study must be interpreted with caution.

#### *Future Directions of Research*

The study of the relationship between child sexual abuse and both childhood and adulthood attachment is in its infancy, and hence the directions for future research are numerous. First, there are research projects generated directly from this study. The most practical of directions would be to correct for the major shortcomings of this study and re-test all hypotheses. More specifically, future researchers are encouraged to increase the power of study by incorporating a larger child sexual abuse sample, control for childhood violence, and sample a group of individuals who are, either, more reflective of the undergraduate student population, in specific, or the general population, as a whole.

While researchers are encouraged to improve upon the external validity of this study, by sampling subjects more representative of the student population, or the general population, an alternate and likely more informative population to study would be the clinical population of adult survivors of child sexual abused individuals. One reason non-significant or minimally significant findings may have resulted in this study, especially for the second and third hypotheses (e.g., accounting for the minor statistical difference between the size of the main effect and interaction/moderation models of attachment security and fearfulness), may be that the characteristics of abuse sampled by this study were not severe enough for the strength of the predicted relationships to be fully captured. Indeed, the average level of abuse severity found for the child sexual abuse survivors in this sample was moderate. Hence, re-assessing this study's hypotheses, within a clinical context, would help to ameliorate this problem as the average level of abuse severity for the clinical group is expected to be higher than that found for the undergraduate sample.

The recommendation that future researchers control for the incidence of exposure to childhood violence, leads to an additional set of research questions. For example: are childhood violence and sexual abuse similar in terms of impact on childhood/adult attachment?; do these similarities and/or differences continue to manifest in adulthood?; and what is the cumulative impact of multiple childhood traumas on both child and adult attachment? Similarly, future researchers may wish to assess the relationship between various adult traumas (e.g., rape, non-sexual violence) and adult attachment.

Another potentially informative area for future research would be to explore the relationships among abuse severity, attachment styles and different sources of



social support. The current study looked at global, adult, measure of social support, so future researchers may wish to explore how other sources of social support, such as familial support, and support from friends and significant others are related to adult secure and fearful attachment, within the adult, child sexual abuse population. Similarly, childhood social support, support received in response to abuse disclosure, either in childhood, or adulthood, as well as social support in the form of therapeutic intervention, are possible refinements to the social support variable and hence, should be studied in relation to the attachment of child sexual abuse survivors.

Finally, most studies of survivors of child sexual abuse are limited by their sample size, hence restricting the potential for comparisons within the abused population. In particular, it would be worthwhile to definitively assess whether social support acts as a moderator of the relationship between child sexual abuse and attachment. That is, instead of looking at whether social support predicts secure attachment within the child sexual abuse population and whether social support moderates the relationship between abuse severity and fearfulness, future researchers may wish to broaden the scope of their research goals by determining whether social support moderates the relationship between child sexual abuse and adult attachment in general.

### *Societal Implications*

The short and long term consequences of child sexual abuse are many. The most basic of conclusions supported by the literature is that child sexual abuse has the potential to set the occasion for considerable interpersonal difficulties within the surviving individual. In addition to interpersonal difficulties, intrapersonal difficulties are also a common by-product of child sexual abuse.

The results of this study clearly suggest an association between child sexual abuse and adult attachment styles, and this may have implications not only for the individual but also for society as a whole. This finding is congruent with past research, which has noted that a significant portion of the pervasive long-term effects of child sexual abuse are interpersonal in nature (Alexander, 2003; Davis & Petretic-Jackson, 2000). Abuse survivors, most typically female, are vulnerable to marital violence (Alexander, 2003; Follette, Polusny, Bechtle, & Naugle, 1996), general parenting difficulties (Alexander, 2003; Banyard, 1997; Cohen, 1995), increased potential to victimize children (Alexander, Schaeffer, Young, & Kretz, 2001), and susceptible to marrying a spouse who abuses their children (Oates, Tebbutt, Swanson, Lynch, & O'Toole, 1998). Given the above noted interpersonal difficulties and the cycle of abuse (e.g., the abused becoming abusers), societal goals of primary, secondary and tertiary prevention of child sexual abuse are of utmost importance.

Social support may have a highly significant role in the mental well-being of child sexual abuse survivors. This study found that social support was directly related to the secure attachment of adult child sexual abuse survivors. That is, greater levels of secure attachment were associated with greater levels of adult social support of adult child sexual abuse survivors. Further, an inverse relationship was found between social support and fearful attachment in adult, child sexual abuse survivors. That is, greater levels of fearful attachment were associated with lowered levels of adult social support. Hence, a fundamental implication of these findings is that social support appears to be a very important factor in the attachment style of child sexual abuse survivors. Tertiary prevention efforts to mitigate some of the negative

sequelae of child sexual abuse should focus on the maximization of the social support network of survivors.

The goal of primary prevention would be to proactively reduce the probability of child sexual abuse from ever occurring. Potential ways for doing so, on a collective level, would be through psycho-educational commercials and television programs. These programs could focus on educating children about child sexual abuse and how to say "NO." Further, these programs could instruct children on what to do if inappropriate sexual relations occur.

The goal of secondary prevention would be to isolate those children who are at risk for sexual abuse and enrich their social support networks so as to prevent the possibility of child sexual abuse from occurring. Research suggests that children who are at risk for child sexual abuse would be those with an insecure attachment presentation, especially the disorganized presentation, and those children reared in homes that are either neglecting and/or socio-economically impoverished (Alexander, 1993, 2001). Some preventative strategies within this sphere would be to develop special within school, or after school programs designed to foster self-esteem and social skills in at risk youth. Also, programs that improve the parenting skills of parents who have at-risk children, would be quite beneficial. Further, programs designed to provide adequate social and economic resources, to ease the stress of parenting, should be instituted. For example, those individuals who have at risk children should be given adequate daycare resources, affordable and safe housing, as well as ample access to nutritional food, transportation and a community that helps to ease the stress of parenting, instead of amplifying it.

Finally, the goals of tertiary prevention would be to isolate those children and adults who have been exposed to child sexual abuse and work to reduce the short and long-term impact of child sexual abuse. Psychotherapy would be implemented to ameliorate the short and long-term impact of child sexual abuse. However, given the limited availability of individual psychotherapy in society, an alternative would be to offer a variety of out-reach programs within the community. An example would be mentoring programs. That is, adult child sexual abuse survivors who are demonstrating stable mental health and resiliency could serve as mentors or role models to children who are presently enmeshed within the immediate aftermath of the trauma. For adult survivors who are still struggling with the long-term aftermath of child sexual abuse, general counseling services and counseling services designed specifically for child sexual abuse survivors should be made available within the general community. Further, society could greatly benefit from the creation of a community for child sexual abuse survivors. How better to reduce stigmatization and foster a sense of normalcy in child sexual abuse survivors than for survivors to ban together, share stories of pain and growth as well as provide support to one another? For example, success stories, question and answer forums guided by clinicians and trained volunteers, as well as listings for other resources, may be communicated through mediums such as magazines, news letters, heavily monitored internet sites (so to prevent perpetrators from preying on and re-victimizing the survivors), and email pen-pal programs.

The finding that abuse severity moderates both the relationship between social support and the secure and fearful attachment of adult, child sexual abuse survivors has one final implication concerning tertiary prevention. While intervention

programs cannot logically control the severity of sexual abuse when it occurs, the assessment of abuse severity can aid in the tailoring of therapy to the specific needs of the individual. Further, interventions implemented at the group level would be enhanced by a priori knowledge of abuse severity. That is, to foster what Yalom (1995) calls “universality,” or a sense that one is not alone, all intervening groups should be comprised of individuals who share a range of similar experiences. The assessment of abuse severity as captured within this study would help to achieve this goal.

Overall, the general theme behind all prevention strategies discussed thus far is to enhance resiliency, empowerment and mental health in potential victims and survivors of child sexual abuse. To achieve this, it is necessary to first improve self-esteem, or model of self and other-esteem, or model of other, through the imparting of social skills, empathy and care. By successfully increasing both self and other-esteem is by definition, naturally increasing secure attachment while, simultaneously reducing fearful attachment. Increasing secure attachment, while reducing fearful attachment, should lessen the probability that child sexual abuse will occur, and foster resiliency in individuals when child sexual abuse does occur.

### *Concluding Comments*

Given the demonstrated complexities of understanding the impact of child sexual abuse on both the short and long-term emotional, psychological, physical and behavioural well-being of survivors, and given that child sexual abuse is an interpersonal trauma, five concluding comments seem worthy of note. First, to understand the complexities associated with child sexual abuse, a parsimonious theory capable of capturing and explaining the complexity of child sexual abuse is

required. Second, as attachment theory is an interpersonal theory of human experience which places a premium on both interpersonal and intrapersonal functioning, attachment theory appears to be the most efficacious and efficient theoretical contender to help understand sexual abuse related sequelae and guide prevention goals (Roche et. al, 1999) Third, attachment theory should not be dogmatically adhered to (e.g., Bolan, 2002; Olafson, 2002). Rather, these authors suggest that attachment theory should be used as a theoretical framework from which to view the complex causal web of human behaviour. Fourth, to maximize the efficacy of prevention and to minimize the potentiality for re-victimization, all individuals who come into therapeutic contact with child sexual abuse survivors should evidence a secure attachment (Bacon & Richardson, 2001).

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## Appendix A

**Consent Form**

**Research Project Title:** Impact of Child Sexual Abuse, Abuse Severity and Social Support on Attachment.

**Researcher:** Chantal L. MacDonald

**Research Advisor:** Rayleen V. De Luca, PhD. C. Psych.

You are invited to participate in a research study conducted by Chantal MacDonald, a M.A. student from the Psychology department. To contact Chantal, you may leave a message with her advisor, Dr. Rayleen De Luca at 474-7255. You will be asked to complete a set of short questionnaires which pertain to the phenomena of child sexual abuse. More specifically, this project looks at the relationship between child sexual abuse, abuse severity, social support and attachment. You will be asked your opinion on a variety of questions that measure these constructs, as well as a scale which measures general childhood trauma. The entire questionnaire should take approximately 15-25 minutes to complete. Please note that this is a very sensitive research project as you will be asked a variety of questions concerning your own experiences with child sexual abuse and general trauma. To reinforce your participation you will receive 1 research participation credit, to be put toward your final grade in Introductory Psychology. If you become uncomfortable at any time, you are free to end your participation without loss of course credit.

Given the sensitivity and seriousness of child sexual abuse, your safety and confidentiality is of utmost importance to us. Concerning your safety, if participation in this study elicits negative memories or any other adverse consequences, a variety of resource/support telephone numbers will be provided to you on the debrief form that you will receive upon the completion of the questionnaire. Concerning confidentiality, we ask that you place no identifying information on your questionnaire. Questionnaires will be kept in a locked laboratory office and will be viewed only by laboratory researchers. Further, only group results (e.g., means) will

be used and reported. Finally, all questionnaires will be destroyed by means of shredding in the summer (July) of 2005. The results of this study may be referred to in presentations at psychological conferences, in an M.A. thesis paper, or journal articles.

The Psychology/Sociology Research Ethics Board (P/SREB) of the University of Manitoba has approved this study. If you have any concerns about the way in which the study is conducted, you may contact the faculty advisor of this project, Dr. Rayleen De Luca at 474-7255, or the Human Ethics Secretariat at 474-7122, or email: [margaret\\_bowman@umanitoba.ca](mailto:margaret_bowman@umanitoba.ca).

Your signature below indicates that you are 18 years of age or older and have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation.

Date: \_\_\_\_\_

\_\_\_\_\_   
 Chantal MacDonald, Graduate Student

Printed Name: \_\_\_\_\_

Student Number: \_\_\_\_\_

Signature: \_\_\_\_\_

If you wish to receive a summary of the study's results, please provide your email or mailing address as of June, 2005. If not, do not provide your address:

\_\_\_\_\_  
\_\_\_\_\_



## Appendix B

**Debriefing Form**

Attachment styles, of which there are four, concern typical relationship styles and relate to the degree to which an individual likes him or herself and likes other people. Individuals who have a *secure* attachment style like themselves and they like other people also. Individuals with a *dismissing* attachment style, while liking themselves, they do not like other people. Individuals with a *preoccupied* attachment style, while liking other people, they don't much like themselves. Finally, individuals with a *fearful* attachment style don't like themselves and they don't like other people either.

This study hypothesizes that child sexual abuse impacts attachment by lowering security and raising fearfulness. That is, we propose that child sexual abuse causes people to not like themselves and to not like other people as well. Furthermore, we propose that for those who have been sexually abused, social support will predict their level of security (e.g., the greater the support, the greater the level of security) and abuse severity will predict their level of fearfulness (e.g., the greater the severity of the abuse, the greater the level of fearfulness). Finally, we propose that the relationship between social support and security will be moderated by abuse severity and the relationship between abuse severity and fearfulness will be moderated by social support. That is, the relationship between social support and security will be strongest when abuse severity is low. As abuse severity increases however, the relationship between social support and security will become weaker. Similarly, the relationship between abuse severity and fearfulness will be strongest when social support is at a minimum. As social support increases, we expect the relationship between severity and fearfulness will become weaker.

Child sexual abuse is a sensitive issue. This study may have evoked memories or feelings that may affect you negatively. If this is so, we strongly encourage you to seek resources available to you to help you work through these issues including family, friends, religious leaders, mentors... If your negative feelings persist, then talking to a trained counselor may be helpful. The Klinik Crisis Line (786-8686) is a 24-hour confidential service with trained volunteers. Students of

the University of Manitoba can also access free counseling services at the Student Counseling and Career Centre (474-8592). Other resources that may be useful and are available in Winnipeg include the Elizabeth Hill Counseling Centre (956-6560) and the Interfaith Marriage and Family Institute (786-9251).

Child sexual abuse is a serious legal offence. It is our legal obligation to encourage students who have been sexually abused as children and have not reported these offences to the proper authorities, to do so. Perpetrators of sexual abuse may continue to abuse children if they are not reported to authorities. If you have not reported your experience of child sexual abuse, you may report incidents of abuse to your local law enforcement office or Winnipeg Child and Family Services (944-4200).

If, for any reason, you wish to withdraw your data from this study, or have any concerns or questions, please leave a message for Chantal MacDonald or her advisor, Dr. Rayleen De Luca at 474-9255. If your request is to remove your data, please indicate this request along with the subject number that is indicated at the top of this debriefing form (to ensure your confidentiality, do not indicate your name in the telephone message, only your subject number is required). Thank you very much for your participation in this study.

## Appendix C

**Demographic Questionnaire**Instruction set A:

The following information relates to demographic information and it is collected for statistical purposes only.

1. Please indicate your age \_\_\_\_\_
2. Sex:
  - 1) Female
  - 2) Male
3. Marital Status:
  - 1) Single
  - 2) Married or living as married
  - 3) Separated or divorced
  - 4) Other
4. Year in program at university:
  - 1) 1
  - 2) 2
  - 3) 3
  - 4) 4
  - 5) Other
5. Living arrangements:
  - 1) With parent(s)
  - 2) Alone
  - 3) With friends or other family
  - 4) With spouse or partner
  - 5) Residence
6. Number of children in your family, including yourself, even if you don't live with them now:
  - 1) One
  - 2) Two
  - 3) Three
  - 4) Four
  - 5) Five or more

7. In your family, you are
  - 1) The only child
  - 2) The youngest child
  - 3) In the middle
  - 4) The oldest child
  
8. Estimated yearly family income when you were 18 years and younger:
  - 1) <\$10,000/year
  - 2) \$10-19,000/year
  - 3) \$20-29,000/year
  - 4) \$30-39,000/year
  - 5) >\$40,000/year
  
9. Indicate the level of education completed by your father
  - 1) Some elementary grades
  - 2) Some high school grades
  - 3) High school graduate
  - 4) Some college or university
  - 5) College diploma
  - 6) University degree
  - 7) Graduate school
  
10. Indicate the level of education completed by your mother:
  - 1) Some elementary grades
  - 2) Some high school grades
  - 3) High school graduate
  - 4) Some college or university
  - 5) College diploma
  - 6) University degree
  - 7) Graduate school
  
11. Indicate the number of parents (genetic parents, or those who adopted you from birth) that consistently lived with you while you were 18 years of age and younger:
  - 1) Both parents
  - 2) 1 parent
  - 3) Neither parents (raised by foster parent(s), or other guardian(s))
  
12. Did you at anytime when you were 18 years of age or younger, live with a stepfather?
  - 1) Yes
  - 2) No

13. Estimated size of the town or city you lived in the longest when you were 18 years of age or younger
- 1) Farm or town of 10,000 people or less
  - 2) 11-50,000 people
  - 3) 51-150,000 people
  - 4) 151-300,000 people
  - 5) More than 300,000 people
14. Estimate the level of social activity of your family when you were 18 years of age or younger:
- 1) Very outgoing socially
  - 2) Somewhat outgoing socially
  - 3) Not very outgoing socially
  - 4) Somewhat isolated socially
  - 5) Very isolated socially
15. What is your predominant ethnic background (choose no more than 1):
- |                    |                    |                           |
|--------------------|--------------------|---------------------------|
| 1) Irish           | 2) Italian         | 3) German                 |
| 4) French-Canadian | 5) Polish          | 6) Other Eastern European |
| 7) Asian           | 8) Spanish         | 9) English                |
| 10) Scottish       | 11) Aboriginal     | 12) Philippino            |
| 13) African        | 14) Middle Eastern | 15) Ukrainian             |
| 16) Other          |                    |                           |
16. In what religion were you raised?
- |                             |                     |                 |
|-----------------------------|---------------------|-----------------|
| 1) Roman Catholic           | 2) Eastern Orthodox | 3) Episcopalian |
| 4) Congregationalist        | 5) Methodist        | 6) Presbyterian |
| 7) Other Protestant         | 8) Judaism          | 9) Islam        |
| 10) Aboriginal Spirituality | 11) Hinduism        | 12) Buddhism    |
| 13) Other Eastern           | 14) Agnostic        | 15) No religion |
| 16) Other _____             |                     |                 |

## Appendix D

**Attachment Questionnaire 1 (RSQ)**Instruction set B:

Please read each of the following statements and rate the extent to which you believe each statement best describes your feelings about close relationships.

		<b>Not at all like me</b>		<b>Somewhat like me</b>		<b>Very much like me</b>
1.	I find it difficult to depend on other people	1	2	3	4	5
2.	It is very important for me to feel independent	1	2	3	4	5
3.	I find it easy to get emotionally close to others	1	2	3	4	5
4.	I worry that I will be hurt if I allow myself to to become too close to others	1	2	3	4	5
5.	I am comfortable without close emotional relationships	1	2	3	4	5
6.	I want to be completely emotionally intimate with others	1	2	3	4	5
7.	I worry about being alone	1	2	3	4	5
8.	I am comfortable depending on other people	1	2	3	4	5
9.	I find it difficult to trust others completely	1	2	3	4	5
10.	I am comfortable having other people depend on me	1	2	3	4	5
11.	I worry that others don't value me as much as I value them	1	2	3	4	5
12.	It is very important to be to feel self-sufficient	1	2	3	4	5
13.	I prefer not to have other people depend on me	1	2	3	4	5
14.	I am somewhat uncomfortable being close to Others	1	2	3	4	5
15.	I find that others are reluctant to get as close as I would like	1	2	3	4	5
16.	I prefer not to depend on others	1	2	3	4	5
17.	I worry about having others not accept me	1	2	3	4	5

## Attachment Questionnaire 2 (RQ)

Instruction set C:

The following are four general relationship styles that people often report. Please rate each relationship style to indicate how well or poorly each description corresponds to your general relationship style:

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.

1	2	3	4	5	6	7
<b>Disagree</b>		<b>Neutral/ mixed</b>				<b>Agree</b>
<b>Strongly</b>						<b>strongly</b>

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.

1	2	3	4	5	6	7
<b>Disagree</b>		<b>Neutral/ mixed</b>				<b>Agree</b>
<b>Strongly</b>						<b>strongly</b>

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.

1	2	3	4	5	6	7
<b>Disagree</b>		<b>Neutral/ mixed</b>				<b>Agree</b>
<b>Strongly</b>						<b>strongly</b>

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.

1	2	3	4	5	6	7
<b>Disagree</b>		<b>Neutral/ mixed</b>				<b>Agree</b>
<b>Strongly</b>						<b>strongly</b>

## Appendix E

## Childhood Traumatic Events Scale

Instruction set D:

For the following questions, answer each item that is relevant. Be as honest as you can. Each question refers to any event that you may have experienced **prior to the age of 17**.

- 1) Prior to the age of 17, did you experience a death of a very close friend or family member? (please circle your response)

No = 0

Yes = 1

If yes, how old were you when this happened? \_\_\_\_\_

If yes, how traumatic was this? (using a 7-point scale, where 1 = not at all traumatic, 4 = somewhat traumatic, 7 = extremely traumatic. *Please circle your response*)

1      2      3      4      5      6      7

- 2) Prior to the age of 17, was there a major upheaval between your parents (such as divorce, separation)? (*please circle your response*)

No = 0

Yes = 1

If yes, how old were you when this happened? \_\_\_\_\_

If yes, how traumatic was this? (using a 7-point scale, where 1 = not at all traumatic, 4 = somewhat traumatic, 7 = extremely traumatic. *Please circle your response*)

1      2      3      4      5      6      7



- 3) Prior to the age of 17, were you the victim of violence?(such as child abuse, mugged or assaulted, other than sexual) (*please circle your response*)

No = 0

Yes = 1

If yes, how old were you when this happened? \_\_\_\_\_

If yes, how traumatic was this? (using a 7-point scale, where 1 = not at all traumatic, 4 = somewhat traumatic, 7 = extremely traumatic. *Please circle your response*)

1      2      3      4      5      6

- 4) Prior to the age of 17, were you extremely ill or injured ? (please circle your response)

No = 0

Yes = 1

If yes, how old were you when this happened? \_\_\_\_\_

If yes, how traumatic was this? (using a 7-point scale, where 1 = not at all traumatic, 4 = somewhat traumatic, 7 = extremely traumatic. *Please circle your response*)

1      2      3      4      5      6      7

- 5) Prior to the age of 17, did you experience any other major upheavals (such as parental alcoholism/substance abuse...) that you think may have shaped your life or personality significantly (*please circle your response*)

No = 0

Yes = 1

If yes, how old were you when this happened? \_\_\_\_\_

If yes, how traumatic was this? (using a 7-point scale, where 1 = not at all traumatic, 4 = somewhat traumatic, 7 = extremely traumatic. *Please circle your response*)

1      2      3      4      5      6      7

## Appendix F

**Multidimensional Scale of Perceived Social Support**Instruction set E:

We are interested in how you feel about the following statements, which pertain to social support. Read each statement carefully. Indicate how you feel about each statement.

	Very strongly disagree			Neutral			Very strongly agree
1. There is a special person who is around when I am in need of them	1	2	3	4	5	6	7
2. There is a special person with whom I can share my joys and sorrows	1	2	3	4	5	6	7
3. My family really tries to help me	1	2	3	4	5	6	7
4. I get the emotional help and support I need from my family	1	2	3	4	5	6	7
5. I have a special person who is a real source of comfort to me	1	2	3	4	5	6	7
6. My friends really try to help me	1	2	3	4	5	6	7
7. I can count on my friends when things go wrong	1	2	3	4	5	6	7
8. I can talk about my problems with my family	1	2	3	4	5	6	7
9. I have friends with whom I can share my joys and sorrows	1	2	3	4	5	6	7
10. There is a special person in my life who cares about my feelings	1	2	3	4	5	6	7
11. My family is willing to help me make decisions	1	2	3	4	5	6	7
12. I can talk about my problems with my friends	1	2	3	4	5	6	7

## Appendix G

**Child Sexual Abuse Qualifying Questions**Instruction set F:

While the following questions tap sensitive content matter, please circle “yes” or “no” to the following three questions:

1. Have you ever had sexual contact (fondling, oral-genital contact, or intercourse) before the age of 15, with an adult who was 5 or more years older than you?

YES = 1

NO = 0

2. Have you ever had sexual contact, prior to the age of 15, with an individual who may or may not have been 5 or more years older than you but who used force or threats to ensure your compliance?

YES = 1

NO = 0

3. Have you ever had sexual contact, prior to the age of 15, with someone of any age that you regarded as abusive?

YES = 1

NO = 0

Instruction set G:

If you have answered “YES” to *any one* of the above 3 questions, please complete the rest of the questionnaire. If you have answered “NO” to *all 3* questions, the questionnaire is complete. Please hand back the questionnaire to your instructor and thank you for your participation.

## Appendix H

**Abuse Severity Index**Instruction set H:

The following questions pertain to the details of the sexual encounter(s) you experienced as a child. Please answer the questions by circling your response.

1. Approximately how many sexual encounters did you engage in prior to the age of 15, with the individual(s) who initiated the encounter?
  - a. 1-5
  - b. 6-10
  - c. 11-15
  - d. 16-20
  - e. 21+
  
2. How many individuals, fitting one of the three previous sexual encounter qualifications, engaged you in sexual relations prior to the age of 15?
  - a. 1
  - b. 2
  - c. 3
  - d. 4
  - e. 5+
  
3. How old were you when the sexual encounters began?
  - a. Younger than 4
  - b. Between 4 years, 1 day to 6 years
  - c. Between 6 years, 1 day to 8 years
  - d. Between 8 years, 1 day to 10 years
  - e. Between 10 years, 1 day to 15 years
  
4. What was the duration of the sexual activity?
  - a. 1-7 days
  - b. 1-4 weeks
  - c. 1-12 months
  - d. More than 1 year
  
5. How frequent was the sexual activity?
  - a. Daily (very frequent)
  - b. A few times a week
  - c. A few times a month
  - d. A few times a year
  - e. It was an isolated event (not at all frequent)

Instruction set I:

The following statements relate to your sexual experiences. Please read each of the following statements and rate the extent to which you agree with each statement.

	<b>Strongly disagree</b>		<b>Neutral</b>			<b>Strongly Agree</b>	
	1	2	3	4	5	6	7
6. The sexual encounter(s) was/were physically painful	1	2	3	4	5	6	7
7. The person initiating the sexual activity used a considerable amount of force to gain my compliance	1	2	3	4	5	6	7
8. I was coerced into the sexual act (e.g., tricked, bribed, pressured...).	1	2	3	4	5	6	7
9. The person initiating the sexual activity threatened to hurt me, or someone I cared about if I didn't comply with their sexual advances	1	2	3	4	5	6	7
10. The sexual activity involved penetration (e.g., digital, vaginal, anal)	1	2	3	4	5	6	7
11. I was very close to and trusted the person initiating the sexual encounter(s)	1	2	3	4	5	6	7
12. The sexual encounter(s) was/were severe and hurt me	1	2	3	4	5	6	7

Table 1

Descriptive Statistics and Reliability Analysis for MSPSS, RSQ and RQ.

Scale	Mean	Standard Deviation	N	Cronbach's Alph
MSPSS Total	65.91	12.45	12	.88
MSPSS Family	22.33	5.40	4	.85
MSPSS Friends	21.51	4.80	4	.86
MSPSS Significant Other	22.08	5.91	4	.90
RQ Security	NA	NA	1	NA
RQ Fearfulness	NA	NA	1	NA
RQ Preoccupied	NA	NA	1	NA
RQ Dismissing	NA	NA	1	NA
RSQ Security	15.64	3.10	4	.31
RSQ Fearfulness	10.82	3.16	5	.65
RSQ Preoccupation	11.62	2.26	4	.12
RSQ Dismissing	16.46	2.98	5	.40

Notes:

MSPSS = Multidimensional Scale of Perceived Social Support

RSQ = Relationship Scales Questionnaire

RQ = Relationship Questionnaire

NA= Not Applicable

Table 2

## Content Validity Analysis for the RSQ and RQ

Variables	RQ Security	RQ Fearfulness	RQ Preoccupied	RQ Dismissing
RSQ Security	.46*	-.32*	.23*	-.12
RSQ Fearfulness	-.39*	.60*	.21*	.19*
RSQ Preoccupied	-.05	.13	.54*	-.13
RSQ Dismissing	.03	.11	-.01	.51*

Notes:

RSQ = Relationship Scales Questionnaire

RQ = Relationship Questionnaire

\*  $p \leq .01$

Table 3

## Measures of Association for the Abuse Severity Index

	AS Total	Subjective Severity	Significance
Number of sexual encounters	.74	.61	.00
Number of abusers	.40	.39	.03
Age onset	.40	.21	.25
Duration of abuse	.71	.59	.00
Frequency	.63	.49	.00
Physical pain	.58	.43	.00
Force	.67	.41	.02
Coercion	.72	.52	.02
Threat	.53	.33	.06
Penetration	.55	.44	.01
Trust/closeness	.61	.66	.00
Subjective severity	.82	1	.



Table 4

## Descriptive Statistics for Selected Variables

Variable	Attribute	Frequency and % Non-CSA (n = 145)	Frequency and % CSA (n = 34)
Gender	Male	55 (37.9%)	7 (20.6%)
	Female	90 (62.2%)	26 (76.5%)
	Missing	0 (0%)	1 (2.9%)
Marital status	Single	126 (86.9%)	26 (76.5%)
	Married	8 (5.5%)	4 (11.8%)
	separated/ divorced	0 (0%)	2 (5.9%)
	Other	11 (7.6%)	2 (5.9%)
Year in program	1	97 (66.9%)	22 (64.7%)
	2	22 (15.2%)	7 (20.6%)
	3	14 (9.7%)	1 (2.9%)
	4	7 (4.8%)	3 (8.8%)
	Other	5 (3.4%)	1 (2.9%)
Living arrangements	Parents	62 (42.8%)	9 (26.5%)
	Alone	18 (12.4%)	11 (32.4%)
	friends/ family	52 (35.9%)	11 (32.4%)
	Partner	10 (6.9%)	3 (8.8%)
	Residence	3 (2.1%)	0 (0%)
# of children	1	55 (37.9%)	8 (23.5%)
	2	50 (34.5%)	11 (32.4%)
	3	22 (15.3%)	9 (26.5%)
	4	11 (7.6%)	3 (8.8%)
	5 or more	7 (4.8%)	3 (8.8%)
Birth order	Only	58 (40%)	8 (23.5%)
	Youngest	34 (23.4%)	10 (29.4%)
	Middle	14 (9.7%)	9 (26.5%)
	Oldest	39 (26.9%)	7 (20.6%)
Parent's income	<\$10,000	26 (17.9%)	1 (2.9%)
	\$10-19,000	22 (15.2%)	14 (41.2%)
	\$20-29,000	14 (9.7%)	2 (5.9%)
	\$30-39,000	25 (17.2%)	4 (11.8%)
	>\$40,000	57 (39.3%)	13 (38.2%)
	Missing	1 (0.7%)	0 (0%)

Table 4 continued

## Descriptive Statistics for Selected Variables

Variable	Attribute	Frequency and % Non-CSA (n = 145)	Frequency and % CSA (n = 34)
Population size	<10,000	21 (14.5%)	6 (17.6%)
	11-50,000	5 (3.4%)	1 (2.9%)
	51-150,000	4 (2.8%)	0 (0%)
	151-300,000	12 (8.3%)	2 (5.9%)
	>300,000	103 (71%)	33 (97.1%)
	Missing	0 (0%)	1 (2.9%)
Social activity	very outgoing	37 (25.5%)	7 (20.6%)
	somewhat outgoing	73 (50.3%)	13 (38.2%)
	not very outgoing	29 (20%)	7 (20.6%)
	somewhat isolated	4 (2.8%)	3 (8.8%)
	very isolated	2 (1.4%)	3 (8.8%)
	Missing	0 (0%)	1 (2.9%)

Table 5

## Descriptive Statistics for the Abuse Severity Index

Variable	CSA (n = 32)	
	Attribute	Frequency and %
Perpetrator gender	male	22 (68.8%)
	female	9 (28.1%)
	both	1 (3.1%)
# encounters	1-5	22 (68.8%)
	6-10	2 (6.3%)
	11-15	3 (9.4%)
	16-20	2 (6.3%)
	21+	3 (9.4%)
# perpetrators	1	21 (65.6%)
	2	7 (21.9%)
	3	2 (6.3%)
	4	1 (3.1%)
	5	1 (3.1%)
Age onset	<4	3 (9.4%)
	4.1 – 6	7 (21.9%)
	6.1 – 8	5 (15.6%)
	8.1 – 10	3 (9.4%)
	10.1 – 15	14 (43.8%)
Duration	days	16 (50%)
	weeks	3 (9.4%)
	months	4 (12.5%)
	years	9 (28.1%)
Frequency	daily	1 (3.1%)
	weekly	11 (34.4%)
	monthly	5 (15.6%)
	yearly	1 (3.1%)
	isolated	14 (43.8%)
Abusive?	yes	20 (62.5%)
	no	12 (37.5%)

Table 6

## Descriptive Statistics for the Likert Scale Section of the Abuse Severity Index

Variable	Mean	Standard Deviation
Pain	3.97	2.04
Force	3.31	1.91
Coercion	4.44	2.20
Threat	2.75	2.16
Penetration	3.91	2.39
Trust	4.47	2.00
Severity	4.19	2.01

Notes:

Range = 1-7

Each item within this measure represents the presence of a severity variable. Low scores (e.g., 1, 2 and 3) indicate disagreement that the item was present. Moderate scores (e.g., 4) indicate neutrality and higher scores (e.g., 5, 6, and 7) indicate agreement with the presence of the severity item.

Table 7

## Control t-tests

Variable	Group		Independent group t-test (2-tailed)	
	No trauma (n = 37)	Other trauma (n= 108)	t- value	p- value
RQS Mean (SD)	4.22 (1.47)	4.57 (1.43)	-1.30	.19
RQF Mean (SD)	3.95 (1.81)	3.55 (1.69)	1.22	.23
RSQS Mean (SD)	15.62 (2.70)	15.99 (3.17)	-0.63	.53
RSQF Mean (SD)	10.78 (3.15)	10.58 (3.06)	0.34	.73

## Notes:

RQS = Relationships Questionnaire Security

RQF = Relationship Questionnaire Fearfulness

RSQS = Relationships Scales Questionnaire Security

RSQF = Relationship Scales Questionnaire Fearfulness

Table 8

## Independent Group t-tests and Effect Sizes

Variable	Group		Independent group t-test (1-tail)		Cohen's d
	Non-CSA (n = 145)	CSA (n = 34)	t-score	p-value	
RQ Security Mean (SD)	4.48 (1.44)	3.76 (1.50)	2.59	.01	.49
RQ Fearfulness Mean (SD)	3.65 (1.73)	4.06 (1.84)	-1.23	.11	.23
RSQ Security Mean (SD)	15.90 (3.05)	14.56 (3.12)	2.29	.01	.44
RSQ Fearfulness Mean (SD)	10.63 (3.08)	11.62 (3.45)	-1.64	.05	.31

Notes:

RSQ = Relationship Scales Questionnaire

RQ = Relationship Questionnaire

Table 9

Proportion of Variance Accounted for and Unstandardized Beta Coefficients Associated with each of Simple Linear Regression

Model	R <sup>2</sup>	b	p-value
DV: RQS			
M1: IV: SS	.04	.19	.29
IV: AS	.05	.22	.23
M2: IV: Interaction	.07	.21	.16
DV: RSQS			
M1: IV: SS	.34	.59	.00
IV: AS	.00	-.00	.99
M2: IV: Interaction	.36	.48	.00
DV: RQF			
M1: IV: AS	.01	.11	.55
IV: SS	.16	.40	.03
M2: IV: Interaction	.16	-.32	.02
DV: RSQF			
M1: IV: AS	.00	-.03	.99
IV: SS	.34	.59	.00
M2: IV: Interaction	.36	.48	.00

Notes:

IV = Independent variable

DV = Dependent variable

M= Model

SS= Social Support

AS= Abuse Severity

RQS = Relationship Questionnaire, Security

RQF = Relationship Questionnaire, Fearfulness

RSQS = Relationship Scales Questionnaire, Security

RSQF = Relationship Scales Questionnaire, Fearfulness

Table 10

## Exploratory Ad-Hoc Attachment t-tests

Variable	Group		Independent group t-test (2-tail)	
	Non-CSA (n = 145)	CSA (n = 34)	t-score	p-value
RQP				
Mean (SD)	3.80 (1.53)	4.29 (1.80)	-1.66	.10
RQD				
Mean (SD)	3.92 (1.69)	4.24 (1.50)	-.99	.33
RSQP				
Mean (SD)	11.57 (2.22)	11.82 (2.44)	-.58	.56
RSQD				
Mean (SD)	16.35 (2.89)	16.94 (3.35)	-1.04	.30

Notes:

RQP = Relationship Questionnaire Preoccupied

RQD = Relationship Questionnaire Dismissing

RSQP = Relationship Scales Questionnaire Preoccupied

RSQD = Relationship Scales Questionnaire Dismissing



Table 11

## Exploratory Ad-Hoc Social Support t-test

Variable	Group		Independent group t-test (2-tail)	
	Non-CSA (n = 145)	CSA (n = 34)	t-score	p-value
MSPSS Total Mean (SD)	66.39 (12.11)	63.88 (13.85)	1.06	.29

Note:

MSPSS = Multidimensional Scale of Perceived Social Support

Table 12

## Exploratory Ad-Hoc Chi Square Tests of Independence for the CTES

Variable	Attribute	Frequency and	Frequency and	Chi square ( $\chi^2$ )	p-value
		% Non-CSA (n = 145)	% CSA (n = 34)		
Death	Yes	82 (56.6%)	19 (55.9%)	0.01	.94
	No	63 (43.4%)	15 (44.1%)		
Parental upheaval	Yes	16 (11%)	10 (29.4%)	7.50	.01
	No	129 (89%)	24 (70.6%)		
Violence	Yes	14 (9.7%)	13 (38.2%)	17.56	.00
	No	131 (90.3%)	21 (61.8%)		
Illness	Yes	33 (22.8%)	8 (23.5%)	0.01	.92
	No	112 (77.2%)	26 (76.5%)		
Other	Yes	16 (11%)	9 (26.5%)	5.46	.02
	No	129 (89%)	25 (73.5%)		

Note:

CTES = Childhood Traumatic Events Scale

Table 13

## Exploratory Ad-hoc Control t-tests: Violence

Variable	Group		Independent group t-test (1-tailed)	
	No violence (n = 152)	Violence (n= 27)	t- value	p- value
RQS				
Mean (SD)	4.43 (1.44)	3.85 (1.63)	1.90	.02
RQF				
Mean (SD)	3.66 (1.72)	4.07 (1.90)	-1.12	.13
RSQS				
Mean (SD)	15.88 (3.03)	14.30 (3.20)	2.49	.01
RSQF				
Mean (SD)	10.58 (3.04)	12.19 (3.53)	-2.47	.01

## Notes:

RQS = Relationships Questionnaire Security

RQF = Relationship Questionnaire Fearfulness

RSQS = Relationships Scales Questionnaire Security

RSQF = Relationship Scales Questionnaire Fearfulness

Table 14

## Exploratory Ad-hoc Control t-tests: Parental Upheaval

Variable	Group		Independent group t-test (1-tailed)	
	No violence (n = 153)	Violence (n= 26)	t- value	p- value
RQS				
Mean (SD)	4.39 (1.50)	4.12 (1.31)	.86	.20
RQF				
Mean (SD)	3.76 (1.74)	3.54 (1.82)	.59	.28
RSQS				
Mean (SD)	15.64 (3.12)	15.65 (3.06)	-.02	.49
RSQF				
Mean (SD)	10.94 (3.10)	10.12 (3.50)	1.23	.11

Notes:

RQS = Relationships Questionnaire Security

RQF = Relationship Questionnaire Fearfulness

RSQS = Relationships Scales Questionnaire Security

RSQF = Relationship Scales Questionnaire Fearfulness

Table 15

Exploratory Ad-hoc Control t-tests: "Other" Trauma

Variable	Group		Independent group t-test (1-tailed)	
	No violence (n = 154)	Violence (n= 25)	t- value	p- value
RQS Mean (SD)	4.42 (1.49)	3.92 (1.35)	1.56	.06
RQF Mean (SD)	3.67 (1.73)	4.08 (1.89)	-1.09	.14
RSQS Mean (SD)	15.74 (3.08)	15.04 (3.23)	1.05	.15
RSQF Mean (SD)	10.73 (3.13)	11.36 (3.37)	-.92	.18

Notes:

RQS = Relationships Questionnaire Security

RQF = Relationship Questionnaire Fearfulness

RSQS = Relationships Scales Questionnaire Security

RSQF = Relationship Scales Questionnaire Fearfulness

Figure 1

Example Main Effect Path Diagram

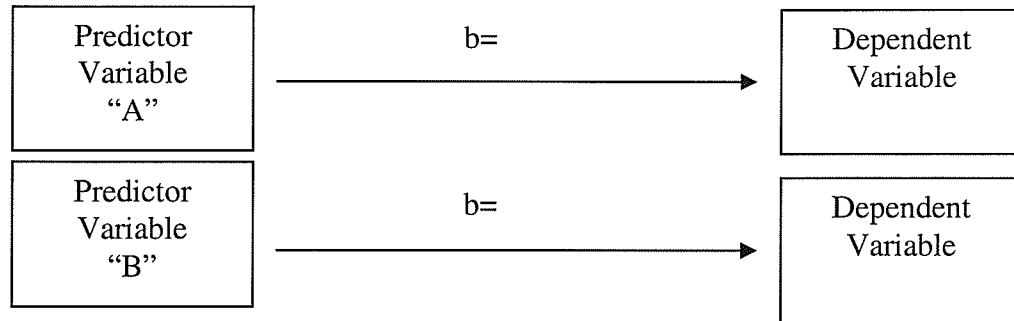


Figure 2

Example Interaction Path Diagram

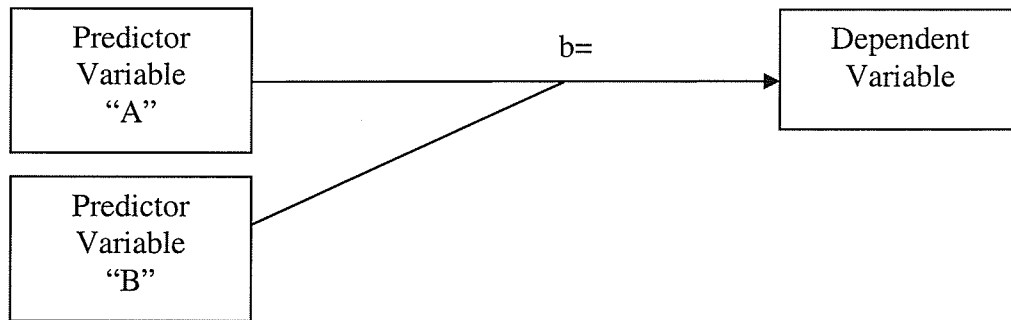


Figure 3

Main Effect Diagram for the Prediction of RQ Security

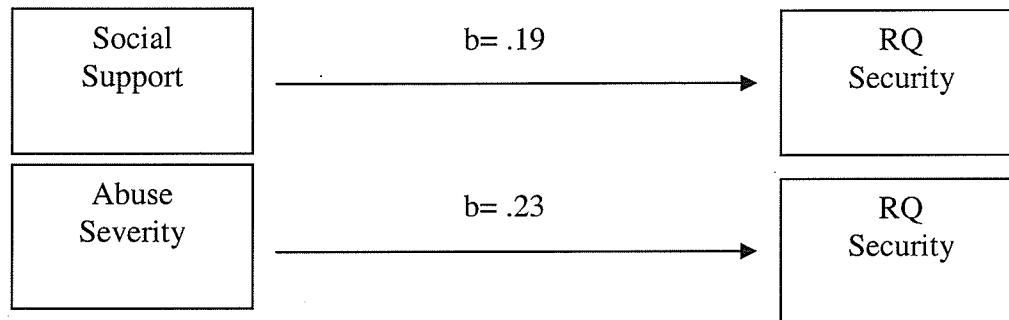




Figure 4

Interaction Path Diagram for the Prediction of RQ Security

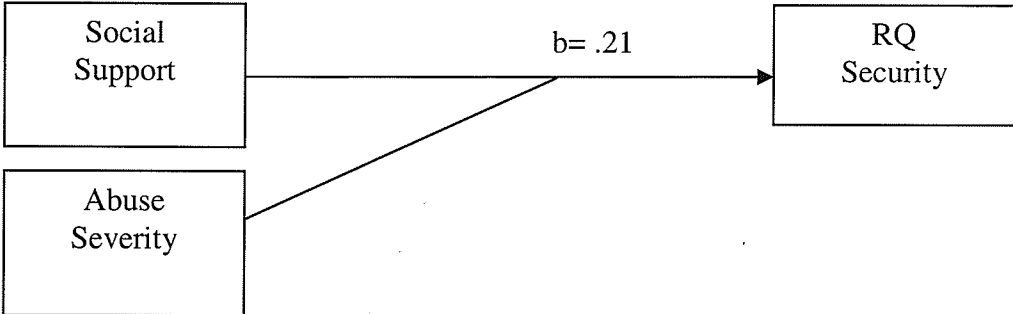
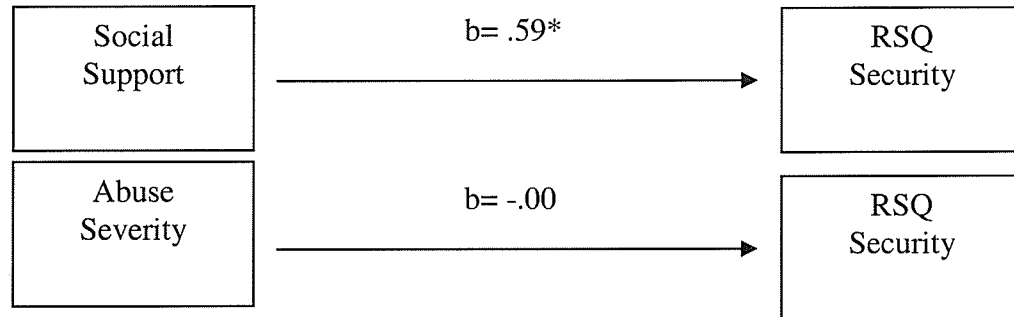


Figure 5

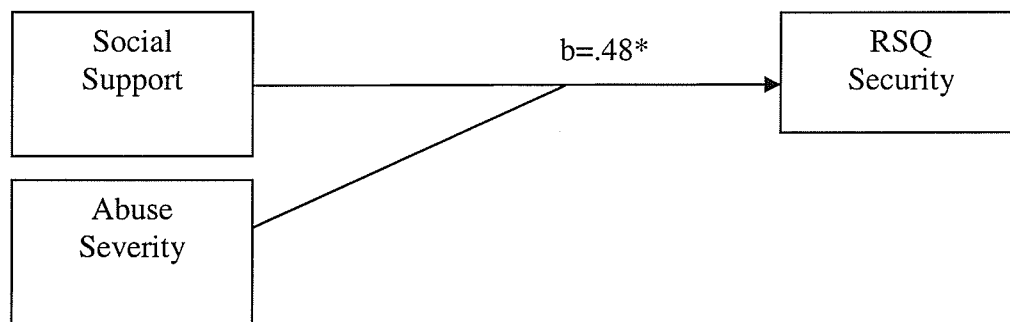
Main Effect Path Diagram for the Prediction of RSQ Security



\*Alpha <.01

Figure 6

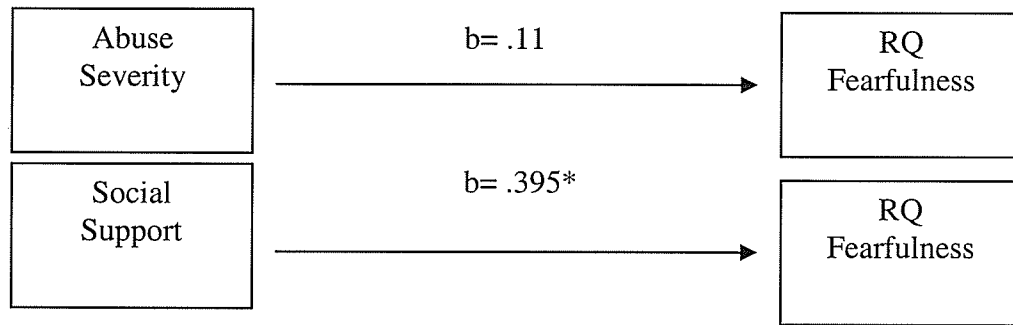
Interaction Path Diagram for the Prediction of RSQ Security



\*Alpha <.01

Figure 7

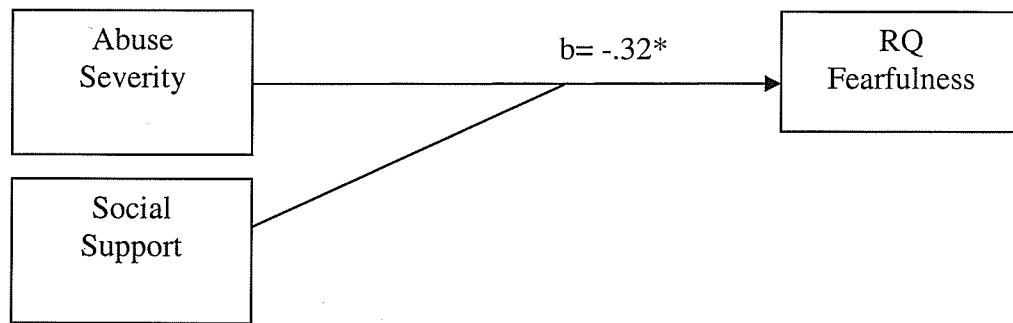
Main Effect Path Diagram for the Prediction of RQ Fearfulness



\* Alpha <.05

Figure 8

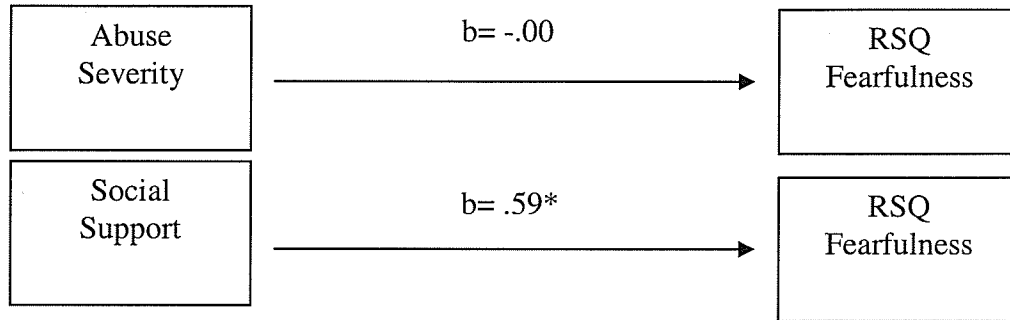
Interaction Path Diagram for the Prediction of RQ Fearfulness



\* alpha < .05

Figure 9

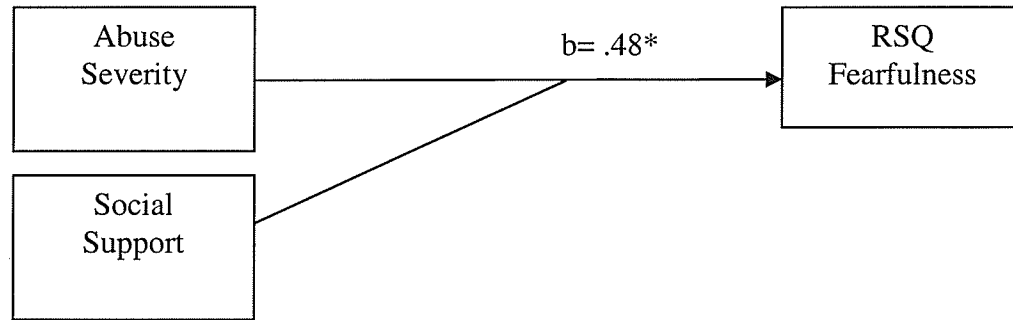
Main Effect Path Diagram for the Prediction of RSQ Fearfulness



\* Alpha <.01

Figure 10

Interaction Path Diagram for the Prediction of RSQ Fearfulness



\* Alpha <.01