

ADULT ATTACHMENT STYLES: A COMPARISON BETWEEN  
PSYCHOLOGICALLY MALTREATED AND NON-MALTREATED INDIVIDUALS  
USING SELF-REPORT AND PROJECTIVE METHODS

by

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**ABSTRACT**

The recognition of psychological maltreatment as a distinct form of child maltreatment worthy of independent investigation occurred only as recently as the late 1970s. Today, there is a growing consensus among professionals that not only is psychological maltreatment far more prevalent than was once realized, but also that it lies at the core of all major forms of abuse and neglect. Furthermore, its impact has been judged by some to be more damaging than the effects of either physical or sexual abuse. The current study examined individuals who reported having experienced childhood psychological maltreatment in comparison to a control group who reported not having experienced any form of childhood maltreatment. The attachment styles of the maltreated and non-maltreated groups were compared with respect to a two-dimensional model of attachment. It was hypothesized that maltreated individuals would have less secure adult attachment relationships than their non-maltreated counterparts. Results indicated that individuals who reported childhood psychological maltreatment were indeed more likely than their non-maltreated counterparts to have developed a self-reported insecure attachment style in their adult relationships, characterized by higher levels of both attachment avoidance and attachment anxiety. A secondary goal of the study was to determine whether self-reports of the two attachment dimensions (anxiety and avoidance) were associated with theoretically coherent constellations of Rorschach projective responses. No evidence of associations between the projective responses and the self-report measure of these attachment dimensions was found in either the maltreated or the non-maltreated group, suggesting the need for further research in this area.

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**TABLE OF CONTENTS**

ABSTRACT .....	i
ACKNOWLEDGEMENTS .....	ii
TABLE OF CONTENTS .....	iv
LIST OF TABLES .....	vi
LIST OF FIGURES .....	viii
CHAPTER 1 – INTRODUCTION .....	1
Rationale for Studying Psychological Maltreatment .....	2
Terminology and Definitional Issues .....	5
Behaviours Constituting Psychological Maltreatment .....	8
Sequelae of Psychological Maltreatment .....	11
<i>Attachment</i> .....	12
<i>Social competence and social adjustment</i> .....	13
<i>Behaviour</i> .....	13
<i>Unhappiness, depression, and low self-esteem</i> .....	15
<i>Longer-term sequelae</i> .....	15
Attachment Theory .....	18
<i>Attachment Patterns and their Antecedents</i> .....	21
<i>Secure Attachment</i> .....	22
<i>Insecure Attachment</i> .....	22
<i>Avoidant/anxious avoidant</i> .....	23
<i>Ambivalent/anxious resistant</i> .....	24
<i>Disorganized/Disoriented</i> .....	24
Continuity of Childhood Attachment Patterns into Adulthood .....	25
Models of Adult Attachment Styles .....	28
Measurement Issues .....	36
<i>The Accuracy of Retrospective Self-Reports</i> .....	36
<i>Assessing the Nature of the Individual's Abuse History</i> .....	38
<i>Assessment of Abuse Effects</i> .....	40
<i>Use of the Rorschach Inkblot Method</i> .....	43
<i>Rorschach Variables Selected for the Current Study</i> .....	45
<i>Attachment anxiety variables</i> .....	45
<i>Attachment avoidance variables</i> .....	48
Summary of the Current Study and its Contributions to the Literature .....	50
Hypotheses .....	52
Hypothesis 1 .....	52
Hypothesis 2 .....	53
Hypothesis 3 .....	53

CHAPTER 2 – METHOD .....	54
Participants .....	54
Measures .....	55
<i>Demographic Data</i> .....	55
<i>Protective Factors</i> .....	55
<i>Resiliency Scale for Adults (RAS)</i> .....	56
<i>Childhood Maltreatment Questionnaire (CMQ)</i> .....	57
<i>Experiences in Close Relationships (ECR)</i> .....	58
<i>The Rorschach Inkblot Method</i> .....	60
<i>Reliability of the Rorschach</i> .....	64
<i>Validity of the Rorschach</i> .....	65
Procedure .....	67
CHAPTER 3 – RESULTS .....	73
Data Preparation .....	73
Part I – Participant Characteristics .....	74
Maltreatment Frequencies and Comorbidity .....	80
Attachment .....	90
Resilience and Protective Factors .....	96
Comparisons by Protective Factor .....	96
Correlations Between Main Variables and Demographics .....	103
Correlations Between Main Scales .....	107
Part II – Participant Characteristics .....	109
Main Hypotheses .....	120
<i>Hypothesis 1</i> .....	120
<i>Hypothesis 2</i> .....	126
<i>Hypothesis 3</i> .....	130
Supplementary Analyses .....	133
CHAPTER 4 – DISCUSSION .....	144
Summary of the Results .....	144
Strengths and Limitations .....	155
Areas for Further Study .....	158
Conclusions and Clinical Implications .....	160
REFERENCES .....	165
Appendix A .....	182
Appendix B .....	184
Appendix C .....	186
Appendix D .....	189
Appendix E .....	190
Appendix F .....	195
Appendix G .....	197
Appendix H .....	198

**LIST OF TABLES**

Table 1 – Demographic Data for all Part I Participants . . . . .	76
Table 2 – Protective Factors Endorsed by Part I Participants . . . . .	81
Table 3 – Alpha Reliability Coefficients for the Subscales of the CMQ . . . . .	83
Table 4 – Frequencies of Endorsement of Parental Sexual Abuse Items . . . . .	85
Table 5 – Frequencies of Endorsement of Non-parental Sexual Abuse Items . . . . .	86
Table 6 – Frequencies of Endorsement of Physical Abuse Items . . . . .	88
Table 7 – Frequencies of Endorsement of Psychological Maltreatment Items . . . . .	89
Table 8 – Frequency of Occurrence of Each Type of Maltreatment . . . . .	91
Table 9 – Maltreatment Comorbidity Frequencies . . . . .	92
Table 10 – Abuse Frequencies by Psychological Maltreatment Status . . . . .	93
Table 11 – Descriptive Statistics for Attachment Variables and Resilience Scale . . . . .	95
Table 12 – Attachment Type Frequencies . . . . .	97
Table 13 – Comparison of Mean Resilience Scores for Participants With and Without Protective Factors . . . . .	98
Table 14 – Mean Psychological and Physical Maltreatment Scores by Protective Factor . . . . .	100
Table 15 – Mean Parental and Non-Parental Sexual Abuse Scores by Protective Factor . . . . .	101
Table 16 – Mean Anxiety and Avoidance Scores by Protective Factor . . . . .	102
Table 17 – Mean Differences between Males and Females on Main Variables . . . . .	104
Table 18 – Mean Differences between White and Non-White Individuals on Main Variables . . . . .	105
Table 19 – Correlations between Demographic Variables and Main Variables . . . . .	106

Table 20 – Correlations between Resilience, Attachment, and Maltreatment Scales . . . . .	108
Table 21 – Demographic Data – Part II Participants . . . . .	110
Table 22 – Protective Factors Endorsed by Participants in Part II . . . . .	116
Table 23 – Attachment Anxiety Variables – Descriptive Statistics . . . . .	118
Table 24 – Attachment Avoidance Variables – Descriptive Statistics . . . . .	119
Table 25 – Frequencies of Secure and Insecure Attachment: Comparison of Psychologically Maltreated and Non-Maltreated Individuals . . . . .	121
Table 26 – Frequencies of Secure and Insecure Attachment: Comparison of Psychologically Maltreated and Non-Psychologically Maltreated Individuals . . . . .	121
Table 27 – Frequencies of Each Attachment Type: Comparison of Psychologically Maltreated and Non-Maltreated Individuals . . . . .	123
Table 28 – Frequencies of Each Attachment Type: Comparison of Psychologically Maltreated and Non-Psychologically Maltreated Individuals . . . . .	124
Table 29 – Multitrait-Multimethod Correlations Among Assessed Scores for Non-Maltreated Part II Participants . . . . .	128
Table 30 – Multitrait-Multimethod Correlations Among Assessed Scores for Psychologically Maltreated Part II Participants . . . . .	131
Table 31 – Percentage of Securely Attached Individuals by Gender and Psychological Maltreatment Status . . . . .	137
Table 32 – Percentage of Securely Attached Individuals by Ethnicity and Psychological Maltreatment Status . . . . .	137
Table 33 – Multitrait-Multimethod Correlations Among Assessed Scores for All Part II Participants . . . . .	143



**LIST OF FIGURES**

Figure 1 – Hazan and Shaver’s (1987) Descriptions of the Three Attachment  
Styles ..... 29

## CHAPTER 1 - INTRODUCTION

The primary aim of the current study was to compare the attachment styles of individuals who reported a history of childhood psychological maltreatment<sup>1</sup> to those of individuals who reported a childhood history involving no form of maltreatment. In this study, psychological maltreatment was defined as “a repeated pattern of caregiver behavior or extreme incident(s) that convey to children that they are worthless, flawed, unloved, unwanted, endangered, or of value only in meeting another’s needs” (as per Brassard & Hardy, 1997, p. 393). The attachment styles of individuals were examined in two ways: (1) via individuals’ self-reports, and (2) via the use of the Rorschach Inkblot Method, a projective testing measure.

A handful of researchers have examined various Rorschach variables under the assumption that these variables reveal information about an individual’s attachment dynamics (see, for example, Broeking, 2008; Fowler, Brunnschwiler, Swales, & Brock, 2005; Smith, Gacono, & Kaufman, 1997); however, there appears to have been little effort to objectively examine the validity of using these variables to infer attachment-related information. One exception was a study by Berant, Mikulincer, Shaver, and Segal (2005). In this study, the researchers examined whether theoretically coherent constellations of Rorschach responses that were assumed to measure aspects of attachment dynamics did indeed correspond with measurements of these attachment constructs via a well-accepted self-report questionnaire.

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<sup>1</sup> Although some authors make distinctions between the terms “emotional maltreatment”, “emotional abuse”, “psychological abuse”, “psychological maltreatment”, “emotional neglect”, and “psychological neglect,” these terms are considered roughly equivalent within the context of this study, and thus will be used interchangeably throughout.

The current study attempted to replicate the results of Berant and colleagues, who demonstrated that self-reported attachment anxiety and avoidance were associated with their proposed theoretically coherent constellations of Rorschach responses. Further, the study attempted to extend the use of the Rorschach as a means of delineating attachment style to a population of individuals with a reported history of childhood psychological maltreatment. Comparisons were made between the attachment styles developed by individuals in the psychologically maltreated group and the attachment styles developed by individuals in the non-maltreated group. Finally, factors that protected individuals against the negative sequelae of maltreatment, including resilience, were examined in terms of their effect on the development of secure versus insecure attachment styles.

### **Rationale for Studying Psychological Maltreatment**

In the field of child abuse, the recognition of psychological maltreatment as a distinct form of abuse, worthy of independent investigation, occurred only as recently as the late 1970s and early 1980s (Iwaniec, 1997). Since that time, however, there has been a growing consensus among professionals that psychological maltreatment is far more prevalent than was once realized (Straus & Field, 2003), that it lies at the core of all major forms of abuse and neglect (Hamerman & Ludwig, 2000), and that its impact can be more damaging than the effects of either physical or sexual abuse (Brassard & Hardy, 1997; Briere & Rickards, 2007; Erickson & Egeland, 2002; Hart, 2002; Iwaniec, 1997). Briere (2006) has suggested that significant emotional abuse or neglect may be considered *traumatic*. Loring (1994) went so far as to describe psychological

maltreatment as a form of *violence*. Others have described this form of maltreatment as the most painful (Fortune, 1991) and most detrimental to self-esteem (Ferraro, 1979).

Psychological maltreatment has been recognized not only as an entity in and of itself, but also as a major component of physical abuse, sexual abuse, and neglect (Finkelhor, 1983; Garbarino, Guttman, & Seely, 1986; Hamerman & Ludwig, 2000; Starr, MacLean, & Keating, 1991; Wolfe, 1987). Some authors have asserted that most of the consequences of any given form of maltreatment are due more to the psychological component of the maltreatment than to other aspects such as injury or physical deprivation (e.g., Garbarino et al., 1986; Wolfe, 1987). Other researchers have suggested that the degree of maltreatment (i.e., frequency and/or severity) has more impact than the type of maltreatment (e.g., Higgins, 2004). Supporting this assertion is research by Briere, Kaltman, and Green (2008), who observed a linear relationship between the number of different types of childhood trauma experienced by participants in their study and the symptom complexity (number of different types of symptomatology) reported by these individuals.

Grusec and Walters (1991) asserted that psychological abuse conceptually represents the core issue in the study of maltreatment. Similarly, Garbarino and Vondra (1987) argued that psychological abuse “is the critical aspect in the overwhelming majority of what appear as physical and sexual maltreatment cases” (p. 28). They noted that psychological maltreatment is generally believed to be more prevalent than any of the other types of maltreatment, that it almost always accompanies other incidents of maltreatment, and that its social consequences are more destructive to the developing

child. An example of the destructive potential of psychological maltreatment comes from a meta-analysis of published research reporting on the effects of psychobiological influences, childhood experiences, external influences, interpersonal influences, and child antisocial behaviour. Results of this meta-analysis indicated that emotional abuse by a caregiver was the variable with the largest effect size for the development of antisocial personality disorder (Nottell, 2002).

In child protection cases, initial referrals to the protection agency are rarely due to psychological abuse, yet psychological abuse is often noted once the case is further investigated. For example, Walters (1989) found that when child protection workers were asked to classify their clients with respect to *type* of abuse, the protection workers listed psychological abuse as involved in 35 out of 38 cases that were originally called to the attention of their agency as either physical abuse, sexual abuse, or neglect incidents.

One of the reasons psychological abuse has not tended to come to the attention of professionals nearly as often as have physical and sexual abuse lies in the fact that there are typically no physical signs of its existence (Auburn, 2003; Oates, 1996). Sadly, however, research suggests that the psychological maltreatment of children is a common occurrence (Straus & Field, 2003). Based on self-report, recall studies conducted with undergraduate students, and differing by definition and reporting methods, the prevalence of psychological maltreatment has been found to range from 29% (Doyle, 1997) to as much as 62% (Demare, 2000). In the study by Demare, 28% of the sample had experienced psychological maltreatment in combination with other types of maltreatment

(physical and/or sexual), while another 34% of the sample had experienced psychological maltreatment alone.

Another explanation for why psychological maltreatment has not come to the attention of professionals as often as physical or sexual abuse arises from difficulties with defining the concept (Auburn, 2003). Although the lack of concise and commonly accepted definitions for all types of child maltreatment has been problematic, nowhere has it been more pronounced than in the area of psychological maltreatment (Brassard & Hardy, 1997). In the majority of literature on psychological maltreatment, definitional issues are discussed and allusions are made to there being no one agreed upon definition (Doyle, 1997). The following section examines definitional issues related to psychological maltreatment.

### **Terminology and Definitional Issues**

Agreement on appropriate and consistent terminology to describe maltreatment of a psychological nature has not come easily. In the years since psychological maltreatment became an issue of interest to researchers, it has been labelled variously as non-physical abuse (Hudson & McIntosh, 1981), indirect abuse (Gondolf, 1985), emotional abuse (NiCarthy, 1986), psychological abuse (Walker, 1984), psychological aggression (Murphy & O'Leary, 1989), psychological maltreatment (Tolman, 1989), verbal abuse (Ney, 1987), and mental or psychological torture (Russell, 1982).

Defining what is meant by the term psychological maltreatment has been another area of difficulty. Brassard and Hardy (1997) noted that among the reasons psychological maltreatment was so difficult to define was the fact that it could result from acts of

commission (typically called *abuse*) and/or acts of omission (typically called *neglect*). Second, it could occur in acute instances, such as specific threats to children, or in chronic patterns of interaction, such as ongoing criticism. Finally, it could occur in subtle behaviours, such as emotional unavailability, or in extreme or pronounced behaviours, such as verbal assault.

The difficulty in defining psychological maltreatment has been complicated further by the question of whether the emphasis should be on the abusive parental behaviour or on the effects of this behaviour on the development of the child. Some researchers have focused on parental behaviour that is considered to be damaging (McGee & Wolfe, 1991), while others have argued that parental behaviour is an inadequate predictor of emotional damage and have instead chosen to focus on child outcomes (Kavanagh, 1982).

A further definitional problem is the issue of whether or not to make a distinction between psychological and emotional abuse. O'Hagan (1993), who considered emotional abuse and psychological abuse to be different concepts, identified emotional abuse as sustained, repetitive, inappropriate emotional responses to a child and psychological abuse as sustained, repetitive, inappropriate behaviour that damages the developmental potential of mental processes and faculties. Other writers, noting the interrelationship between the concepts of emotional and psychological abuse, have preferred the use of the term *maltreatment* as a catch-all description (Garbarino et al., 1986). Furthermore, as Navarre (1987) pointed out, "In professional literature the terms psychological abuse, emotional abuse and mental cruelty have been used interchangeably" (p. 45).

Emotional abuse also has been distinguished from emotional neglect by some authors (Oates, 1996). Emotional neglect has been defined as “subtle or blatant acts of omission or commission experienced by the child, which cause handicapping stress on the child and which is manifested in patterns of inappropriate behaviour” (Whiting, 1976, p. 2). By contrast, Oates (1996) has stated that emotional abuse can be seen as “an active, constant behaviour toward the child, usually by a parent, where self-esteem is pulled down rather than built up” (p. 20). Oates favoured a specific definition of emotional abuse provided by Skuse (1989): “The habitual, verbal harassment of a child by disparagement, criticism, threat, ridicule and the inversion of love; by verbal and nonverbal means rejection and withdrawal are substituted” (p. 692).

Just as definitional issues have plagued scholarly research in the area of psychological maltreatment, governmental attempts to include concepts of mental injury in the determination of child maltreatment also have been controversial. Brassard and Hardy (1997) described a warning from Representative Earl Landgrebe in the United States Congress in which he stated that the concept of mental injury is difficult to define, that *clear-cut evidence* of its existence would be difficult to establish, and that the vagueness of the term would lead to contestation between the rights of parents and the responsibilities of state agencies mandated to implement the law.

Brassard and Hardy (1997) have asserted that the term *psychological* is preferable to the term *emotional* because it “better incorporates the cognitive, affective, and interpersonal conditions that are the primary components of this form of child abuse and neglect” (p. 393). Similarly, the term *psychological maltreatment* has been suggested as



preferable by Hart, Brassard, Binggeli, and Davidson (2002), who argued that it is sufficiently broad to include both the cognitive and affective meanings of maltreatment (psychological) as well as acts of both commission and omission by the perpetrator (maltreatment).

As for how one defines what is meant by the term psychological maltreatment, arguably one of the most well-accepted definitions is the one offered in the *Guidelines for the Psychosocial Evaluation of Suspected Psychological Maltreatment in Children and Adolescents* of the American Professional Society on Abuse of Children (APSAC, 1995): “A repeated pattern of caregiver behavior or extreme incident(s) that convey to children that they are worthless, flawed, unloved, unwanted, endangered, or of value only in meeting another’s needs” (p. 2). Operational definitions of psychological maltreatment such as this also generally include specific behaviours that are considered to constitute such maltreatment. However, the subset of behaviours that should be grouped under the rubric of psychological maltreatment is another area of contention. The following section presents an overview of some of the work that has been done in this area.

### **Behaviours Constituting Psychological Maltreatment**

The specific behaviours considered to constitute psychological maltreatment vary between researchers. Garbarino and colleagues (1986) suggested that psychological abuse could be seen to fall into six domains: (1) mental cruelty, (2) sexual abuse and exploitation, (3) emotional neglect, (4) cultural bias or prejudice, (5) institutional abuse, and (6) living in dangerous environments. The APSAC guidelines (1995) also grouped psychological maltreatment behaviours into six categories that appear to overlap, but are

certainly not identical to, those of Garbarino and colleagues. The APSAC categories include: (1) spurning, (2) terrorizing (threatening), (3) isolating, (4) exploiting/corrupting, (5) denying emotional responsiveness, and (6) unwarranted denial of mental health care, medical care, or education (see Appendix A for complete definitions of these terms). Brassard and Hardy (1997) have argued the merits of this selection of behaviours based not only on the similarity to the work of Garbarino and colleagues, but also to the consistency with the National Incidence Study (NIS) definitions, the psychological abuse and neglect categories of the Record of Maltreatment Experiences (ROME), the operational definitions of Bailey and Bailey, and the ordinal scales of Barnett and colleagues. Brassard and Hardy also noted that these subtype definitions had been recommended by Egeland (1991a) for application in “efforts to establish the state of knowledge and practice” (p. 393).

Demare (1993) developed twelve categories of psychological maltreatment based on literature reviews that included the works of Hart, Germain and Brassard (1987), McGee and Wolfe (1991), and Briere (1992). Demare (1993) argued that the term *terrorizing* used by some authors was heterogeneous in nature and might better be described in terms of more homogenous categories, identified as verbal terrorism, physical terrorism, and witness to family violence. Demare also argued for the removal of sexual forms of abuse from lists of psychological maltreating behaviours. In particular, he noted that the term *exploiting* often was used to encompass sexually exploiting, and that this form of exploitation fit more appropriately under the rubric of sexually abusive behaviours. Furthermore, Demare asserted that three categories of psychological

maltreatment often had not been included in operational definitions of psychological maltreatment: (1) unreliable and inconsistent care, (2) controlling or stifling independence, and (3) physical neglect. Demare's final twelve categories thus included the behaviours of: (1) rejecting, (2) degrading, (3) isolating, (4) corrupting, (5) denying emotional responsiveness, (6) non-sexually exploiting, (7) verbally terrorizing, (8) physically terrorizing, (9) witnessing family violence, (10) unreliable and inconsistent care, (11) controlling or stifling independence, and (12) physically neglecting (see Appendix B for complete definitions of these terms).

More recently, Auburn (2003) conducted a literature review and identified five constructs central to an operational definition of psychological maltreatment of children: rejecting, ignoring, isolating, terrorizing, and corrupting. Using a survey instrument of items considered to reflect these constructs, Auburn found support for four of the five constructs: rejecting, ignoring, isolating, and terrorizing. Her explanation for the lack of support for the concept of corrupting was that it was a behaviour directed toward a child's socialization rather than the child-caregiver relationship.

The lack of clarity in terminology, definitions, and constituent behaviours has made efforts to summarize research in the area of childhood emotional maltreatment difficult. Nevertheless, some relatively well-accepted sequelae of psychological maltreatment can be found in the literature. The following section examines some of these sequelae.

### **Sequelae of Psychological Maltreatment**

Maltreated children display disturbances in child-caregiver attachment as well as in multiple other domains such as cognitive, moral, social, and emotional development (see Cicchetti & Carlson, 1989; Hart, Brassard, Binggeli, & Davidson, 2002; Haugaard & Reppucci, 1988). Psychological maltreatment has been identified as having a “more extensive and destructive impact on the development of children” (Brassard & Hardy, 1997, p. 399) than any other type of abuse or neglect. The Minnesota Mother-Child Interaction Project (Egeland & Erickson, 1987; Egeland, Sroufe, & Erickson, 1983; Erickson et al., 1989) followed children, from birth to adulthood, who had been born to mothers at risk for caretaking problems. They found that the most devastating impact on these children arose from psychologically unavailable mothers (i.e., denying emotional responsiveness).

Hart, Brassard, and Karlson (1996) observed that psychological maltreatment is “likely to produce maladaptive deviancy in intra- and inter-personal characteristics, retard and distort development and functioning, and lead to withdrawal and aggression” (p. 77). At the 1983 International Conference on Psychological Abuse of Children and Youth, a review of expert opinions, clinical cases, and empirical research literature resulted in an extensive list of negative child development conditions associated with psychological maltreatment (Hart et al., 1986). Hart and colleagues (1987) reviewed the relevant literature and found the following problems were associated with psychological maltreatment: poor appetite, lying and stealing, encopresis and enuresis, low self-esteem or negative self-concept, emotional instability or emotional maladjustment, reduced

emotional responsiveness, inability to become independent, incompetence or underachievement, inability to trust others, depression, prostitution, failure to thrive, withdrawal, suicide, and homicide.

Many of the consequences of psychological maltreatment have yet to gather strong empirical support, but some have enough research backing to suggest a firmly established relationship. Some of the more established relationships have been found between psychological maltreatment and childhood problems of (a) attachment, (b) social competence and social adjustment, (c) behaviour, and (d) depression and lower self-esteem. In addition, some longer-term sequelae of childhood abuse have also been reported in the literature. An overview of some of the specific research in these areas follows.

***Attachment.*** A number of studies have found that maltreated children were more likely to form insecure attachment relationships with their mothers or other primary caregivers than were demographically matched comparison groups (see Cicchetti, 1989). Cicchetti, Toth, and Bush (1988) found that the vast majority of maltreated infants form insecure, anxious-avoidant attachments with their caregivers.

Egeland and Sroufe (1991) examined a group of children who had received psychologically unavailable caregiving but no other identifiable forms of maltreatment. Egeland and Sroufe (see also Egeland, 1991b) found all the children in this group had developed avoidant attachments with their caregivers. Attachment disorders, identified by behaviours such as not seeking comfort when distressed or not benefiting from a parent's presence when distressed, have also been observed in studies of psychologically

maltreated infants by Crittenden and Ainsworth (1989), Erickson and Egeland (1987), and Erickson, Egeland, and Pianta (1989).

***Social competence and social adjustment.*** Social competence and social adjustment also have been shown to be affected negatively by psychological maltreatment in childhood. Herrenkohl, Herrenkohl, Egolf, and Wu (1991) found a negative relationship between parental emotional abuse and social competence dimensions, specifically academic excellence and a dimension they labelled as self-respecting/happy. Relationships also were found between neglect and all but one of seven social competence variables studied. Similarly, mothers' positive and negative interactions were related to all seven of the social competence variables. Fathers' positive interactions were related to none of the social competence indicators; however, fathers' negative interactions were related to four of the social competence variables: academic excellence, angry/negative, self-respecting/happy, and acting out/destructive.

Other aspects of social competence also have been found to be negatively affected by psychological maltreatment. These aspects of social competence include lack of friends among preschool and school-age children (Hart & Brassard, 1991), increased number of social problems among adolescents (Claussen & Crittenden, 1991), and more peer-related problems among adolescents (Vissing, Straus, Gelles, & Harrop, 1991).

***Behaviour.*** According to Hart and colleagues (1996), psychologically maltreated children have more behavioural problems than demographically matched peers. Studies have shown that childhood experiences of abuse or neglect increase one's risk of developing aggressive behaviour (Rosen, 1998). In a longitudinal study of 172 at-risk

mother-child dyads, Egeland (1991b) found that children whose mothers were physically abusive or psychologically unavailable were more aggressive than children of mothers who were not physically abusive or psychologically unavailable, even when socioeconomic status, life stress, school quality, and selected child characteristics were controlled. There was also evidence that the relationship between physical punishment and children's aggressive behaviour was mediated by positive parent-child interaction.

Parental coercion and intrusiveness, two forms of psychological maltreatment, have been found to relate positively to children's aggressive behaviour (Pettit, Harriet, Bates, & Dodge, 1991). In a longitudinal study conducted by Dodge, Pettit, and Bates (1994), eight factors in preschool children's familial and social context predicted teacher-rated and peer-rated aggression in kindergarten and through third grade. Among these eight factors, six factors fell under the rubric of emotional abuse: harsh discipline, lack of maternal warmth, exposure to aggressive adult models, maternal aggressive values, lack of maternal supports, and lack of maternal cognitive stimulation. According to Rosen (1998), parents who are rejecting and unresponsive increase their children's learning of and motivation to use inappropriate, aggressive behaviour.

Other behavioural problems found in children of various ages who were exposed to psychological maltreatment include more disruptive behaviour in the classroom among school-age children (Erickson et al., 1989; Hart & Brassard, 1991) and more behaviour problems in general among children of all ages (Vissing et al., 1991; Wolfe & McGee, 1994). In addition, Lewis (1990, 1992) found that among adolescents, psychological maltreatment by caregivers resulted in more anti-social behaviours.

***Unhappiness, depression, and low self-esteem.*** Numerous studies have indicated that emotional maltreatment negatively impacts a child's emotional well-being and self-esteem. For example, Jurkovic (1998) described a recent study of adolescents of substance abusing and non-substance-abusing parents, in which the degree of *destructive parentification* (i.e., children assuming excessive responsibility for other family members and often for the family as a whole) was inversely related to positive self-regard. Ney, Fung, and Wickett (1994) followed children, from ages 7 through 18 years, who had been identified as experiencing maltreatment. Verbal abuse and emotional neglect were found to strongly influence the development of negativity in individuals' perceptions about their enjoyment of living, purpose in life, prospects for future life, chances of having a happy marriage, and expectations for being a good parent.

Cusinato (1998) has argued that parental emotional warmth (the balance of supportive versus non-supportive behaviours toward the child) is connected directly to children's self-esteem. Cusinato described emotional warmth as the aspect of parental behaviour that consistently has been found to be the most important influence on children in numerous studies. Nonsupportive behaviors in these studies were characteristic of emotional maltreatment and included blaming, criticizing, punishing, threatening, ignoring the child, and expressing anger and negative evaluations of the child.

***Longer-term sequelae.*** Starr and colleagues (1991) argued that in addition to the large number of difficulties experienced in childhood, much evidence suggests that there are also significant adulthood sequelae of childhood maltreatment. These long-term effects of psychological maltreatment have not been a major focus of research until



recently, due, at least in part, to difficulties in defining, assessing, and studying this type of maltreatment (Bojkova, 2008). Some researchers have also raised concerns over the accuracy of self-reports in retrospective studies of abuse. Batgos and Leadbeater (1994) addressed concerns of this nature regarding the accuracy of retrospective reports of parental behaviour from self-critical and depressed individuals. Questions had been raised as to whether the retrospective reports of these individuals were coloured by their concurrent dysphoria.

Batgos and Leadbeater (1994) described three studies that found that depressed and self-critical individuals provided accurate retrospective reports of their parents' behaviours. In the first study, a relationship was found between the degree of women's self-criticism and their reports of maternal lack of care even after controlling for current mood state. In the second study, the degree of negative parental behaviours reported by women after remission of postpartum depression was comparable to the degree reported during postpartum depression, suggesting that current mood state does not impact upon self-reported levels of abuse. In the third study, support was found for the accuracy of self-reports when non-depressed siblings of depressed adolescents reported similarly high levels of stress in the family relationship. The adolescents' experiences of depression thus did not appear to result in a response bias to over-report negative events.

Concerns over accuracy of retrospective reports notwithstanding, a number of psychological disorders in adults, such as anxiety disorders and depression, have been connected to emotional maltreatment by parents (see, for example, Hankin, 2005).

According to Cusinato (1998), patients with anxiety disorders described their parents as

less caring, more rejecting, and more overprotective than matched nonpsychiatric controls. Similarly, compared with nonpsychiatric controls, depressed patients consistently and reliably reported less adequate parenting. Cusinato argued that individuals who had experienced parental discord, little parental care and warmth, and hostile and abusive parental behaviours during childhood were at greater risk of becoming depressed than those who had not experienced such negative relationships.

In a longitudinal study, Koestner, Zuroff, and Powers (1991) examined parenting experiences and self-criticism. Parental restrictiveness and rejection when girls were 5 years old was related to self-criticism when the girls were age 12. Follow-up analyses at age 31 revealed that this self-critical affect remained stable into adulthood. Briere and Runtz (1988, 1990) similarly found that psychological maltreatment in childhood was strongly related to low self-esteem in adulthood. In addition, Briere and Runtz found strong relationships between childhood psychological maltreatment and adult symptoms of interpersonal sensitivity, dissociation, anxiety, and depression.

Negative descriptions of parents have been found to be associated with adult depression in studies using a variety of subject types (e.g., both non-clinical and hospitalized adults) and measures (e.g., both self-report and investigators' ratings) (Batgos & Leadbeater, 1994). According to Batgos and Leadbeater, both retrospective and longitudinal studies of child-parent relationships suggest that a lack of consistency and nurturance from parents, or experiences of parents as authoritarian, critical, and rejecting, are associated with adult depression.

The research literature has consistently identified a link between childhood psychological maltreatment and long-term effects such as adulthood depression and low self-esteem. Whether this type of maltreatment also exerts long-term effects on attachment behaviours has not been as thoroughly studied or as clearly linked. For example, Marcy (1998) found that childhood psychological maltreatment was associated with dismissive and fearful attachment styles in adults, but only among women. In a more recent study, Hankin (2005) found evidence that insecure attachment acts as a partial mediator in the relationship between familial discord and adult depressive symptoms and as a medium effect size mediator in the link between childhood emotional neglect and depressive symptoms. Confusing the picture somewhat, Hankin also found that negative life events and a negative cognitive style acted as mediators between aspects of childhood maltreatment and adult depressive symptoms. Upon entering all three mediators into his model simultaneously, Hankin found that the composite of childhood emotional maltreatment no longer reliably predicted depressive symptoms.

In clarifying the impact of childhood psychological maltreatment on adult attachment characteristics, it seems prudent to turn to an examination of attachment theory. Attachment theory provides some insight into the possibility that childhood psychological maltreatment experiences may indeed exert long-term effects on attachment behaviours well into an individual's adulthood.

### **Attachment Theory**

Attachment theory was proposed by Bowlby as a means to explain certain patterns of behaviour that were formerly conceptualized as dependency and over-

dependency (Bowlby, 1988). These patterns of behaviour were initially seen as characteristic of infants and young children, but were later recognized as also being present in adolescents and adults. To date, however, the theory is much more fully articulated for infancy than for adulthood (Waters, Crowell, Elliott, Corcoran, & Treboux, 2002). In Bowlby's words, attachment theory at its essence is

a way of conceptualizing the propensity of human beings to make strong affectional bonds to particular others and of explaining the many forms of emotional distress and personality disturbance, including anxiety, anger, depression and emotional detachment, to which unwilling separation and loss give rise. (Bowlby, 1977, p. 201)

Bowlby based his attachment framework on object-relations-psychoanalytic theory, but also used ideas from animal ethology, cognitive psychology, and control theory (Sable, 1997). Attachment theory regards the inclination of individuals to make intimate emotional bonds with others as a basic component of human nature, present from birth and continuing through adult life and into old age (Bowlby, 1988). During infancy and childhood, these attachment bonds are typically made with parents (or parent substitutes) who are looked to for protection, comfort, and support. During healthy adolescence and adult life, these initial bonds persist, but new attachment bonds also are formed (Bowlby, 1988). Bowlby conceptualized attachment behaviour as operating like an *environmental homeostasis system* within the central nervous system that "maintains a person's relations to his attachment figure between certain limits of distance and accessibility" (p. 123).

Bowlby (1977) postulated that attachment to a preferred figure (often the mother) develops during the first nine months of life and that its main evolutionary function is protection of the infant from predation. Bowlby described the attachment relationship as characterized by *proximity keeping*, and noted that it was activated in young children by separation from the attachment figure, and in later life by threat, illness, or fatigue (Holmes, 1993).

One of Bowlby's (1977) central ideas in attachment theory was that a strong causal relationship exists between individuals' experiences with their parents and their later capacity to make affectional bonds. The major influences affecting this relationship are the extent to which parents provide their children with (a) a secure base and (b) encouragement to explore away from the secure base. A reciprocal relationship is said to exist between attachment behaviour, such as seeking out or clinging to an attachment figure, and exploration (Holmes, 1993).

Bowlby (1977) noted that many individuals who experience psychological distress, often in the form of anxiety and/or depression, have been exposed to one or more patterns of *pathogenic parenting*. The pathogenic parenting patterns described by Bowlby include:

one or both parents being persistently unresponsive to the child's care-eliciting behaviour and/or actively disparaging and rejecting; discontinuities of parenting, occurring more or less frequently, including periods in hospital or institution; persistent threats by parents not to love a child, used as a means of controlling him; threats by parents to abandon the family, used either as a method of

disciplining the child or as a way of coercing a spouse; threats by one parent either to desert or even to kill the other or else to commit suicide (each of them commoner than might be supposed); inducing a child to feel guilty by claiming that his behaviour is or will be responsible for the parent's illness or death. (pp. 206-207)

Had Bowlby placed these parenting behaviours under one heading, he might well have used the term psychological maltreatment.

As attachment theory has been further developed, regularly occurring patterns of attachment have been observed and described, and the particular parenting styles that give rise to these patterns have been identified. The following section examines these attachment patterns.

### *Attachment Patterns and their Antecedents*

Ainsworth and colleagues, who based much of their work on Bowlby's theory, developed a test to identify different patterns of attachment in infants. The test, which became known as the *Strange Situation* task (Ainsworth, Blehar, Waters, & Wall, 1978; Ainsworth & Wittig, 1969) revolved around placing the mother and infant in a series of situations that involved their separation and reunion as well as the introduction of a stranger. Ainsworth and colleagues were able to identify distinct behaviours exhibited by infants that corresponded to each of three distinct attachment patterns: secure, anxious resistant, and anxious avoidant.

In follow-up studies based on Ainsworth's *Strange Situation* task, researchers began to record a number of children who could not easily be placed into any of these

three categories. Ultimately, a fourth category was delineated to categorize this group of children. This fourth category was labelled *disorganized/disoriented* by Main and Solomon (1990), and behaviours that were hallmarks of individuals in this group were identified. In the following section, Strange Situation behaviours observed in infants identified as falling into each of the four categories of attachment pattern are described, and their antecedent parental behaviours are identified.

### ***Secure Attachment***

Securely attached infants behave in a predictable manner in the Strange Situation task. When separated from the mother, they initially call for her, attempt to follow her, look for her, and ultimately start to cry in a clear sign of distress (Brisch, 2002). When the mother returns, they react with happiness, seek physical contact with her, and want to be consoled. In a short period of time, they are able to reach a calm state and return to play (Brisch, 2002).

According to Bowlby (1988), the secure attachment pattern is promoted by a parent figure, particularly the mother in the child's early years, being "readily available, sensitive to her child's signals, and lovingly responsive when he seeks protection and/or comfort" (p. 124). The secure attachment pattern is described by Stosny (1995) as contributing self-knowledge, particularly of one's status as a lovable person; validation of sense of self; enhancement and growth of self; capacity for self-acceptance; and emotional attunement and regulation.

### ***Insecure Attachment***

Those children not identified as securely attached were deemed to fall within one

of the insecure attachment categories. As previously described, the insecurely attached child was initially identified as either anxious avoidant or anxious resistant, but further studies eventually identified the disorganized/disoriented style as a third type of insecure attachment.

*Avoidant/anxious avoidant.* In the Strange Situation task, avoidant children react to separation with very little protest and display no clear attachment behaviour such as crying or following the mother to the door. Typically, they continue to play, although sometimes with less curiosity or persistence. Occasionally, they follow the mother with their eyes when she leaves so it is clear that they have recognized that she has left. Upon her return, they react to her with avoidance, do not seek to be taken into her arms, and a distinct absence of intense physical contact is observed (Brisch, 2002).

Despite the apparent lack of behaviourally expressed stress reactions during the separation phase of the Strange Situation, a number of studies have shown that insecure-avoidant infants display marked physiological and endocrinological responses (see Brisch, 2002). Brisch suggested that these studies indicate suppressed attachment behaviour in the avoidantly attached infants, for whom down-regulations in the expression of affect and behaviour occur at the cost of strong reactions of the regulatory systems. Brisch compared the situation to that of psychosomatic clients who neither feel nor express their affect openly, but have measurable stress reactions in their physiology and endocrinology. Brisch also suggested that the high level of arousal in the regulatory systems of the avoidantly attached infants, which is expressed neither in behaviour nor in



verbal communication, could predispose the children to the development of psychosomatic symptoms and diseases.

Bowlby (1988) believed that the anxious avoidant attachment pattern resulted when the individual's mother constantly rebuffed him when he approached her for comfort or protection. Repeated rejections were theorized to result in the more extreme cases of anxious avoidant attachment.

***Ambivalent/Anxious Resistant.*** According to Brisch (2002), ambivalently attached infants demonstrate the greatest distress in the Strange Situation after separation and tend to cry intensely. When their mothers return, they are not easily calmed. These children take the longest to achieve emotional equilibrium and sometimes are not able to return to play even after several minutes. When picked up by their mothers, they express both a desire for physical contact and closeness and an aggression towards their mothers in the form of kicking, hitting, pushing, or turning away (Brisch, 2002).

The anxious ambivalent attachment pattern was described by Bowlby (1988) as being promoted by a parent who was inconsistent; available and helpful on some occasions, but not so on others. Such a parent might typically use separation and threats of abandonment as a means of control (Bowlby, 1988).

***Disorganized/Disoriented.*** Infants identified as disorganized/disoriented exhibit Strange Situation behaviours that are described as short periods of disorganized behaviours. These disorganized behaviours include such activities as running toward the mother, stopping short halfway, then turning around and running away from her (Brisch, 2002). The movements of such children are said to have the appearance of *freezing*.

Additionally, repetitive stereotyped behaviour and movement patterns are noted in these infants (Brisch, 2002). These behaviours are interpreted as a sign that the child's attachment system has been activated, but is unable to express itself in any particular, clear behavioural strategies. Brisch reported that physiological measurements of these children indicate high stress, similar to that found in the insecurely attached avoidant and ambivalent children.

According to Bowlby (1988), the disorganized/disoriented attachment pattern is sometimes seen in infants whose parents have physically abused and/or grossly neglected them. It is also found in infants whose mothers suffer from severe bipolar disorder and who, as a result, treat their children in erratic and unpredictable ways (Radke-Yarrow, Cummings, Kuczynski, & Chapman, 1985). In addition, it is found in children whose parents themselves have experienced traumas such as loss, separation, maltreatment, and abuse, and have carried these experiences into their relationships with their own children (Main & Hesse, 1990).

### **Continuity of Childhood Attachment Patterns into Adulthood**

Bowlby (1977, 1988) believed that his conceptualization of attachment patterns and effects was, in fact, not limited to childhood, but that the *attachment dynamic* (Heard & Lake, 1986) continued throughout life. Bowlby (1977) presumed that childhood attachment underlaid one's later capacity to make affectional bonds and that insecure attachment would result in a range of adult dysfunctions including "marital problems and trouble with children as well as . . . neurotic symptoms and personality disorders" (p. 206).

The idea that childhood attachment patterns continue into adulthood has found support in adult attachment studies that have used a variety of retrospective self-report methodologies. According to Rothbard and Shaver (1994), adults classified as secure have tended to describe their primary attachment figures in childhood as generally warm, responsive, available, and sensitive -- the kind of behaviours that typically underlie the formation of a secure attachment bond. Furthermore, anxious/ambivalent (also described as preoccupied) adults described their parents as having been warm and loving part of the time, but also as inaccessible, unresponsive, intrusive, and inconsistent. Avoidant (fearful) adults described their parents as having been less warm or nurturant than those parents described by securely attached adults, as relatively uninvolved, and as at least somewhat rejecting when they were growing up. Finally, dismissing (disorganized/disoriented) individuals provided a mix of positive and negative descriptions of both parents, stating that parents provided adequate, sometimes ideal care, but indirectly characterizing them as having been rejecting or otherwise less than optimal parents (Rothbard & Shaver, 1994).

Bowlby's (1988) theory portrayed the mother-child (or caregiver-child) relationship as the root of both intra- and inter-personal functioning in later childhood and adulthood. Bowlby and others (e.g., Ainsworth et al., 1978; Bretherton, 1985; Main, Kaplan, & Cassidy, 1985) have suggested that as a result of early attachment experiences, a child accumulates knowledge and develops a set of expectations or *internal working models* about the self, significant others, and the larger social world. Working models are said to consist of one's accumulated knowledge about the self, attachment figures, and

attachment relationships. The function of these internal working models is to regulate the attachment behavioural system, and they are thus considered the mechanisms through which continuity in the organization of attachment is achieved. Working models, which function at least partially outside of awareness, provide a person with heuristics for anticipating and interpreting the behaviours and intentions of others -- particularly attachment figures (Rothbard & Shaver, 1994). During early childhood, the internal working models of attachment are thought to be relatively flexible and impressionable; however, over time, and with consistency in the nature of interactions with one or more primary caregivers, they are believed to become stronger and, thereby, increasingly resistant to change (Rothbard & Shaver, 1994).

Although patterns once formed have a tendency to persist, Bowlby (1988) suggested that they are by no means necessarily permanent. In fact, Reite and Boccia (1994) described the attachment system as “exquisitely sensitive to experience, both early and late” (p. 117). Evidence has shown that if, over time, the parent begins to treat the child differently, the pattern will change accordingly (Bowlby, 1988). Sroufe (1985) reviewed evidence of such changes and concluded that stability of pattern, when it occurs, cannot be attributed to *inborn temperament* as sometimes has been claimed. However, as children grow older, the pattern does become increasingly a property of the children themselves. This results in a tendency to impose the pattern upon new relationships such as with a teacher, a step-parent, or a therapist (Bowlby, 1988).

According to Bowlby (1988), as securely attached children grow older and their parents begin to treat them differently than they did when they were infants, a gradual

updating of models occurs. However, in the case of insecurely attached children, the gradual updating of models is to a certain degree obstructed through “defensive exclusion of discrepant experience and information” (p. 130). In other words, these patterns of interaction, “having become habitual, generalized, and largely unconscious, persist in a more or less uncorrected and unchanged state” (p. 130) despite the fact that later in life these individuals will likely be dealing with persons who treat them entirely differently than did their parents when they were children (Bowlby, 1988).

Given the conceptualization of attachment styles as acting both in childhood and adulthood, some researchers have attempted to identify the specific attachment styles that come into play in adult relationships. The following section will explore some of the models of adult attachment that have been proposed to date.

### **Models of Adult Attachment Styles**

Hazan and Shaver (1987) examined adolescent and adult romantic attachment orientations using a self-report questionnaire and found that adults could be grouped into three patterns: secure, anxious, and avoidant. Notably, Hazan and Shaver described these three patterns as the same three initially identified by Ainsworth and colleagues (1978) in their studies of infant-caregiver attachment. Hazan and Shaver’s (1987) adult formulations of these three attachment styles are presented in Figure 1.

Brennan, Clark, and Shaver (1998) described Hazan and Shaver’s (1987) conceptualization of attachment styles into distinct categories as naïve. Brennan and colleagues argued that Hazan and Shaver should have paid attention to Ainsworth et al.’s (1978) use of continuous rating scales for coders to characterize the infants’ behaviours

Figure 1

## Hazan and Shaver's (1987) Descriptions of the Three Attachment Styles

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Style	Description
Secure	I find it relatively easy to get close to others and am comfortable depending on them and having them depend on me. I don't often worry about being abandoned or about someone getting too close to me.
Avoidant	I am somewhat uncomfortable being close to others. I find it difficult to trust them completely, difficult to allow myself to depend on them. I am nervous when anyone gets too close, and often, love partners want me to be more intimate than I feel comfortable being.
Anxious/ambivalent	I find that others are reluctant to get as close as I would like. I often worry that my partner doesn't really love me or won't want to stay with me. I want to merge completely with another person, and this desire sometimes scares people away.

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in the *Strange Situation* task as well as to their resulting figure, which placed individuals' scores in two-dimensional space rather than categorizing them into three independent categories. Brennan and colleagues (1998) suggested that the discriminant functions that form the axes of this two-dimensional figure are appropriately identified as *avoidance* and *anxiety*. These same researchers made the following observation about further developments in the field of attachment orientations:

The two-dimensional empirical and conceptual structure underlying attachment orientations was articulated more completely when researchers who study infant-caregiver attachment and those who study adolescent and adult romantic attachment realized that a two-dimensional space makes room for four, rather than three, quadrants or conceptual patterns. (p. 49)

As had occurred in the field of infant attachment, the field of adult attachment eventually came to recognize the presence of four, rather than three, distinct attachment styles. One of the first researchers to propose a four-category model of attachment paralleling the four attachment styles now recognized in infants was Bartholomew (1990). Bartholomew's model grew out of two key features of Bowlby's (1973) concept of working models of attachment:

personal beliefs about (a) whether or not the attachment figure is judged to be the sort of person who in general responds to calls for support and protection; [and] (b) whether or not the self is judged to be the sort of person towards whom anyone, and the attachment figure in particular, is likely to respond in a helpful way. (Bowlby, 1973, p. 204)

Bartholomew's (1990) model systematized Bowlby's conception of internal working models by organizing different patterns of adult attachment in terms of the intersection of models of the self and other. She arranged self- and other-representations along two axes, arguing that models of the self could be dichotomized as either positive (positive self-concept, the self as worthy of love and attention) or negative (negative self-concept, the self as unworthy of love and attention). Similarly, she argued that models of other could be viewed as either positive (trustworthy, caring, available) or negative (rejecting, uncaring, distant). The resulting four attachment patterns were based on combinations of these self- and other-representations: positive self/positive other, positive self/negative other, negative self/positive other, and negative self/negative other.

According to Bartholomew and Horowitz (1991), Cell I (positive self, positive other) represents a sense of worthiness (lovability) and an expectation that other people generally will be accepting and responsive. Warm and responsive parenting is expected to give rise to positive models of both the self and other, resulting in secure and fulfilling adult relationships. The cell was labeled *secure* because it corresponded conceptually to categories that other investigators had called securely attached (e.g., Hazan & Shaver, 1987; Main et al., 1985). Behaviourally, secure individuals display high self-esteem and an absence of serious interpersonal problems (Bartholomew, 1990).

Cell II (negative self, positive other) reflects a sense of unworthiness (unlovability) combined with a positive evaluation of others. Such a combination of characteristics is expected to lead the person to strive for self-acceptance by gaining the



acceptance of valued others. Children who experience inconsistent and insensitive parenting, especially if accompanied by messages of parental devotion, might conclude that their own unworthiness explains any lack of love on the caregiver's part. The result is a preoccupied, overly-dependent style characterized by an insatiable desire to gain others' approval and a deep-seated feeling of unworthiness (Bartholomew, 1990). Bartholomew and Horowitz (1991) argued that this pattern corresponds conceptually to Hazan and Shaver's (1987) ambivalent group and to Main and colleagues' (1985) enmeshed or preoccupied with attachment pattern. Bartholomew and Horowitz (1991) elected to refer to the pattern using similar terminology to Main et al., and labeled Cell II as *preoccupied*.

Cell III (negative self, negative other) indicates a sense of unworthiness (unlovability) combined with an expectation that others will be negatively disposed (untrustworthy and rejecting). Like avoidant children, these individuals experience frustrated attachment needs. They desire social contact and intimacy, but experience pervasive interpersonal distrust and fear of rejection. The result is subjective distress and disturbed social relations characterized by a hypersensitivity to social approval. To preclude the possibility of rejection, such individuals actively avoid social situations and close relationships in which they perceive themselves as vulnerable to rejection. In the process, they undermine the possibility of establishing satisfying social relations that can serve to modify early attachment representations. By avoiding close involvement with others, this style enables people to protect themselves against anticipated rejection by others. Bartholomew and Horowitz (1991) suggested that this cell corresponds in part to

the avoidant style described by Hazan and Shaver (1987), and therefore labelled it *fearful-avoidant*.

Finally, Cell IV (positive self, negative other) implies a sense of love-worthiness combined with a negative disposition toward other people. This style reflects a more complex strategy in which attachment needs are either denied or, in Bowlby's terms, the attachment system is deactivated. For individuals with this attachment stance, a way of maintaining a positive self-image in the face of rejection by attachment figures is to distance oneself and develop a model of the self as fully adequate and hence invulnerable to negative feelings that might activate the attachment system. According to Bartholomew (1990), this pattern is equivalent to a permanent adoption of the avoidant stance observed in infants during the Strange Situation. As such, correlates of infant avoidance such as displacement behaviors (e.g., preoccupation with achievement), blunted affect, and possibly even physiological arousal are expected.

Over time, the strategies used to defend against the awareness of attachment needs become so ingrained as to operate automatically and largely outside of awareness. Individuals with this style passively avoid close relationships; they place much value on independence and assert that relationships are relatively unimportant. A focus on impersonal aspects of life, such as work or hobbies, is also expected. Bartholomew and Horowitz (1991) asserted that this style corresponds conceptually to the detached or dismissing attachment attitude described by Main et al. (1985), and so labeled it *dismissive-avoidant*.

In efforts to confirm the hypothesized underlying structure of the four-category model, Bartholomew and Horowitz (1991) conducted multi-dimensional scaling analyses. They found that across family ratings and peer ratings, and across interview, self-reports, and friend-reports, the configurations of attachment ratings conformed to the theoretical model. Further confirming their model, they observed that self-concept measures differentiated the attachment styles with respect to the model of self only, and that measures of sociability differentiated the styles with respect to the model of other only.

Additional support for Bartholomew's four-category model versus a three-level model such as the one postulated by Hazan and Shaver (1987) came from a study by Feeney, Noller, and Hanrahan (1994). Feeney and colleagues found stronger support for the existence of four groups than three groups, and the researchers noted that when their data were examined from the perspective of a three-cluster solution, the three clusters did not well represent the three discrete styles postulated by Hazan and Shaver (1987).

Following Bartholomew's (1990) description of her four-category model of attachment, others have similarly chosen to view attachment in terms of four categories delineated by two major axes, but there has been a decreased emphasis on strict categorization. Rather, studies have revealed that categorical measures of attachment style are not as precise a characterization of attachment organization as is, more simply, a region in a two-dimensional, attachment-style space (e.g., Bartholomew & Horowitz, 1991; Brennan, Clark & Shaver, 1998; Fraley & Waller, 1998).

The research by Brennan and colleagues in 1998 was particularly compelling because it involved a factor analysis of *all* existing English-language self-report measures

of attachment style. This factor analysis included 60 specifically named attachment-related constructs (subscales). The study found that all the attachment-related constructs could be reduced to two orthogonal dimensions. Although these dimensions were described as conceptually equivalent to the horizontal and vertical axes of Bartholomew's (1990) four-category model, Berant and colleagues (2005) have indicated that they are now more commonly referred to as *attachment anxiety* and *attachment avoidance*. Attachment anxiety is defined by items tapping fear of rejection, separation, and abandonment, whereas attachment avoidance is defined by items describing discomfort with intimacy and dependency.

In this new two-dimensional version of attachment theory, what was formerly delineated as a *secure attachment style* is now associated with a region in space where both anxiety and avoidance are low (Berant et al., 2005). Confidence in a partner's love and supportiveness as well as comfort with closeness and interdependence are characterizations that define this region. What was called the *anxious attachment style* is a region in which the fear of separation and abandonment (attachment anxiety) is high and avoidance is low. The *avoidant attachment style* is now a region in which discomfort with intimacy and dependency (attachment avoidance) is high. A distinction is made between *dismissing avoidance* (high avoidance and low anxiety) and *fearful avoidance* (high avoidance and high anxiety) (Bartholomew & Horowitz, 1991).

As described earlier, childhood attachment has consistently been shown to be affected by psychological maltreatment from caregivers. What has yet to be studied as thoroughly is whether psychological maltreatment in childhood exerts an ongoing

influence over the years such that one's adult attachments are also affected. Although Bowlby's (1977, 1988) theory of the continuity of childhood attachment styles into adulthood via internal working models suggests that the effects of childhood psychological maltreatment on attachment would tend to continue into adulthood, to date few studies have addressed this particular question. The following section examines a number of measurement issues that arise in studying the effects of childhood psychological maltreatment on adults.

### **Measurement Issues**

Briere (1997a) has suggested that there are a number of central issues in the assessment and measurement of child abuse effects in adults, including: (a) The relative accuracy of the individual's retrospective report, (b) how best to systematically assess the specific details of the abuse such as type of abuse, frequency, duration, age at onset and offset of abuse, etc., particularly given that more severe abuse seems to increase subsequent mental health impairment; and (c) how best to accurately assess the specific nature and extent of any abuse-related symptomatology or dysfunction that may be present.

#### ***The Accuracy of Retrospective Self-Reports***

Regarding the first issue, the accuracy of retrospective reports, Briere (1997a) argued that even those who question a given abuse disclosure typically do not deny the high incidence and potential negative impacts of child abuse. Although Briere conceded that a small minority of abuse reports are likely to be distorted or confabulated, he opined

that clinical experience generally suggests that most reports of long-past abuse are accurate in their major details.

According to Cusinato (1998), reviews of the available data on the accuracy of memory for early experiences support a copy theory (in which the thoroughness of memory persists even after many years) rather than a reconstructive position (in which memory changes over time). Cusinato has argued that there is little evidence of a general deficit in memory associated with anxiety or depression and that the data on personal memories that are available from naturalistic studies suggest psychiatric patients' recall is as reliable as that of non-patients. These studies offer little support for the claim that recall of childhood experiences is distorted by a depressed mood: There is no evidence that a global response style (such as *blaming* or *idealization*) affects the appraisal of all interpersonal relationships. Social desirability, in the classical sense, similarly does not affect questionnaire scores of parental behaviour (Brewin, Firth-Cozens, Furnham, & McManus, 1992). Both experimental and naturalistic studies reveal high stability in recall even with changes in mood or clinical status. Furthermore, patients' memories are in as much agreement with external criteria as siblings' memories or independent records even if parents describe their own behaviour in more positive terms than do their offspring (Cusinato, 1998).

Cusinato (1998) suggested that claims about the unreliability of retrospective reports had been exaggerated. Nevertheless, he acknowledged that retrospective reports are clearly subject to various limitations. For example, social influences, childhood amnesia, and the simple fallibility of memory impose limitations on the accuracy of

recall. In some situations, fear of the consequences of disclosure may create further disadvantages. However, provided that individuals are questioned about the occurrence of specific events or facts that they were old enough and sufficiently well placed to know about, the central features of their accounts are likely to be reasonably accurate. Cusinato also argued that because the influences on memory serve mainly to inhibit recall or disclosure, one might in fact be best to conclude that reports confirming events should be given *more* weight than negative reports.

For the current study, due to the nature and scope of the research, it was not possible to engage in any method of verifying individuals' self-reports of abusive childhood histories. However, as noted above, Cusinato (1998) and others have argued that retrospective self-reports of parental behaviour are generally accurate. Furthermore, the research-based nature of the current study may have tended to preclude individuals from falsifying abuse-related histories given that there was no associated gain from doing so. Therefore, it was expected that the accuracy of self-reports in the current research would be adequate for the purposes of the study.

### *Assessing the Nature of the Individual's Abuse History*

Regarding the second issue, how best to determine the specific nature of the individual's abuse history, Briere (1997a) indicated that this information is often explored during an unstructured clinical interview. However, he expressed concern that free-form evaluation of this type is subject to error and oversight, and suggested that more structured and comprehensive abuse history measures should be used instead. Briere identified a number of self-report instruments that specifically address a history of

psychological maltreatment and suggested that at least one measure of this type be used when the nature of an individual's abuse history is to be discerned. Examples of self-report instruments that tap psychological maltreatment history include the Traumatic Events Scale (TES; Elliott, 1992), the Childhood Maltreatment Interview Schedule (CMIS; Briere, 1992), and the Childhood Maltreatment Questionnaire (CMQ; Demare, 1993).

Of the self-report instruments suggested by Briere, the one that is of greatest interest with regard to the current study is the CMQ due to its extensive focus on psychological maltreatment in addition to its inclusion of scales for sexual and physical maltreatment. The CMQ has three components: the Psychological Maltreatment Questionnaire (PMQ), the Physical Abuse Questionnaire (PAQ), and the Sexual Abuse Questionnaire (SAQ). Demare and Briere (1994) found that high scores on these scales were predictive of symptomatology, for both men and women, on the Trauma Symptom Checklist-40 (Briere & Runtz, 1989). Similar results have been found for the CMQ with reference to the Trauma Symptom Inventory (TSI; Briere, 1995; Demare & Briere, 1996).

Selection of categories of psychological maltreatment to examine was also an important consideration in the current study, and ultimately impacted on the choice of maltreatment questionnaire employed. Consideration was given to the works of Garbarino and colleagues (1986), Brassard and Hardy (1997), Auburn (2003), and Demare (1993). The work of Garbarino and colleagues was excluded because it included domains of emotional abuse that are not typically enacted by a caregiver (such as



institutional abuse and cultural bias or prejudice) and because it included sexual abuse, a category of abuse deemed to be distinct from psychological maltreatment for the purposes of the current study. Auburn's recent work, while appealing in its simplification of psychological maltreatment into four major categories, has less support in the literature owing to its more recent status. By contrast, frequent references to the works of both Demare, and Brassard and Hardy can be found in the literature.

Ultimately, Demare's (1993) twelve categories of psychological maltreatment were chosen for use in the current study for a number of reasons. First, by examining a greater number of categories of psychological maltreatment, theoretically there should be greater sensitivity to detect psychological maltreatment in its various forms. Second, Demare's comprehensive twelve categories are written in terms of very specific parental (or caregiver) behaviours that impact upon the child. Third, Demare has designed a questionnaire that screens not only for the twelve specific categories of psychological maltreatment he delineated, but also screens for sexual and physical maltreatment. The use of Demare's comprehensive questionnaire made it possible not only to identify individuals who had been psychologically maltreated, but also to screen out individuals who had been subjected to other forms of maltreatment in addition to the psychological maltreatment. Finally, Demare's CMQ is one of the three self-report instruments recommended by Briere (1997a) in his analysis of measurement issues in the assessment of child abuse effects in adults.

### *Assessment of Abuse Effects*

Briere's (1997a) third issue in adult assessments was how best to accurately assess the nature and extent of any abuse-related symptomatology or dysfunction that may be present. Assessment of these effects has typically been completed by using generic measures of global phenomena such as depression, anxiety, and personality disorders; however, Briere noted that such measures may overlook or misinterpret specific abuse-related psychological disturbance. Briere (2004) noted that when using such abuse-nonspecific tests, the evaluator must consider the balance between having access to data that can be valid and useful (despite being abuse-nonspecific) and the potential risk of under-assessing or distorting abuse effects as a result of the generic nature of these tests. Examples of such commonly used measures include the Minnesota Multiphasic Personality Inventory (MMPI-II), the Millon Clinical Multiaxial Inventory (MCMI-III), and the Beck Depression Inventory (BDI-II).

Conte and Schuerman (1988) observed that the field of research into the effects of abuse would benefit from the identification of nonbehavioral psychological processes that are altered by abuse. These processes may be important because they may serve as mediators between the abuse itself and the resulting problems that victimized children typically experience (Leifer, Shapiro, Martone, & Kassem, 1991). One possible method for identifying these nonbehavioural psychological processes is the use of projective tests.

The basic rationale for projective tests is that they tap aspects of functioning that the subject may not be either willing or able to report and that are not easily accessible to behavioural observation (Blatt, 1975; Klopfer, Ainsworth, Klopfer, & Holt, 1954;

Schaefer, 1954). Dosajh (1996) described the principal advantage of most projective techniques relative to structured personality tests as their capacity to (a) bypass or circumvent the conscious defenses of respondents, and (b) allow clinicians to gain privileged access to important psychological information (e.g., conflicts, impulses) of which respondents are not consciously aware. According to the projective hypothesis (Frank, 1948; Sundberg, 1977), respondents project aspects of their personalities in the process of disambiguating an unstructured test stimulus. Ostensibly, the projective technique interpreter can *work in reverse*, examining respondents' answers to these stimuli for insights regarding their personality dispositions (Lilienfeld, Wood, & Garb, 2000). Proponents of projective techniques have often maintained that these techniques provide incremental validity in the assessment of personality and psychopathology above and beyond structured measures (e.g., Finn, 1996; Spangler, 1992; Riethmiller & Handler, 1997; Weiner, 1999, Weiner & Meyer, 2009).

Given the idea that projective instruments provide an opportunity to access information that the subject would otherwise not easily be able to report, such instruments have much potential for providing useful information regarding the psychological status of abuse victims (Leifer et al., 1991). Projective tests provide an opportunity to avoid the constraints of more objective testing, in which the abuse victim is typically forced to respond to a specific test item and therefore to a specific *mini-hypothesis* regarding the structure of his or her psychological disturbance (Briere, 1997b). In particular, the Rorschach Test, one of the most widely used projective techniques, “offers a set of relatively free-form stimuli to which the client may respond in any

manner he or she chooses” (Briere, 1997b, p. 120). According to Briere, the client’s productions are thereby less predetermined than they would be in a self-report format, and the client is allowed more freedom to reflect whatever abuse effects might be discoverable by the Rorschach.

Further rationale for the use of projective testing in abuse studies comes from a meta-analysis of twelve studies conducted by West (1998). West found that the overall effect size was large in studies using projective instruments to discriminate distressed from nondistressed subjects. Six of the studies examined by West compared a norm group of nondistressed, nonabused children to the sexually abused group, and among these, the average effect size was an impressive  $d = .87$ . Six other studies included a clinical group of distressed but not sexually abused subjects, and the effect size decreased slightly to  $d = .76$ . This finding suggests that projective instruments can discriminate distressed from nondistressed subjects quite well; however, the instruments were less able to discriminate the specific type of distress (West, 1998).

### ***Use of the Rorschach Inkblot Method***

As described above, projective tests have the potential to add a great deal to the study of the impact of abuse, above and beyond what can be discovered through self-report instruments. One particular projective test, The Rorschach Inkblot Method, is an important instrument to be studied in abuse research due to its ongoing and widespread use in clinical settings. Hogan (2005) reported that over the past 40 years, the Rorschach has consistently been ranked the fourth most frequently used test among clinical psychologists, exceeded only by the Wechsler Adult Intelligence Scale (WAIS), the

Minnesota Multiphasic Personality Inventory (MMPI), and the Wechsler Intelligence Scale for Children (WISC). Furthermore, Camara, Nathan, and Puente (cited in Weiner & Meyer, 2009) reported survey data indicating that over 80% of clinical psychologists engaged in providing assessment services used the Rorschach as part of their assessment battery.

In the current study, the effects of childhood psychological maltreatment upon one's adult attachment functioning were examined. According to Berant and colleagues (2005), most studies of attachment to date have focused on explicit, conscious manifestations of the affect-regulation strategies underlying the two major attachment-style dimensions. This has generally been undertaken through the use of self-report instruments. By contrast, few studies have examined the implicit, unconscious processes theorized to be part of Bowlby's (1982) *attachment behavioural system*. The result of this lack of focus on the implicit, unconscious processes has been continuing controversy over the ability of self-report, attachment measures to capture these underlying processes. Berant and colleagues (2005) appear to have been among the few researchers to date to address this concern by using projective testing to examine attachment dynamics in adults, and more specifically to compare the results of a self-report attachment measure to specific Rorschach variables theorized to measure aspects of attachment.

Notably, the participants in the Berant et al. study were healthy, well-functioning adults who were not compared to any other group, such as individuals who come from abusive backgrounds. While the current study is similar in nature to the study by Berant, it was designed to add to the relevant literature by extending the research to a group of

individuals who reported childhood psychological maltreatment. It was expected that a larger proportion of individuals in the psychologically maltreated group, as compared to the non-maltreated group, would display insecure attachment styles.

### ***Rorschach Variables Selected for the Current Study***

Given the intention to replicate and extend the findings of Berant and colleagues (2005), the same Rorschach variables were used in this study as in the Berant study.

Berant and colleagues had selected a constellation of seven Rorschach scores (Afr, CF, ColShdBld, Y, m, MOR, Food) they hypothesized would represent attachment anxiety and four Rorschach scores (low FM, L, Cg, and Fr + rF) they hypothesized would represent attachment avoidance. The theoretical rationale for the choice of these particular variables follows.

***Attachment anxiety variables.*** According to Mikulincer and Shaver (2003), high scores on attachment anxiety measures are associated with “hyperactivating” strategies. Hyperactivating strategies are strategies designed to force a relationship partner, perceived as insufficiently available and responsive, to pay greater attention and provide better protection and support. The means for attaining this desired outcome involve maintaining the attachment system in an activated state (e.g., by searching, pleading, demanding, etc.) until a partner is perceived to have become adequately available and a sense of security (albeit potentially temporary) is attained. Mikulincer and Shaver thus described attachment anxiety as associated with hyperactivation of emotional experiences, difficulties in emotion regulation, rumination on threat- and distress-related thoughts, negative models of the self, and strong dependence needs.

Based on Mikulincer and Shaver's description of the hyperactivating strategies associated with attachment anxiety, Berant et al. (2005) argued that attachment anxiety should be associated with Rorschach scores that, according to Exner's (2000) system, reflect attraction to emotional situations (Afr), problems in emotion regulation (CF), and intrusion of negative affect (Color Shading Blends). Similarly, Berant and colleagues argued that high attachment anxiety should be associated with Rorschach scores theorized to reflect the experience of situational stressors (m), a sense of helplessness (Y), failure to maintain a positive self-image (MOR), and adoption of a dependent relational position (Food).

The Rorschach Affective Ratio (Afr) compares the number of responses to the coloured inkblots to the number of responses to the achromatic inkblots. Different studies suggest that a link exists between the responses to coloured stimuli and emotion, and that a higher proportion of responses to the coloured cards reflect a high level of affective reactivity (Tibon & Blumberg, 2000). According to Exner (1993), people with a higher affective ratio are intrigued or reinforced by emotional stimuli.

The Colour-Form response (CF) is a response to a Rorschach inkblot which is primarily based on the colour of the blot, but in which the form is not entirely disregarded. Rorschach (1942/1998 translation) reported that CF responses had "proved to be the representatives of emotional instability, irritability, sensitivity, and suggestibility." Hertz and Baker (1943) reported, "there is general agreement that colour factors give a measure of the stability of the emotional life" and stated, "FC represents

emotional stability and adaptability, CF, emotional lability, excitability, and lack of control, and C, lack of restraint and compulsiveness.”

Colour-shading blends are responses in which shading is perceived in the chromatic inkblots. Silberg and Armstrong (1992) describe colour-shading blend responses as indicating that emotional arousal is anxiety-provoking for the responder. Fowler, Hilsenroth, and Piers (2001) suggested that colour-shading blends indicate overwhelming immersion in psychological conflict and pain, with little ability to sustain effective defenses.

Inanimate movement responses (m) are responses in which an inanimate object is described to be in a state of motion (for example, a flag flapping in the wind). This variable is often interpreted as a state-dependent response to stress (Exner, 1986). Both inanimate movement (m) and diffuse shading responses (Y) have been found to measure the impact of stress and subsequent anxiety levels on an individual. McCown, Fink, Galina, and Johnson (1992) found that both variables measure anxiety resulting from a stressful experience; however, Y suggests that the experienced stress was uncontrollable whereas m is associated with a more general sense of anxiety, irrespective of the individual's perceived ability to control the situation.

Morbid responses (MOR) are those that describe images of dead, damaged, decaying, and injured objects (Exner 1993). The presence of a high number of morbid responses has been linked to the presence of major depression (Exner 1993). According to Fowler, Hilsenroth, and Piers (2001), morbid responses to the Rorschach may best



capture representations of the self as damaged, depleted, and attacked, all of which may be related to experiences of self-hatred, despair, and hopelessness.

*Attachment avoidance variables.* Mikulincer and Shaver (2003) have argued that “deactivating” strategies are characteristic of individuals who score high on attachment avoidance. Deactivating strategies result from appraising proximity-seeking as a faulty or dangerous means of dealing with attachment insecurity, and aim to maintain the attachment system in a deactivated state to avoid the frustration and pain associated with unavailability of the attachment figure. Mikulincer and Shaver described avoidant attachment behaviours such as denial and repression of basic needs for proximity and security, personal disengagement from challenging and demanding person-environment transactions, and maintenance of a narcissistic self-façade. Berant and colleagues argued that attachment avoidance should therefore be associated with Rorschach scores that, according to Exner’s (2000) system, theoretically indicate lack of acknowledgment and expression of one’s primary needs (low FM), a disengaged attitude toward reality (L), a tendency to hide behind a façade (Cg) and a tendency to maintain a grandiose, inflated self-representation (Fr + rF).

The animal movement response (FM) is a response to an inkblot in which an animal is described to be moving in a manner typical of its species. According to Chabert (1987), who provides a psychoanalytical interpretation of the Rorschach test, the FM responses are underpinned by a defensive “transfer” mechanism, by which the subject’s libidinous or aggressive impulses, perceived as a particular source of anxiety, are transferred to an animal. Klopfer (cited in Sheehan & Tanaka, 1983) related FM to the

childish, the primal, the id forces, pleasure-seeking, impulse-gratifying, and immature strivings toward need satisfaction. Thus, a low value of FM might be seen as indicating a lack of acknowledgement or expression of one's primary needs.

Lambda (L) measures openness to experience. It is calculated by dividing the number of responses based purely on form determinants by the number of responses which are not purely form-based. A Lambda score of  $> .99$  is usually associated with lack of adequate openness to experience, a narrow frame of reference, and little tolerance for uncertainty or ambiguity (Weiner & Greene, 2008). Exner (2000) described Lambda  $> 0.99$  as an avoidant style through which perceptions are simplified. The subject selectively attends to aspects of their environment, ignoring or disregarding other sources of information.

Clothing responses (Cg) in Rorschach protocols suggests a concern with "cloaking," or hiding one's true personality and motives (Kamphuis, Tuin, Timmermans, & Punamaki, 2008). Clothing responses may denote defensiveness and/or a need to separate or hide from others (Exner, 1986). Others report that clothing responses reveal an interest in superficial relationships, attractiveness, characteristics of others, or in social status (Klopfer et al., 1954; Vincent, 1987).

Reflection responses (Fr + rF) are responses in which the test-taker identifies an object as well as its reflection in the inkblot. Reflection responses are associated with a tendency to overvalue one's personal worth and become preoccupied with one's own needs at the expense of the needs of others (Weiner & Greene, 2008). As noted above, Berant and colleagues chose the reflection response as one of the Rorschach variables

theoretically associated with the deactivating strategies of attachment avoidance, based on the idea that it represents a grandiose, inflated self-representation that would theoretically assist the individual in avoiding a sense that they need to engage in attachments to others.

### **Summary of the Current Study and its Contribution to the Literature**

The current study examined university students who reported having experienced childhood psychological maltreatment and compared them to a control group of university students who reported not having experienced any form of childhood maltreatment. The primary goal of the study was to compare the attachment styles developed by these two groups of individuals using a two-dimensional model of attachment. The individuals' attachment dynamics were determined using Brennan et al.'s (1998) self-report Experiences in Close Relationships questionnaire, a measure that quantifies the two attachment dimensions of attachment anxiety and attachment avoidance. A secondary goal of the study was to replicate (with a non-maltreated group) and extend (with a psychologically maltreated group) the results of Berant and colleagues (2005), who demonstrated that selected, theoretically matched constellations of Rorschach variables were correlated with self-reported attachment anxiety and attachment avoidance.

The study was designed to add to the literature in the field of psychological maltreatment in a number of important ways. First, although research into childhood abuse is plentiful, historically there has been far more examination of the effects of sexual and physical abuse than that of psychological abuse. Further, when research has

been done that examined psychological abuse, it has often looked at individuals who have experienced this type of abuse *in addition to* other types of maltreatment, making the unique contribution of the psychological abuse difficult to parse out. In the current study, individuals who experienced psychological maltreatment *only* (i.e., did not experience any additional forms of maltreatment) were compared to a control group of non-maltreated individuals, allowing for the opportunity to study the effects of this one type of abuse alone.

Another way in which the current study was designed to be a significant contribution to the literature was by focusing on the longer-term sequelae of childhood abuse. While much has been written about the impact of childhood abuse on the child, less has been written about the impact this abuse may still be having on the victim once he or she has reached adulthood. This is particularly true in terms of the effects of abuse on attachment dynamics. While there is some research on the impact of physical and sexual abuse on the child's attachment dynamics, there is less about the impact of *psychological* maltreatment on the child's attachment dynamics, and almost nothing about the long-term impact of childhood psychological maltreatment on the individual's *adult* attachment relationships.

Another area of research that is comparatively unique is the exploration of attachment through the use of projective testing. Berant and colleagues (2005) appear to have been the first to do a comparison of the attachment information obtained via self report to a set of variables theorized to measure similar constructs via a projective technique, the Rorschach Inkblot Method. The current research aimed to contribute to the

literature by providing a replication of the Berant study with a group of non-maltreated individuals, and extending the study to a new population, a group of psychologically maltreated individuals.

### **Hypotheses**

Based on the literature review that suggested childhood psychological maltreatment may have an impact that (a) lasts into adulthood and, (b) affects the nature of one's adult attachment relationships, the following primary hypothesis was proposed:

***Hypothesis 1:*** Individuals who report having experienced childhood psychological maltreatment would be more likely than individuals who report not having experienced childhood psychological maltreatment to demonstrate an insecure attachment style versus a secure attachment style when attachment style is determined by self-report questionnaire. Higher levels of both attachment avoidance and attachment anxiety would characterize the increased propensity toward insecure attachment in the maltreated group as compared to the non-maltreated group.

A secondary goal of the study was to replicate (with a non-maltreated group) and extend (with a maltreated group) the findings of Berant et al. (2005). Berant and colleagues demonstrated, using MTMM (multitrait-multimethod) analysis, that theoretically matched constellations of Rorschach variables converged with corresponding measures of self-reported attachment anxiety and attachment avoidance and that there was discriminant validity between the measures of attachment anxiety and attachment avoidance. Hypothesis 2 pertains to the replication of the Berant study, while Hypothesis 3 pertains to the extension of the Berant study.

***Hypothesis 2:*** Using an MTMM correlation matrix it would be shown that the findings of Berant et al. (2005) would be replicable in a group of non-maltreated individuals such that, for that group: (a) Rorschach scores associated theoretically with attachment anxiety would correlate (i) with each other and (ii) with self-reported attachment anxiety; (b) Rorschach scores associated theoretically with attachment avoidance would correlate (i) with each other and (ii) with self-reported attachment avoidance; and (c) markers of attachment anxiety and attachment avoidance would be shown to be independent of each other.

***Hypothesis 3:*** Using an MTMM correlation matrix it would be shown that the findings of Berant et al. (2005) would extend to a group of psychologically maltreated individuals such that, for that group: (a) Rorschach scores associated theoretically with attachment anxiety would correlate (i) with each other and (ii) with self-reported attachment anxiety; (b) Rorschach scores associated theoretically with attachment avoidance would correlate (i) with each other and (ii) with self-reported attachment avoidance; and (c) markers of attachment anxiety and attachment avoidance would be shown to be independent of each other.

## CHAPTER 2 – METHOD

### Participants

Participants in the current study were 293 university students enrolled in Introductory Psychology classes at the University of Manitoba (U of M). Students were recruited via an on-line system used at the U of M in which Introductory Psychology students can read about the various psychological studies being conducted at the university and choose which ones, if any, they wish to participate in. The students received partial course credit for their participation in the study. In Part I of the study, which involved all 293 participants, individuals completed questionnaires inquiring into demographic information, maltreatment history, self-reported attachment style, protective factors, and resilience. Participants in Part II of the study were recruited based on their maltreatment status, determined from their questionnaire responses in Part I of the study.

In a similar study, Berant and colleagues (2005) had achieved statistically significant results on the order of  $r = .35$  at an alpha level of .01 using a sample size of 72. Cohen (1992) indicated that  $r = .3$  is a medium effect size. Power analysis based on one-tailed correlational tests suggested that adequate power of 0.72 is achieved with a sample size of 40 when the anticipated effect size is .34 and expected alpha is .05 (Miles, 2005). Therefore, it was expected that adequate power would be achieved in the current study if approximately 40 individuals were recruited for the psychologically maltreated group and another 40 for the non-maltreated group. In the end, only 39 of the individuals who had been psychologically maltreated agreed to participate in Part II, and thus an equal number of non-maltreated individuals were also recruited.

## **Measures**

### ***Demographic Data***

Participants completed a demographic questionnaire that was developed by the primary investigator and was based largely on the demographic variables that had been used in Demare's studies (1993, 2000). These variables included gender, age, race, place of birth, primary language, number of university courses completed, cumulative grade point average, marital status, living arrangements, size of community during childhood, average family income during childhood, parents' highest education levels, parents' employment status, and primary caretaker during childhood. The demographic questionnaire administered in Part I of the study can be seen in Appendix C.

### ***Protective Factors***

Protective factors are specific variables and processes involved in safeguarding an individual and promoting his or her successful development (Perkins, Luster, & Jank, 2002). A number of factors have been found to be protective in terms of either mitigating the negative impact of deleterious circumstances such as childhood abuse and/or by being related to well being. Among these protective factors are the presence of a supportive adult (Benson, 1990; Hawley & DeHaan, 1996; Murphy, 2008; Olson, 2003; Smokowski, Reynolds, & Bezrucko, 1999; Werner, 1990; Werner & Smith, 1992), participation in counselling (Nabors, Reynolds, & Weist, 2000; Pavan et al., 2003; Travis, Bliwise, Biner, & Horne-Moyer, 2001), having lived in a two-parent household (Eitle, 2005; Henderson, 2003; Lonczak, Fernandez, Austin, Marlatt, & Donovan, 2007), parental marital stability (Belsky & Fearon, 2004), parental resilience/role modelling (Boer, 1996; Egliston &



Rapee, 2007), belief in God/religiosity (Dryfoos, 1998; Hawley & DeHaan, 1996; Murphy, 2008; Suzuki, 2006), and optimism (Hirsch, 2004; Mrazek & Mrazek, 1987; Murphy, 2008). Given the potential for these factors to influence the impact of abuse on an individual, it was decided that a brief measure querying the presence or absence of these factors might prove useful in explaining the results of the study. As such, the author developed a *Protective Factors Questionnaire* for the current study that was administered in Part I of the study (see Appendix D).

#### ***Resiliency Scale for Adults (RAS)***

Resiliency can be defined as the ability of individuals to do well despite facing adversity in their lives (Bogenschneider, 1998), and is thus another factor with the potential to mitigate the negative sequelae of an abusive childhood. For example, Runtz (1992) found that maltreated individuals who saw themselves as “survivors” were more likely to display positive psychological adjustment. For this reason, the Resiliency Scale for Adults (RAS, Brodsky & Lavitch, n.d.) was added to the current study. The RAS is composed of 30 items to which participants respond on a likert-scale from 1 = Very much *not* true about me to 5 = Very much true about me. Examples of items from the scale include, “If life presents me with a lemon, I think about making lemonade” and “When someone is mean to me I take it personally.” An individual’s score on the RAS is computed by adding his or her scores on each of the 30 individual items after reverse-scoring those items requiring reversal such that a maximum score of 150 points is possible.

In their original study, Brodsky and Lavitch (n.d.) demonstrated that the RAS was correlated with a measure of attachment known as the Revised Adult Attachment Scale ( $r = .44$ ) and found that the properties of the scale included a mean score of 105.62, a standard deviation of 12.44, a two-week test-retest reliability of  $r = .73$ , and Cronbach's alpha of .82. A second series of studies found a mean value for the RAS that varied near the mean of the first study. The second set of studies examined correlations between the RAS and a number of other measures of functioning. High resilience on the RAS was correlated with less depression and negative affect, a higher sense of coherence, more positive affect, better problem solving skills, and more creativity. Most of the studies using the RAS thus far have used Introductory Psychology students, although some studies have also used inmates, former prostitutes, and cancer patients. The RAS was included in the questionnaire package completed by participants in Part I of the current study.

### *Childhood Maltreatment Questionnaire (CMQ)*

Another questionnaire completed by participants in Part I was the Childhood Maltreatment Questionnaire (CMQ, Demare, 1993). The CMQ focuses extensively on psychological (emotional) maltreatment, but also includes scales for sexual and physical maltreatment. The questionnaire contains three components: the Psychological Maltreatment Questionnaire (PMQ), the Physical Abuse Questionnaire (PAQ), and the Sexual Abuse Questionnaire (SAQ). The PMQ has 12 scales, each tapping a form of child maltreatment identified in the psychological abuse literature as significant: Rejecting, Degrading, Isolating; Corrupting, Denying Emotional Responsiveness,

Exploiting (Nonsexual), Verbal Terrorism, Physical Terrorism, Witness to Violence, Unreliable and Inconsistent Care, Controlling and Stifling Independence, and Physical Neglect. The PAQ has a single scale, whereas the SAQ consists of Parental and Nonparental versions. Each CMQ scale item is scored on a 5-point Likert scale (ranging from never to very often) and assesses the frequency of maltreatment behaviours on or before age 17. Demare and Briere (1994) examined the psychometric characteristics of these scales in two separate samples of university students with a total  $N = 1,179$  and found them relatively reliable (alphas ranged from .67 to .95) and predictive of symptomatology on the Trauma Symptom Checklist-40 (Briere & Runtz, 1989) for both men and women. Similar results have been found for the CMQ with reference to the Trauma Symptom Inventory (TSI; Briere, 1995; Demare & Briere, 1996).

The alpha coefficients for the total scores of the component questionnaires of Demare's CMQ (1992/1995) were found to be as follows: .97 in both samples for the PMQ total score; .89 in both samples for the PAQ total score; .96 and .97, respectively, in each sample for the SAQ-P (parental version) total score; and .96 in sample 2 for the SAQ-NP (non-parental version) total score. Four-month test-retest reliability data was based on a sample of 604 participants, and revealed the following values:  $r = .85$  for the PMQ total score,  $r = .77$  for the PAQ total score,  $r = .89$  for the SAQ-P total score.

### ***Experiences in Close Relationships (ECR)***

The final measure completed by participants in Part I of the study was the Experiences in Close Relationships (ECR), a 36-item self-report attachment measure developed by Brennan and colleagues (1998). Each item of the ECR is written in the

form of a statement to which the responder rates his or her level of agreement on a 7-point scale ranging from 1 = disagree strongly to 7 = agree strongly. The items of this measure were derived from a factor analysis of 323 items from every categorical and multi-item measure of adult romantic attachment of which the researchers were aware. The original 323 items assessed 60 different attachment-related constructs which were found to yield two major factors. Brennan and colleagues identified these factors as anxiety and avoidance, but also noted that they were conceptually equivalent to Bartholomew's four-category typology of attachment styles. A chi-square test comparing Bartholomew's four-category self-classification measure and the cluster-based ECR method indicated substantial similarity between the two methods; however, the ECR procedure was found to be more conservative in classifying an individual as secure than was Bartholomew's measure (Brennan et al., 1998). Brennan and colleagues argued that greater conservatism in labelling a person as secure generally leads to statistically stronger results.

The development of the ECR was intended to encourage researchers to use a common metric for assessing adult romantic attachment styles. Furthermore, it was expected to circumvent the unreliability inherent in single-item response formats such as Bartholomew's self-classification measure. Brennan and colleagues (1998) indicated that the two 18-item scales that make up the ECR have high internal consistency, and are likely more precise than previous adult attachment style scales, having been based on a large and comprehensive item pool. As would be expected, the two scales were found to be independent measures that were not significantly correlated with each other ( $r = .11$ )

but were strongly and significantly correlated with their parent factors ( $r = .95$  in both cases).

Brennan and colleagues (1998) argued that their longer-than-usual scales might have the advantage of circumventing temptations toward biased responding generally aroused by simple measures that require people to state rather directly whether or not they are secure. Notably, self-report measures such as the ECR “require only a modicum of familiarity with one’s own feelings, social behaviour, and beliefs about relationships and the feedback one has received from relationship partners” (p. 68). Thereby, it is possible to classify individuals into attachment categories without the necessity of them fully understanding their own histories or dynamics (Brennan et al., 1998).

### ***The Rorschach Inkblot Method***

Participants in the second part of the study, who had been recruited based on their maltreatment status as determined in Part I of the study, completed the Rorschach Inkblot Method (Rorschach, 1921). The Rorschach Inkblot Method, one of the most frequently used projective techniques in clinical practice, was first developed by Swiss psychiatrist Herman Rorschach in the 1920s. It involves a set of 10 inkblots (five black and white, five containing color), each of which is printed on a separate card. In the standard procedure, the client is handed the cards one at a time and asked what each card “might be”. This part of the procedure lasts about 45 minutes. Scoring and interpreting the responses generally takes an additional 1.5 to 2 hours (Ball, Archer, & Imhoff, 1994; Lilienfeld et al., 2000). The respondent’s statements can be scored for more than 100 characteristics, including those in the three major categories of (a) content (e.g., What

particular object(s) did the client report seeing?); (b) location (e.g., Did the client report seeing the whole blot as one picture or just one particular area of the blot?); and (c) determinants (e.g., Did the client report seeing something that involved color? Or movement? Or shading?).

The Rorschach Method was controversial almost from the time of its development, in part because a large number of scoring systems were designed for interpretation of responses, creating confusion and difficulty in comparing reliability and validity studies (Sorrow, 1988). In an effort to overcome these difficulties, Exner (1969) published a comparative analysis of the five most well-used Rorschach scoring systems. The intent of his analysis was to ascertain which system had the greatest empirical strength and the greatest clinical usefulness. Ultimately, his work led to the creation of a new system called the Comprehensive System (CS). The CS integrated the empirically testable aspects of each of the five major systems into a single system of administration, scoring, and interpretation. The first volume of the Comprehensive System was published in 1974, and it was later expanded to two additional volumes (Exner, 1978; Exner & Weiner, 1982). A second edition of the first volume was published in 1986, followed by a third edition in 1993, and a fourth in 2003. Volumes two and three also have been regularly updated. Exner's reliance on empirical validation of Rorschach summary scores as well as his development of a large normative database have increased both the Rorschach's acceptance and its status as a psychological assessment instrument (Groth-Marnat, 1997).

In describing the task of the subject taking the Rorschach, Exner (1993) noted that the subject was being asked to provide something that was not actually there, or to *misperceive* the stimulus, and thereby project something of himself or herself into the response. Exner (1993) argued that a *problem-solving* situation was created which required some violation of reality on the part of the subject while remaining concerned with his or her own personal integrity. The situation was seen to provoke “a complex of psychological operations into activity that ultimately culminates in decision making and the delivery of answers” (p. 29)

Exner (1993) asserted that upon presentation of an inkblot, the individual would form many potential answers very quickly. Thus, part of the problem-solving task of the subject was to determine which of the potential answers to verbalize and which to discard. In a study by Exner and Armbruster (1974) in which reinforcement in the form of payment for responses was administered, non-patients averaged 104 responses to the 10 blots, while non-schizophrenic outpatients averaged 113 responses. Based on these results and those from similar studies, Exner (1993) argued it would be reasonable to suggest that in a standard administration where the average number of responses of adult subjects is between 20 and 23 responses, subjects are in fact delivering fewer than 25% of the potential answers that they have available.

Exner (1993) suggested that six elements in the response process contribute to the ultimate selection of responses delivered by the subject. These elements include: (1) the input or encoding of the stimulus field, (2) the classification of the field and/or its parts, (3) discarding some potential answers by reasons of economy and rank ordering, (4)

discarding some potential answers through censorship, (5) selection from the remaining potential responses because of styles and/or traits, and (6) selection of answers because of psychological states that are activated by the task demand.

Once subjects have responded to each of the 10 inkblots, and a follow-up inquiry phase has occurred in which clarification of location and elements contributing to the subject's perceptions have been identified, scoring of responses can occur. Scoring of Rorschach responses is completed along seven major categories. Ratios, percentages, and constellations are derived from combinations of these seven categories. The seven scoring categories of the Comprehensive System are:

1. *Location* – Location scores reflect the portion of the blot used by the individual in formulating responses.
2. *Determinants* – Determinants are the features of the blot used in forming the response. Features may include form, movement, chromatic colour, achromatic colour, texture, dimensionality, diffuse shading, form-derived dimensionality, pairs, and reflections or any combination of these.
3. *Form Quality* – This score reflects the level of conformity of the object specified in the response to actual form requirements of that object.
4. *Content* – Content refers to the category of the object specified in the response. Examples of content categories include human, animal, anatomy, blood, clouds, explosions, and sex.



5. *Popularity* – The 13 most frequently delivered responses have been designated as Popular. A response is scored Popular when it is one of the designated Populars.
6. *Organizational Activity* – Organizational Activity refers to the extent to which the subject establishes meaningful relationships between the blot elements in the response process.
7. *Special Scores* – Special Scores function as a code that signals the presence of an “unusual characteristic in the response” (Exner, 1993, p. 164). There are 12 Special Scores, six concerning unusual verbalizations, two regarding perseverations and integration failure, two involving special features of content, one reflecting personalization, and one involving a special colour phenomenon.

See Appendix E for a complete listing of the available codes in each scoring category.

### ***Reliability of the Rorschach***

Using the Comprehensive System, the reliability of the Rorschach can be divided into three areas: interscorer reliability, test-retest reliability, and stability across populations. Exner has claimed (1993, p. 23) that the scoring reliability of CS variables is uniformly above a minimum acceptable threshold of .85, and these claims have been generally accepted in the psychological community (see Groth-Marnat, 1997, p. 397). Use of the Exner system has resulted in higher interscorer reliability than previous systems due to two factors: (1) scoring is based primarily on verbalizations with few

subjective decisions made by the examiner; and (2) variables that had interscorer reliabilities of less than .85 were not included in the scoring system, by design.

Recently, some researchers have studied CS scoring reliability and found that while the median reliability of CS scores was in the low .80s, only about half of the CS variables attained a reliability of .85 or higher according to the modern approach of calculating reliability using intraclass correlations or Kappa coefficients (see Lilienfeld et al., 2000). According to Lilienfeld and colleagues, however, most experts would agree that interrater reliabilities of .60 are minimally acceptable for research involving between-group comparisons. Of importance for the current study is that inter-rater agreement of an acceptable level be attained before analysis of results proceeds.

Regarding test-retest reliability of the CS, Viglione (1999) stated that, “the great majority of Rorschach Comprehensive System (CS) variables and configurations have shown impressive temporal consistency reliability” (p. 252). In books and articles by Exner and his colleagues, the test-retest coefficients have typically ranged from .30 to .90, with mean values in the .80s or mid-to-high .70s (Lilienfeld et al., 2000). Lilienfeld and colleagues, however, argued that test-retest results have only been reported for about 40% of the variables in the CS, leading one to question whether sweeping statements of the strong test-retest reliability of the CS are warranted. Lilienfeld and colleagues suggested that the test-retest reliability of the CS was still an open issue remaining to be solved by methodologically rigorous studies.

### ***Validity of the Rorschach***

Parker (1983) performed a meta-analysis of 39 Rorschach validity papers

published between 1971 and 1980 in the *Journal of Personality Assessment*. Results of his analysis indicated “clearly that, when studies are well done, the validity of the Rorschach scores used was quite acceptable” (p. 231). Using meta-analytic procedures, Atkinson (1986) conducted a comparison of the relative validities of the Minnesota Multiphasic Personality Inventory (MMPI) and the Rorschach. On the basis of a random sample of articles listed in *Psychological Abstracts*, he found that the conceptual validation studies of the Rorschach were as successful as the conceptual validation studies of the MMPI. Atkinson suggested that the sometimes questionable status of the Rorschach may be based more on sociocultural factors than on any specific scientific evidence (Parker, Hanson, & Hunsley, 1988).

Following upon the work of Atkinson, another comparison of the Rorschach with the MMPI was conducted by Parker and colleagues (1988). In addition, these researchers elected to use the Wechsler Adult Intelligence Scale (WAIS) as a comparison test. The decision to include the WAIS was based on it being one of the most reliable and valid tests used in clinical assessment. The analyses conducted by Parker and colleagues involved only the most commonly used, core scales from each test. The scales considered to be core scales for the Rorschach were those that Exner (1983, Table 2.1) had chosen to examine in detail for temporal stability: Color, Weighted Sum of Color Responses, Achromatic Color, Lambda, Affective Ratio, Egocentricity Index, Experience Actual, Percentage Good Pure Form, and Percentage Good Form. The average reliability of the Rorschach was not found to differ from that of the WAIS or the MMPI. The observed average stability value for the Rorschach was not statistically different than the observed

values for the WAIS and MMPI. The average convergent-validity value for the WAIS was greater than the convergent-validity values for the MMPI and the Rorschach; however, there was no statistically significant difference between the average convergent-validity values for the MMPI and the Rorschach. Based on their study and a review of two other similar studies, Parker and colleagues (1988) concluded that the Rorschach and the MMPI had acceptable and roughly equivalent psychometric properties when used in appropriate circumstances.

### **Procedure**

The design of the current study involved two parts. During Part I, a total of 293 students enrolled in Introductory Psychology classes at the University of Manitoba were recruited. These students completed the following questionnaires: Demographic Questionnaire, Protective Factors Questionnaire, Resiliency Scale for Adults (RAS), Childhood Maltreatment Questionnaire (CMQ), and Experiences in Close Relationships questionnaire (ECR). The data from these questionnaires were then examined to determine which individuals (identified only by a code number) reported having been psychologically maltreated in childhood (but not also sexually or physically maltreated), and which individuals reported not having been maltreated in any way. From these two groups of individuals, a sample of 78 individuals (39 psychologically maltreated and 39 non-maltreated) was recruited to participate in the second part of the study. During the second part of the study, these 78 participants were administered the Rorschach Inkblot Method.

Students who participated in the study received a portion of their course credits in exchange for their participation. At the outset of each part of the study and prior to their participation, students were asked to sign a consent form. The consent form advised participants that the questionnaires they would be asked to complete contained items of a personal and sensitive nature. The form also assured individuals that their questionnaire responses would be kept confidential and that they would not be asked to place any information on their questionnaires that could be used to identify them personally. In addition to the questionnaire items, the students were asked to check a box indicating whether or not they would be interested in participating in the second part of the study, and were asked to provide a contact phone number or e-mail address should they wish to participate in Part II.

During Part I, students completed the questionnaire package in large groups ranging from 50 to 100 students. Rooms large enough to allow the participants adequate space for their own privacy and comfort were chosen as the locations for Part I. Two researchers were present at every session, one male and one female, to administer and collect the questionnaire packages and to answer any questions the participants might have. This procedure ensured (a) sufficient personnel to handle the many administrative tasks required and to answer questions or respond to concerns that students may have during questionnaire completion, and (b) the presence of both a female and male researcher in the event that particular students might feel more comfortable asking a question or sharing a concern with a researcher of a specific gender given the sensitive nature of some of the questionnaire items.

Two copies of the consent form (Appendix F) were attached to the top of the questionnaire package, and students were asked to read and sign these forms before beginning to answer the questionnaire. They were then asked to separate the consent forms from the rest of the package, and then to keep one and hand the other one in separately from the rest of the questionnaire package in order that their names would not be connected with their data. The consent form described the nature of the questionnaire, informed students that they had the right not to participate in the study, and made it clear that if they chose to leave the study at any time, they would still receive credit for their participation. The consent form also provided a space where participants could write their e-mail address if they desired a copy of the results of the study once these results were available.

The next page of the package was a code page that participants were asked to complete and then separate from the remainder of the package. The code page gave instructions to generate a unique ten-digit code consisting of two digits representing the first letter of their first name, two digits representing the last letter of their last name, two digits representing their year of birth, two digits representing their month of birth, and two digits representing their date of birth. These codes were ultimately used to match participants' data from Part I and Part II of the study without identifying the participants personally. Students were clearly instructed not to place their names or any other information on their questionnaires that could be used to identify them.

Because of the sensitive nature of the items comprising the questionnaire, it was felt that some participants might experience a certain degree of emotional distress as a

result of thinking about some of the questionnaire items. For this reason, upon completion of the questionnaires, each participant was given a debriefing form (see Appendix G) that acknowledged that the sensitive nature of some of the questions could evoke thoughts or feelings some participants might wish to discuss with a counsellor. The form suggested two on-campus services where students could receive free counselling, and also provided phone numbers of both the principal researcher and the research advisor should individuals have felt the need to discuss the study further.

Previous research by other investigators at the University of Manitoba using the CMQ and related questionnaires had not produced any serious concerns or severe emotional reactions on the part of participants. Demare (2000) found that none of the participants in his study reported serious concerns as a result of completing the CMQ, and a small number of students who had experienced maltreatment approached him after the study and indicated that they had not found the questionnaire to be distressing. Rather, their comments were supportive of research in the area and suggested that they felt that increased public awareness of abuse-related issues might benefit others. Similarly, empirical findings (Walker, Newman, Koss, & Bernstein, 1997) have indicated that participation in survey studies of childhood maltreatment is generally not perceived as aversive and can be perceived as a positive experience for many individuals. None of the individuals participating in the current study indicated to the primary investigator or her academic advisor that they had experienced any discomfort in completing the questionnaires.

Following Part I of the study, participants' questionnaire responses were examined in order to obtain two subgroups of individuals: (a) those who were psychologically maltreated (but not physically and/or sexually maltreated), and (b) those who were not maltreated either psychologically, physically, or sexually. Based on previous research by Demare (1993, 2000), it was anticipated that approximately one-third of participants would fall into category (a) and another one-third would fall into category (b). The principal investigator then e-mailed all the individuals who fell into either category (a) or category (b) and who had indicated that they would be interested in completing Part II of the study. While the goal was to have 40 participants from each of these two groups complete Part II, in the end only 39 individuals from the psychologically maltreated group responded to the e-mail stating that they were still interested. All 39 of these individuals were slotted into their choice of timeslots for participation in Part II of the study, whereas the second group (the non-maltreated individuals) were offered timeslots on a first-come, first-served basis until the same number of individuals of this category (i.e., 39) were signed-up.

Part II of the study involved participants being administered the Rorschach Inkblot Method by one of two administrators who were blind to both the research questions and the maltreatment status of the participants. Following administration of the Rorschach, participants were provided with a debriefing form, similar to the one provided after Part I, which included contact phone numbers for any individuals who wished to further discuss their experience (see Appendix H). Notably, no participants from either Part I or Part II contacted the principal investigator or her research advisor following their



participation, suggesting that no one was unduly bothered by the contents of the questionnaires or the administration of the Rorschach.

The Rorschach was administered according to the standard procedures of Exner's (2001) Comprehensive System. Two individuals completed the Rorschach scoring, one of whom was the principal investigator, and the other of whom was one of the Rorschach administrators. The individual who participated in both administration and scoring of the Rorschachs was a retired professor with a wealth of experience in the administration and scoring of the Rorschach as well as a long history of having taught these skills to graduate psychology students. The other individual who administered Rorschachs was a recent graduate from a clinical psychology doctoral program, and had taken both courses and practica involving using the Rorschach, as well as having administered numerous Rorschachs in his workplace. The principal investigator, who completed scoring but no administrations of the Rorschach, was a graduate student in a clinical psychology program who had completed a graduate course on administration and scoring of the Rorschach and also had scored a small number of Rorschachs in a workplace setting.

In order to ensure accuracy and consistency of scoring between the two scorers, 25% of the Rorschach protocols scored by the first scorer were re-scored by the second scorer and the results were compared. Inter-rater reliability ratings were then computed for these double-scored Rorschach protocols. Kappa coefficients (Cohen, 1988) were .94 for Location, .87 for Developmental Quality, .83 for Determinants, .75 for Form Quality, .96 for Pairs, .71 for Contents, .94 for Populars, .85 for Z-scores, and .74 for Special Scores, indicating a high level of inter-rater agreement (see Landis & Koch, 1977).

## CHAPTER 3 - RESULTS

### Data Preparation

Prior to conducting the main analyses, data screening and preparation was conducted as suggested by Tabachnick and Fidell (1989). Using SPSS FREQUENCIES, data were checked for accuracy of entry by inspecting minimum and maximum values, means, and standard deviations of each of the variables for plausibility. Similarly, the coefficient of variation was examined for each of the main variables. SPSS FREQUENCIES also allowed for inspection of missing data, and, where appropriate, missing data were replaced by group mean scores. Univariate and multivariate outliers were inspected and dealt with appropriately on a case-by-case basis. The impact of univariate outliers was reduced by replacing any such outliers (determined to be greater than 3.0 standard deviations above the mean) with a value that was one unit higher than the next highest non-extreme data point. Two cases that involved outliers, as determined by examination of bivariate scatterplots, were removed from the analyses.

The data were then screened for normality by examining histograms as well as skewness and kurtosis values. As expected, the maltreatment variables were all found to exhibit large positive skewness due to large numbers of students endorsing the lower end of the scale indicating low frequency of occurrence of maltreatment. Although many multivariate statistical procedures and tests are thought to be robust to departures from normality especially with large samples, some writers (e.g., Tabachnick & Fidell, 1989) recommend transforming variables in order to reduce the degree of skewness and/or kurtosis. The transformations suggested by Tabachnick and Fidell for reducing positive

skewness include computing the inverse or the log10 of the skewed variable. Thus, for each of the maltreatment variables, comparisons were made between the histograms and the skewness and kurtosis values of the untransformed variable and the inverse and log10 of the variable. In some cases, there was a small improvement; however, it was not judged to be of a large enough magnitude to warrant transformation given the increased difficulty of interpretation of the transformed variable in subsequent analyses.

Linearity and homoscedasticity of the variables were examined via observation of residual plots and bivariate scatterplots, and in each case these were judged to be within acceptable limits. In addition, variables were examined for multicollinearity and singularity and none were found to exhibit these characteristics.

### **Part I – Participant Characteristics**

Of the 293 participants who agreed to participate in Part I of the study, none chose to withdraw once the study had commenced. As noted above, two cases were deleted due to multivariate outliers. Thirteen others did not provide complete data for the items of primary interest. Of these individuals, five stopped filling out the questionnaire somewhere past the half-way point, and three others left large sections of the questionnaire blank. Given the large amount of data missing in these cases, a decision was made to exclude them from the analyses. For the other five cases with missing data, it was determined that the participants had omitted only between one and three items from the entire questionnaire, and careful scrutiny of the distribution of these missing scores indicated that they were randomly spread throughout the questionnaire items. In these cases, the data were *reclaimed* using the conservative method suggested by

Tabachnick and Fidell (1989) in which the mean value for that item (from the remaining participants) was inserted for the missing value. The results reported are for the 278 participants who either provided complete data ( $n = 273$ ) or, in the remaining five cases, had item means inserted for a small number of missing data points. Demographic information provided by these participants indicated that 69% of them were female and 31% were male.

The participants ranged in age from 17 years to over 49 years, with the majority of participants being 20 years of age or younger (77%). Only one individual fell within the age group denoted as “over 49 years.” The majority of participants were of white race (approximately 77%), had been born in Canada or the United States (95%), spoke English as a first language (98%), had never been married (91%), lived with their parents or other relatives (66%), and had completed fewer than 5 full university courses (77%). Most had been raised in a family with a combined gross annual income greater than \$40,000 (72%), with approximately 26% of the sample having been raised in a family with a gross annual income in excess of \$70,000. Eighty-seven percent of participants’ mothers and 80% of their fathers had completed a minimum of a high school education, while 39% of mothers and 43% of fathers had completed a university degree. Detailed demographic data are presented in Table 1.

In addition to demographic questions, participants were asked a series of questions about *protective factors* which were based on a review of the literature on this subject. The first of the protective factors was the presence of an adult (other than a

Table 1

## Demographic Data for all Part I Participants

Demographic	Frequency	Percent
<b>GENDER</b>		
Male	87	31.3
Female	191	68.7
<b>Total</b>	<b>278</b>	<b>100%</b>
<b>AGE</b>		
17	21	7.6
18	128	46.0
19	44	15.8
20	21	7.6
21-25	42	15.1
26-30	8	2.9
31-35	8	2.9
36-40	3	1.1
41-48	2	.7
49 +	1	.4
<b>Total</b>	<b>278</b>	<b>100%</b>
<b>RACE</b>		
White	215	77.4
Asian	31	11.2
Aboriginal	3	1.1
Black	8	2.9
Hispanic	2	.7
East Indian	9	3.2
Other	7	2.5
Mixed race	3	1.1
<b>Total</b>	<b>278</b>	<b>100%</b>

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Demographic	Frequency	Percent
<b>PLACE OF BIRTH</b>		
Canada or United States	265	95.3
Asia	4	1.4
Europe	4	1.4
India	1	.4
Mexico, South America, or Central America	0	0
Africa	3	1.1
Other	1	.4
<b><i>Total</i></b>	<b>278</b>	<b>100%</b>
<b>PRIMARY LANGUAGE SPOKEN &amp; UNDERSTOOD</b>		
English	272	97.9
French	0	0
Asian	2	.7
Other European	2	.7
Other (omitted)	1	.4
<b><i>Total</i></b>	<b>278</b>	<b>100%</b>
<b>NUMBER OF UNIVERSITY COURSES COMPLETED</b>		
<5	214	77.0
5-9	34	12.2
10-14	14	5.0
15-19	7	2.5
>19	9	3.2
<b><i>Total</i></b>	<b>278</b>	<b>100%</b>

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Demographic	Frequency	Percent
<b>MARITAL STATUS</b>		
Never married	252	90.7
Married or Common-law	23	8.3
Separated	2	.7
Divorced	1	.4
Widowed	0	0
<b>Total</b>	<b>278</b>	<b>100%</b>
<b>LIVING ARRANGEMENTS</b>		
Parents or relatives	184	66.2
Friends or roommates	37	13.3
Alone	20	7.2
Spouse or partner	27	9.7
Other	10	3.6
<b>Total</b>	<b>278</b>	<b>100%</b>
<b>SIZE OF COMMUNITY DURING CHILDHOOD</b>		
>500,000	70	25.2
100-500,000	29	10.4
50-100,000	9	3.2
10-50,000	68	24.5
<10,000	97	34.9
(omitted)	3	1.1
<b>Total</b>	<b>278</b>	<b>100%</b>
<b>ANNUAL FAMILY INCOME</b>		
< \$15,000	8	2.9
\$15,000 – \$24,999	12	4.3
\$25,000 – \$39,999	46	16.5
\$40,000 – \$54,999	60	21.6
\$55,000 – \$70,000	66	23.7
> \$70,000	73	26.3
(omitted)	13	4.7
<b>Total</b>	<b>278</b>	<b>100%</b>

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Demographic	Frequency	Percent
<b>MOTHER'S EDUCATION</b>		
< High School	28	10.1
High school grad	55	19.8
Non-university training	51	18.3
University – no degree	28	10.1
University degree	109	39.2
Unknown	7	2.5
<b>Total</b>	<b>278</b>	<b>100%</b>
<b>FATHER'S EDUCATION</b>		
< High School	43	15.5
High school grad	41	14.7
Non-university training	36	12.9
University – no degree	27	9.7
University degree	120	43.1
Unknown	11	4.0
<b>Total</b>	<b>278</b>	<b>100%</b>
<b>MOTHER'S WORK</b>		
Mostly full-time	169	60.8
Mostly part-time	49	17.6
Equal full and part-time	28	10.1
Rarely or never worked	22	7.9
On pension/disability	6	2.2
(omitted)	4	1.4
<b>Total</b>	<b>278</b>	<b>100%</b>
<b>FATHER'S WORK</b>		
Mostly full-time	247	91.5
Mostly part-time	9	3.3
Equal full and part-time	5	1.9
Rarely or never worked	3	1.1
On pension/disability	9	3.3
(omitted)	5	1.8
<b>Total</b>	<b>278</b>	<b>100%</b>

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primary caretaker) whom they felt was a strong source of support for them during their childhood. Fifty-nine percent responded to this question in the affirmative, while 41% replied in the negative. Of those who responded in the affirmative, the individual who was most frequently cited as the source of support was a relative (68%), followed by a family friend (30%).

Participation in therapy has also been found to be a protective factor, and survey results indicated that 25% of the participants had participated in some form of therapy or counselling. Of those who had participated in therapy, the greatest percentage (61%) had participated in ten or fewer sessions.

Eighty-six percent of the participants had lived in a two-parent household for most or all of their childhood, and of those, 80% described the parental relationship as “mostly stable.” In response to a question about whether they viewed one or both of their primary caretakers as resilient, 39% of participants said yes, while just over half were unsure. Fifty-two percent of respondents indicated that they believed in and felt loved by God, and 84% described themselves as optimistic. Detailed data regarding protective factors are presented in Table 2.

### **Maltreatment Frequencies and Comorbidity**

Maltreatment status was established based on participants’ responses to the Childhood Maltreatment Questionnaire (CMQ, Demare, 1993, 1996, 2000). The subscales of the CMQ demonstrated high levels of internal consistency, with alpha coefficients ranging from .79 to .96 (see Table 3). Determination of maltreatment (in the forms of psychological, physical, or sexual abuse) was based on the same criteria used by

Table 2

## Protective Factors Endorsed by Part I Participants

	Frequency	Percent
<b>SUPPORTIVE ADULT</b>		
No	109	40.6
Yes	169	59.4
<i>Total</i>	<b>278</b>	<b>100%</b>
<b>THERAPY</b>		
No	209	75.2
Yes	69	24.8
<i>Total</i>	<b>278</b>	<b>100%</b>
<b>TWO-PARENT FAMILY</b>		
No	38	13.7
Yes	240	86.3
<i>Total</i>	<b>278</b>	<b>100%</b>
<b>MARITAL STABILITY</b>		
Mostly stable	178	64.0
Somewhat stable	34	12.2
Mostly unstable	12	4.3
(omitted)	54	19.4
<i>Total</i>	<b>278</b>	<b>100%</b>
<b>PARENTAL RESILIENCE</b>		
No	29	10.4
Yes	107	38.5
Unsure	142	51.1
<i>Total</i>	<b>278</b>	<b>100%</b>

Table 2 (continued)

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	Frequency	Percent
<b>BELIEF IN GOD</b>		
No	55	19.8
Yes	145	52.1
Unsure	78	28.1
<i>Total</i>	<b>278</b>	<b>100%</b>
<b>OPTIMISM</b>		
No	15	5.4
Yes	234	84.2
Unsure	29	10.4
<i>Total</i>	<b>278</b>	<b>100%</b>

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Table 3

Alpha Reliability Coefficients for the Subscales of the CMQ<sup>a</sup>

Maltreatment Subscale	Alpha <sup>b</sup>	Total Items
<b>PSYCHOLOGICAL MALTREATMENT</b>		
Controlling/Stifling Independence	.85	6
Corrupting	.81	6
Degrading	.91	6
Denying Emotional Responsiveness	.91	6
Exploiting (Nonsexual)	.79	6
Isolating	.83	6
Physical Neglect	.79	6
Physical Terrorism	.84	6
Rejecting	.93	6
Unreliable/Inconsistent Care	.85	6
Verbal Terrorism	.89	6
Witness to Violence	.82	6
<b>PHYSICAL ABUSE</b>	<b>.93</b>	<b>16</b>
<b>SEXUAL ABUSE – PARENTAL</b>		
Sexual Harassment	.95	6
Non-Contact Sexual Abuse	.80	6
Contact Sexual Abuse	.92	10
<b>SEXUAL ABUSE - NONPARENTAL</b>		
Sexual Harassment	.96	6
Non-Contact Sexual Abuse	.81	6
Contact Sexual Abuse	.91	10

<sup>a</sup>N = 278. <sup>b</sup>Cronbach alpha coefficient

Demare (1993, 1996, 2000), who authored the Childhood Maltreatment Questionnaire used in this study. Demare used conservative criteria for classifying individuals as sexually abused such that only sexual experiences that involved actual contact were used to classify individuals as sexually abused. Thus, participants were considered sexually abused if they had experienced one or more incidents of contact sexual abuse during childhood. With this criterion, any individual who reported a contact sexual abuse experience at a frequency of anything greater than *never* was considered to have experienced the situation at least once (i.e., those who reported experiencing the event *rarely, sometimes, often, or very often* were considered to have experienced the event at least once.) According to Demare (2000), this determination is in line with social policy and the thinking of most researchers in this area. Using this criterion, 3.6% of participants had experienced parental sexual abuse and 23.7% of participants experienced non-parental sexual abuse. Table 4 (parental) and Table 5 (non-parental) present detailed data regarding the frequency and nature of sexually exploitive acts experienced by participants in this study.

For physical and psychological forms of maltreatment, the criteria used by Demare and adopted for this research were more stringent. Participants were considered to have been physically abused if they reported having experienced any of the items comprising the Physical Abuse Scale at a rate between *sometimes* and *very often* but not if they reported the event as occurring *rarely*. According to Demare (2000), setting the criteria at this level implies that the physically violent parental acts experienced by these individuals were more than mere isolated incidents. Furthermore, it identifies individuals

Table 4

## Frequencies of Endorsement of Parental Sexual Abuse Items

	None <sup>a</sup>		Minimal <sup>b</sup>		Moderate <sup>c</sup>		High <sup>d</sup>	
	<i>n</i>	(%)	<i>n</i>	(%)	<i>n</i>	(%)	<i>n</i>	(%)
<b>Sexual Harassment</b>								
Look or stare sexually	270	(97.2)	3	(1.1)	3	(1.1)	2	(.7)
Sexual comments to you	269	(96.8)	4	(1.4)	3	(1.1)	2	(.7)
Sex comment about you	272	(97.9)	4	(1.4)	0	(.0)	2	(.7)
Talk in a sexual way	274	(98.6)	1	(.4)	2	(.7)	1	(.4)
Sexual invitation	275	(98.9)	1	(.4)	1	(.4)	1	(.4)
Sexual suggestion	274	(98.6)	0	(.0)	2	(.7)	2	(.7)
<b>Noncontact Sex Abuse</b>								
Sexual exposure to you	272	(97.9)	3	(1.1)	1	(.4)	2	(.7)
Make you expose	272	(97.9)	2	(.7)	2	(.7)	2	(.7)
Sex acts in front of you	277	(99.6)	0	(.0)	1	(.4)	0	(.0)
Make you disrobe	276	(99.3)	0	(.0)	2	(.7)	0	(.0)
Get you to touch yourself sexually	276	(99.3)	1	(.4)	1	(.4)	0	(0.0)
Take sexually explicit pictures of you	277	(99.6)	1	(.4)	0	(.0)	0	(.0)
<b>Contact Sexual Abuse</b>								
Rub/touch your genitals	271	(97.5)	3	(1.1)	3	(1.1)	1	(.4)
Kiss or hug you sexually	275	(98.9)	1	(.4)	2	(.7)	0	(.0)
Get you to do something sexual	275	(98.9)	0	(.0)	2	(.7)	1	(.4)
Rub/fondle your genitals	274	(98.6)	0	(.0)	3	(1.1)	1	(.4)
Make you fondle their genitals	275	(98.9)	0	(.0)	2	(.7)	1	(.4)
Insert a finger/object in your vagina or anus	275	(98.9)	0	(.0)	2	(.7)	1	(.4)
Touch your genitals orally	277	(99.6)	1	(.4)	0	(.0)	0	(.0)
Make you touch their genitals orally	277	(99.6)	1	(.4)	0	(.0)	0	(.0)
Attempted intercourse	277	(99.6)	1	(.4)	0	(.0)	0	(.0)
Intercourse	278	(100.0)	0	(.0)	0	(.0)	0	(.0)

<sup>a</sup>Response of "never". <sup>b</sup>Response of "rarely". <sup>c</sup>Response of "sometimes". <sup>d</sup>Response of "often" or "very often"

Table 5

## Frequencies of Endorsement of Non-parental Sexual Abuse Items

	None <sup>a</sup>		Minimal <sup>b</sup>		Moderate <sup>c</sup>		High <sup>d</sup>	
	<i>n</i>	(%)	<i>n</i>	(%)	<i>n</i>	(%)	<i>n</i>	(%)
<b>Sexual Harassment</b>								
Look or stare sexually	190	(68.4)	35	(12.6)	35	(12.6)	18	(6.4)
Sexual comments to you	190	(68.4)	34	(12.2)	33	(11.9)	21	(7.6)
Sex comment about you	212	(76.3)	36	(12.9)	19	(6.8)	11	(4.0)
Talk in a sexual way	203	(98.6)	35	(12.6)	27	(97)	13	(4.7)
Sexual invitation	222	(79.9)	22	(7.9)	22	(7.9)	12	(4.3)
Sexual suggestion	220	(79.2)	29	(10.4)	16	(5.8)	13	(4.7)
<b>Noncontact Sex Abuse</b>								
Sexual exposure to you	240	(86.4)	23	(8.3)	13	(4.7)	2	(.7)
Make you expose	256	(92.1)	11	(4.0)	9	(3.2)	2	(.7)
Sex acts in front of you	271	(97.5)	6	(2.2)	0	(.0)	1	(.4)
Make you disrobe	269	(96.8)	5	(1.8)	3	(1.1)	1	(.4)
Get you to touch yourself sexually	265	(95.4)	7	(2.5)	5	(1.8)	1	(.4)
Take sexually explicit pictures of you	276	(99.3)	1	(.4)	0	(.0)	1	(.4)
<b>Contact Sexual Abuse</b>								
Rub/touch your genitals	228	(82.1)	27	(97)	13	(4.7)	10	(3.6)
Kiss or hug you sexually	230	(82.8)	27	(97)	12	(4.3)	9	(3.2)
Get you to do something sexual	248	(89.3)	14	(5.0)	9	(3.2)	7	(2.5)
Rob/fondle your genitals	247	(88.9)	17	(6.1)	6	(2.2)	8	(2.9)
Make you fondle their genitals	253	(91.1)	15	(5.4)	5	(1.8)	5	(1.8)
Insert a finger/object in your vagina or anus	265	(95.4)	7	(2.5)	3	(1.1)	3	(1.1)
Touch your genitals Orally	267	(96.1)	9	(3.2)	1	(.4)	1	(.4)
Make you touch their genitals orally	267	(96.1)	7	(2.5)	2	(.7)	2	(.7)
Attempted intercourse	264	(95.0)	10	(3.6)	3	(1.1)	1	(.4)
Intercourse	266	(94.7)	6	(2.2)	2	(.7)	4	(1.5)

<sup>a</sup>Response of “never”. <sup>b</sup>Response of “rarely”. <sup>c</sup>Response of “sometimes”. <sup>d</sup>Response of “often” or “very often”

who score at or above the median on the Physical Abuse Scale. Using this criterion, 21.9% of the participants in this study were considered to have experienced physical abuse. Table 6 presents detailed data regarding the nature and frequency of physically abusive acts experienced by participants in the current study.

Criteria used for determination of psychological maltreatment were even more stringent, as per Demare (2000), given that psychological maltreatment is generally considered more difficult to determine than sexual or physical abuse. Thus, only those subjects who reported having experienced parental behaviours comprising any of the psychological maltreatment subscales at a rate of *often* or *very often* were considered to have been psychologically maltreated. Even with this stricter criterion, 51.1% of participants in this study could be considered to have suffered from psychological maltreatment. Table 7 presents data on the frequency of endorsements of PMQ (Psychological Maltreatment) subscales. In the interest of brevity, frequencies are reported by subscale, rather than by item. As indicated in Table 7, only 2.5% of participants had never experienced any amount of *controlling* and only 7.2% had never experienced *verbally terrorizing*. The type of psychological maltreatment most likely to occur at a high frequency was *degrading* (32%), while the type of psychological maltreatment least likely to occur to any degree was *corrupting* (75.9% had not experienced this form of maltreatment). *Neglecting* and *witnessing violence* followed *corrupting* as least likely to occur, with 62.6% and 51.5% of individuals, respectively, never having experienced these forms of maltreatment.



Table 6

## Frequencies of Endorsement of Physical Abuse Items

	None <sup>a</sup>		Minimal <sup>b</sup>		Moderate <sup>c</sup>		High <sup>d</sup>	
	<i>n</i>	(%)	<i>n</i>	(%)	<i>n</i>	(%)	<i>n</i>	(%)
Spank you to bruise or bleed	222	(79.9)	35	(12.6)	14	(5.0)	7	(2.5)
Twist, yank, or Bend a limb	203	(73.1)	52	(18.7)	19	(6.8)	4	(1.5)
Push, throw, or Knock you down	224	(80.6)	36	(12.9)	12	(4.3)	6	(2.2)
Hit or punch with closed fist	263	(94.6)	9	(3.2)	3	(1.1)	3	(1.1)
Beat you up	260	(93.6)	11	(4.0)	4	(1.4)	3	(1.1)
Hit or slap with Open hand	205	(73.8)	51	(18.3)	15	(5.4)	7	(2.5)
Kick, knee, or elbow you	253	(91.0)	17	(6.1)	4	(1.4)	4	(1.4)
Throw an object causing harm	262	(94.3)	12	(4.3)	1	(.4)	3	(1.1)
Pull your hair or Ear	204	(73.4)	51	(18.3)	13	(4.7)	10	(3.6)
Hit you with an object	206	(74.1)	41	(14.7)	19	(6.8)	12	(4.3)
Burn or scald You	273	(98.2)	2	(.7)	2	(.7)	1	(.4)
Harm you with a weapon	260	(93.6)	10	(3.6)	6	(2.2)	2	(.7)
Break your bones or teeth	275	(98.9)	3	(1.1)	0	(0.0)	0	(0.0)
Choke you	267	(96.1)	1	(.4)	5	(1.8)	5	(1.8)
Torture you	270	(97.2)	2	(.7)	3	(1.1)	3	(1.1)
Try to kill you	273	(98.2)	3	(1.1)	1	(.4)	1	(.4)

<sup>a</sup>Response of “never”. <sup>b</sup>Response of “rarely”. <sup>c</sup>Response of “sometimes”. <sup>d</sup>Response of “often” or “very often”

Table 7

## Frequencies of Endorsement of Psychological Maltreatment Items (by Subscale)

	None <sup>a</sup>		Minimal <sup>b</sup>		Moderate <sup>c</sup>		High <sup>d</sup>	
	<i>n</i>	(%)	<i>n</i>	(%)	<i>n</i>	(%)	<i>n</i>	(%)
Controlling	7	(2.5)	155	(55.7)	106	(38.1)	10	(3.6)
Corrupting	211	(75.9)	62	(22.3)	5	(1.8)	0	(0.0)
Degrading	89	(32.0)	124	(44.6)	58	(20.9)	89	(32.0)
Denying responsibility	45	(16.2)	141	(50.7)	78	(28.1)	14	(5.0)
Exploiting	100	(36.0)	152	(54.7)	24	(8.6)	2	(0.7)
Isolating	45	(16.2)	183	(65.9)	49	(17.6)	1	(0.4)
Neglecting	174	(62.6)	97	(34.9)	6	(2.2)	1	(0.4)
Physically Terrorizing	90	(32.4)	162	(58.3)	24	(8.6)	2	(0.7)
Rejecting	107	(38.5)	118	(42.4)	45	(16.2)	8	(2.9)
Unreliable & Inconsistent Care	41	(14.7)	166	(59.7)	66	(23.7)	5	(1.8)
Verbally Terrorizing	20	(7.2)	168	(60.4)	85	(30.6)	5	(1.8)
Witnessing Violence	143	(51.5)	112	(40.3)	20	(7.2)	3	(1.1)

<sup>a</sup>Response of “never” to all questionnaire items. <sup>b</sup>Response of “rarely” to at least one questionnaire item.

<sup>c</sup>Response of “sometimes” to at least one questionnaire item. <sup>d</sup>Response of “often” to “very often” on all questionnaire items.

As noted earlier, as many as 51.1% of study participants were judged to be psychologically maltreated, 21.9% were judged to be physically abused, 3.6% were judged to be sexually abused by a parent, and 23.7% were judged to be sexually abused by a non-parent based on the criteria adopted by Demare (2000). Table 8 presents frequencies of occurrence of each of the types of maltreatment examined in this study, while Table 9 presents frequencies of occurrence for each possible combination of forms of maltreatment. Notably, only 38.1% of the participants had not been exposed to any of these forms of maltreatment. Table 9 also indicates what percentage of the maltreated individuals each maltreated grouping represents.

Given that the focus of the current study is on psychological maltreatment, Table 10 presents the percentage of individuals who experienced this form of maltreatment in addition to at least one other form of abuse. This same table also displays the percentage of individuals who experienced one of the other forms of abuse but were not psychologically maltreated. The likelihood of having experienced either physical and/or sexual abuse was greatly increased among those individuals who were psychologically maltreated compared to their counterparts who were not psychologically maltreated. The participants in this study were four times more likely to have been physically or sexually abused by a parent and more than twice as likely to have been sexually abused by a non-parent if they had experienced psychological maltreatment by a parental figure.

### **Attachment**

An additional measure completed by participants in Part I of the study was the Experiences in Close Relationships Inventory (ECR) for which they were asked to think

Table 8

## Frequency of Occurrence of Each Type of Maltreatment

	Present		Not Present		Total	
	<i>n</i>	(%)	<i>n</i>	(%)	<i>N</i>	(%)
Psychological Maltreatment	142	(51.1)	136	(48.9)	278	(100)
Physical Abuse	61	(21.9)	217	(78.1)	278	(100)
Parental Sexual Abuse	10	(3.6)	268	(96.4)	278	(100)
Non-parental Sexual Abuse	66	(23.7)	212	(76.3)	278	(100)

Table 9

## Maltreatment Comorbidity Frequencies

Combinations of Broad Forms of Maltreatment	<i>n</i>	% (of sample)	% (of Maltreated <sup>a</sup> )
<b>No Maltreatment</b>	106	(38.1)	--
<b>One form of Maltreatment only</b>			
Psychological Maltreatment	66	(23.7)	(38.4)
Physical Abuse	10	(3.6)	(5.8)
Parental Sexual Abuse	0	(0.0)	(0.0)
Nonparental Sexual Abuse	16	(5.8)	(9.3)
<b>Two forms of Maltreatment</b>			
Psychological and Physical	27	(9.7)	(15.7)
Psychological and Parental Sexual	2	(0.7)	(1.2)
Psychological and Nonparental Sexual	25	(9.0)	(14.5)
Physical and Parental Sexual	0	(0.0)	(0.0)
Physical and Nonparental Sexual	2	(0.7)	(1.2)
Parental and Nonparental Sexual	2	(0.7)	(1.2)
<b>Three forms of Maltreatment</b>			
Psychological, Physical & Parental Sexual	0	(0.0)	(0.0)
Psychological, Physical & Nonparental Sexual	16	(5.8)	(9.3)
<b>All four forms of Maltreatment</b>	6	(2.2)	(3.5)
Total	278	(100)	(100)

<sup>a</sup>*n* = 172.

Table 10

## Abuse Frequencies by Psychological Maltreatment Status

	Psychologically Maltreated <sup>a</sup>		Not Psychologically Maltreated <sup>b</sup>	
	<i>n</i>	(%)	<i>n</i>	(%)
Physical Abuse <sup>c</sup>	49	(34.5)	12	(8.8)
Parental Sexual Abuse <sup>d</sup>	8	(5.6)	2	(1.5)
Nonparental Sexual Abuse <sup>e</sup>	47	(33.1)	19	(14.0)

<sup>a</sup>Subjects who reported having experienced one or more Psychological Maltreatment items *often* or *very often* ( $n = 142$ ). <sup>b</sup>Subjects who reported having experienced one or more Psychological Maltreatment items *never* to *sometimes* ( $n = 136$ ). <sup>c</sup>Subjects who reported having experienced one or more Physical Abuse items *sometimes* to *very often* ( $n = 61$ ). <sup>d</sup>Subjects who reported having experienced one or more Parental Contact Sexual Abuse items ( $n = 10$ ). <sup>e</sup>Subjects who reported having experienced one or more Non-parental Contact Sexual Abuse items ( $n = 66$ ).

about their romantic relationships in general rather than focusing entirely on a current relationship. They were then asked to rate the extent of their agreement with each of thirty-six statements describing them in these relationships on a 7-point scale ranging from 1 (*disagree strongly*) to 7 (*agree strongly*). Cronbach alphas for the anxiety and avoidance scales were found to be high in the current sample ( $\alpha = .91$  and  $\alpha = .93$ , respectively).

A single score was calculated for each of the two dimensions by averaging scores on the relevant items after reversing those items requiring reversal. As can be seen in Table 11, anxiety and avoidance scores distributed normally in this sample with means of 3.30 and 2.92 and standard deviations of 1.07 and 1.11, respectively. These scores were similar to those obtained by Berant and colleagues (2005), who reported means of 3.2 and 3.5 and standard deviations of 1.0 and 1.8, although the similarity was greater for attachment anxiety than for attachment avoidance. Attachment anxiety scores ranged from 1 to 6.53, and attachment avoidance scores ranged from 1 to 6.56, suggesting a full range of attachment security-insecurity in the sample. Again, these results were similar to those obtained in the Berant study, where attachment anxiety scores ranged from 1 to 6 and attachment avoidance scores ranged from 1.8 to 6.2.

The specific attachment category into which each participant fell was calculated using the formulas available through Shaver's Adult Attachment Lab website (<http://psychology.ucdavis.edu/labs/Shaver/measures.htm>). The formulas, based on previous research with the ECR, use the individual's attachment anxiety and attachment avoidance values to calculate scores on four dimensions: secure, fearful, preoccupied, and

Table 11

Descriptive Statistics for the Attachment Variables and Resilience Scale

---

Variable	<i>n</i>	<i>M</i>	<i>Mdn</i>	<i>Mod</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>
Anxiety	278	3.30	3.17	2.72	1.07	1.00	6.53
Avoidance	278	2.92	2.83	2.11	1.11	1.00	6.56
Resilience	278	105.9	106.0	100.0	11.6	65.0	139.0

---



dismissing. The dimension with the highest score is then identified as the preferred attachment style of that individual. The distribution of participants falling into each of the four attachment style categories is presented in Table 12. The most common attachment style in this sample was the secure style (39.2%); however, the combined number of individuals falling into one of the three insecure attachment style groups (60.8%) was greater than the number of individuals falling into the secure attachment style group.

### **Resilience and Protective Factors**

Referring again to Table 11, it can be seen that the resilience measure (RAS), like the anxiety and avoidance scales of the ECR, produced a normal distribution. The mean value for the RAS was 105.9 and the standard deviation was 11.6. The participants endorsed a large range of values on the scale, ranging from 65 to 139 (the minimum and maximum possible scores on this scale are 30 and 150, respectively).

Table 13 compares the mean resilience scores of individuals with and without the protective factors queried in this study. After using a Bonferroni correction to avoid inflated Type I error due to multiple comparisons, a significance level of  $p = .008$  was required. There was a difference reaching this level of statistical significance for only one of the six protective factors, that being optimism. Individuals who described themselves as optimistic tended to have much higher resilience scores ( $M = 107.44$ ,  $SD = 10.79$ ) than individuals who did not describe themselves as optimistic ( $M = 90.79$ ,  $SD = 15.32$ ),  $t = -5.46$ ,  $p < .001$ .

### **Comparisons by Protective Factor**

Participants who had experienced each of the four types of maltreatment were

Table 12

## Attachment Type Frequencies

---

Attachment Type	<i>n</i>	(%)
Secure	109	(39.2)
Fearful	56	(20.1)
Preoccupied	51	(18.5)
Dismissing/Avoidant	62	(22.3)
Total	278	(100)

---

Table 13

Comparison of Mean Resilience Scores for Participants With and Without Protective Factors

	No		Yes		<i>t</i> -test
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Supportive Adult	105.36	12.83	106.38	10.75	-.710
Therapy	106.78	11.72	103.57	11.00	2.002*
Two-parent Family	102.66	11.89	106.51	11.50	-1.905
Parental Resilience	105.52	11.76	106.97	11.14	-.616
Belief in God	105.96	14.13	106.71	10.97	-.393
Optimism	90.79	15.32	107.44	10.79	-5.463**

\* $p < .05$ . \*\* $p < .001$ .

compared based on whether or not they reported the presence each of the queried protective factors. After using the Bonferroni correction for multiple comparisons, a value of  $p < .008$  was required for statistical significance. No comparisons reached this level of statistical significance for any of the maltreatment types (psychological, physical, parental sexual, and non-parental sexual). Approaching this level of statistical significance was the difference in the mean maltreatment score (in each category of maltreatment) between individuals who had participated in therapy and those who had not. In each case, there was a trend towards participants with higher maltreatment scores tending to be more likely to have entered into therapy (see Tables 14 and 15).

Another trend that arose was for maltreatment scores of those psychologically and physically abused (Table 14) to be lower among individuals who had lived in a two-parent household for most or all of their childhood years. There were no statistically significant differences between the mean scores for the various types of maltreatment among individuals with and without any of the other protective factors (supportive adult, parental resilience, belief in God, optimism).

Mean scores for anxiety and avoidance were also compared for individuals with and without each of the six protective factors. Using a Bonferonni correction, a value of  $p < .004$  was required to reach statistical significance. Although none of the comparisons reached this level of statistical significance (Table 16), there was a trend suggesting that individuals who had participated in therapy tended to have a higher anxiety score than those who had not participated in therapy. There was also a trend towards individuals

Table 14

## Mean Psychological and Physical Maltreatment Scores by Protective Factor

Protective Factor	Psychological			Physical		
	<i>M</i>	<i>SD</i>	<i>t</i> -test	<i>M</i>	<i>SD</i>	<i>t</i> -test
Supportive Adult						
No	115.90	44.63		19.08	6.85	
Yes	112.08	33.34	.81	18.62	4.38	.68
Therapy						
No	107.20	30.76		18.10	3.67	
Yes	132.63	50.28	4.99*	20.88	8.65	3.17*
Two-parent Family						
No	137.33	53.91		21.34	10.32	
Yes	109.78	33.64	4.25*	18.39	4.13	3.11*
Parental Resilience						
No	122.17	50.01		18.93	3.40	
Yes	113.67	32.94	1.09	18.66	4.09	.32
Belief in God						
No	117.40	39.08		18.60	3.59	
Yes	110.97	35.88	1.10	18.60	4.39	.00
Optimism						
No	119.18	43.11		19.39	4.20	
Yes	111.59	36.24	.77	18.59	4.75	.64

\* $p < .01$ .

Table 15

## Mean Parental and Non-Parental Sexual Abuse Scores by Protective Factor

Protective Factor	Parental Sexual			Non-Parental Sexual		
	<i>M</i>	<i>SD</i>	<i>t</i> -test	<i>M</i>	<i>SD</i>	<i>t</i> -test
<b>Supportive Adult</b>						
No	22.61	4.96		27.29	12.01	
Yes	22.58	3.97	.05	26.55	7.62	.63
<b>Therapy</b>						
No	22.26	2.63		25.66	8.31	
Yes	23.57	7.42	2.16*	30.35	12.06	3.58**
<b>Two-parent Family</b>						
No	23.46	8.26		27.08	9.81	
Yes	22.45	3.38	1.32	26.81	9.58	.16
<b>Parental Resilience</b>						
No	22.10	.31		27.55	10.48	
Yes	22.17	.94	.35	26.15	8.36	.76
<b>Belief in God</b>						
No	22.08	.43		27.25	10.03	
Yes	22.47	3.08	.92	26.99	9.99	.17
<b>Optimism</b>						
No	22.51	1.55		31.59	17.03	
Yes	22.44	3.40	.07	26.58	8.87	1.97

\* $p < .05$ . \*\* $p < .01$ .

Table 16

## Mean Anxiety and Avoidance Scores by Protective Factor

	Anxiety			Avoidance		
	<i>M</i>	<i>SD</i>	<i>t</i> -test	<i>M</i>	<i>SD</i>	<i>t</i> -test
Supportive Adult						
No	3.18	1.14		3.02	1.24	
Yes	3.38	1.00	1.56	2.82	1.01	1.47
Therapy						
No	3.16	.99		2.86	1.07	
Yes	3.73	1.15	4.02*	3.03	1.20	1.11
Two-parent Family						
No	3.56	1.07		3.10	1.03	
Yes	3.26	1.05	1.64	2.87	1.12	1.17
Parental Resilience						
No	3.38	.99		3.01	1.19	
Yes	3.31	1.04	.34	2.88	1.03	.62
Belief in God						
No	3.20	1.19		2.74	1.17	
Yes	3.32	1.06	.68	2.78	1.03	.22
Optimism						
No	3.28	.87		3.82	1.26	
Yes	3.29	1.08	.02	2.77	1.03	3.81*

\* $p < .01$ .

who described themselves as optimistic about the future having lower avoidance scores than individuals who described themselves as not optimistic about the future.

### **Correlations Between Main Variables and Demographics**

Gender-based differences are examined in Table 17. After a Bonferroni correction for multiple comparisons, a value of  $p < .007$  was required for statistical significance.

None of the comparisons reached this level of statistical significance; however, a trend towards higher levels of non-parental sexual abuse among females versus males emerged.

Differences based on ethnicity (grouped as white or non-white) are examined in Table 18. Again, a value of  $p < .007$  was required for statistical significance after using the Bonferroni correction. A statistically significant difference emerged on the measures of psychological maltreatment and physical abuse, in each case with non-white individuals reporting higher scores on these scales than individuals of white ancestry.

Table 19 below identifies the correlations between the main variables and the various demographic variables (other than gender) queried in this study. A Bonferroni correction for multiple comparisons indicated that  $p < .001$  was required for statistical significance. Although none of the comparisons reached this level of statistical significance, trends emerged. For example, participant's age tended toward a positive correlation with anxiety score, psychological maltreatment score, and physical abuse score, suggesting that older participants in this study tended to experience higher levels of anxiety and were more likely to have experienced psychological and physical maltreatment. Individuals with higher resilience scores tended to have higher grade point averages and to come from larger communities. There was also a trend toward greater



Table 17

Mean Differences between Males and Females on Main Variables

	Male		Female		<i>t</i> -test
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Resilience	105.61	12.76	106.13	11.02	.35
Avoidance	3.06	1.04	2.83	1.13	1.59
Anxiety	3.14	1.02	3.37	1.08	1.65
PMQ	113.01	34.90	114.42	40.30	.28
PAQ	19.22	7.02	18.90	6.04	.39
SAQ-P	22.07	.36	22.83	5.26	1.33
SAQ-NP	24.00	6.76	28.11	10.38	3.36*

*Note.* PMQ = Psychological Maltreatment Questionnaire; PAQ = Physical Abuse Questionnaire; SAQ-P = Sexual Abuse Questionnaire, Parental version; SAQ-NP = Sexual Abuse Questionnaire, Non-Parental version.

\*  $p < .01$ .

Table 18

Mean Differences between White and Non-White Individuals on Main Variables

	White		Non-White		<i>t</i> -test
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Resilience	106.23	11.49	105.08	11.88	.69
Avoidance	2.92	1.10	2.85	1.14	.49
Anxiety	3.28	1.07	3.36	1.05	.52
PMQ	109.89	35.52	127.75	45.30	3.28*
PAQ	18.42	4.55	20.97	10.14	2.84*
SAQ-P	22.47	3.51	23.00	6.50	.84
SAQ-NP	27.26	10.08	25.37	7.55	.17

*Note.* PMQ = Psychological Maltreatment Questionnaire; PAQ = Physical Abuse Questionnaire; SAQ-P = Sexual Abuse Questionnaire, Parental version; SAQ-NP = Sexual Abuse Questionnaire, Non-Parental version.

\*  $p < .005$ .

Table 19

## Correlations Between Demographic Variables and Main Variables

	Resilience	Avoidant	Anxious	PMQ	PAQ	SAQ-P	SAQ-NP
Age	.05	.00	.15*	.18**	.15*	.09	.07
GPA	.15*	.02	-.04	-.01	.00	.02	.02
Community Size	.17**	-.09	-.03	-.04	.03	-.03	-.08
Family Income	.01	.01	-.08	-.16**	-.13*	-.06	-.06
Mother's Education	.08	-.01	-.08	-.08	.04	.09	.10
Father's Education	.06	.01	-.05	-.08	-.07	-.02	-.03

\* $p < .05$ . \*\* $p < .01$ .

physical and psychological maltreatment experience among individuals from lower income families compared to those from higher income families.

### **Correlations Between Main Scales**

Table 20 presents correlations between the main variables of interest in the current study. A Bonferroni correction for multiple comparisons indicated that a value of  $p < .002$  was required for statistical significance. As this table shows, none of the correlations reached this level of statistical significance; however, trends emerged. There was a trend towards resilience being associated negatively with attachment anxiety, attachment avoidance, and psychological maltreatment, suggesting the tendency for individuals who are more resilient to be less likely to experience attachment anxiety and avoidance, as well as less likely to have been psychologically maltreated in childhood by a parental figure.

Another trend was toward attachment anxiety being correlated positively with attachment avoidance as well as with each of the four types of maltreatment. By contrast, attachment avoidance tended towards positive correlation only with psychological maltreatment, and not any of the other three types of maltreatment. Each of the four types of maltreatment tended towards positive correlation with each other, suggesting a trend for individuals who experienced higher levels of one type of maltreatment to be likely to experience higher levels of a second type of maltreatment as well.

Putting together the information gathered in the various questionnaires administered in Part I of the study, with a focus on psychological maltreatment, we arrive at the following description. Greater psychological maltreatment was statistically

Table 20

## Correlations Between Resilience, Attachment, and Maltreatment Scales

Measures	1	2	3	4	5	6
1. Resilience Scale						
2. Anxiety	-.32**					
3. Avoidance	-.45**	.14*				
4. Psychological Maltreatment	-.22**	.46**	.22**			
5. Physical Abuse	-.01	.38**	.01	.66**		
6. Sexual Abuse - Parental	-.06	.19**	-.01	.28**	.40**	
7. Sexual Abuse - Non-parental	-.02	.16*	.08	.31**	.27**	.31**

\* $p < .05$ . \*\* $p < .01$ .

associated with being of non-white ethnicity, while trends in the data suggested it was also associated with greater likelihood of having participated in therapy, being older in age, and having come from a lower income family. Data trends also suggested that the more psychologically maltreated individuals were less likely to report personal resiliency and more likely to report having been physically and/or sexually abused. Finally, trends suggested that higher psychological maltreatment scores tended to be found among individuals who reported higher the levels of attachment anxiety and attachment avoidance.

### **Part II – Participant Characteristics**

Participants in Part II of the study were 78 individuals, 39 of whom reported no maltreatment of any type and the other 39 of whom reported psychological maltreatment but no other form of maltreatment. In any further references to Part II of the study, these two groups will be referred to as the maltreated group and the non-maltreated group. Chi-squared analysis was computed to compare the participants in the maltreated and non-maltreated groups on the demographic variables. Results of these analyses indicated that the demographic information of the two groups was comparable, with no significant differences between the groups on any of the measured demographics. Table 21 displays the demographic distribution of the maltreated and non-maltreated groups that composed Part II of the study. With regard to the protective factors, chi-squared analysis indicated statistically significant differences between the maltreated and non-maltreated groups in their reports of their parents' marital stability  $\chi^2 (2, N = 78) = 16.93, p = .001$  and their

Table 21

## Demographic Data - Part II Participants

Demographic	Non-Maltreated		Maltreated	
	<i>n</i>	%	<i>n</i>	%
<b>GENDER</b>				
Male	11	28.2	13	33.3
Female	28	71.8	26	66.7
<b>Total</b>	<b>39</b>	<b>100%</b>	<b>39</b>	<b>100%</b>
<b>AGE</b>				
17-18	26	66.7	22	56.4
19-20	6	15.4	9	23.1
21-25	5	12.8	3	7.7
26-30	1	2.6	1	2.6
31-35	1	2.6	2	5.1
36-40	0	0.0	0	0.0
41-48	0	0.0	1	2.6
49 +	0	0.0	1	2.6
<b>Total</b>	<b>39</b>	<b>100%</b>	<b>39</b>	<b>100%</b>
<b>RACE</b>				
White	33	84.6	29	74.4
Asian	0	0.0	5	12.8
Aboriginal	2	5.1	1	2.6
Hispanic	0	0.0	1	2.6
East Indian	0	0.0	1	2.6
Other	3	7.7	0	0.0
Mixed race	1	2.6	2	5.1
<b>Total</b>	<b>39</b>	<b>100%</b>	<b>39</b>	<b>100%</b>

Demographic	Non-Maltreated		Maltreated	
	<i>n</i>	%	<i>n</i>	%
<b>PLACE OF BIRTH</b>				
Canada or U.S.	38	97.4	39	100.0
Asia	0	0.0	0	0.0
Europe	1	2.6	0	0.0
<b>Total</b>	<b>39</b>	<b>100%</b>	<b>39</b>	<b>100%</b>
<b>PRIMARY LANGUAGE</b>				
English	38	97.4	39	100.0
(omitted)	1	2.6	0	0.0
<b>Total</b>	<b>39</b>	<b>100%</b>	<b>39</b>	<b>100%</b>
<b>No. OF UNIVERSITY COURSES COMPLETED</b>				
<5	35	89.7	30	76.9
5-9	0	0.0	5	12.8
10-14	2	5.1	2	5.1
15-19	1	2.6	1	2.6
>19	1	2.6	1	2.6
<b>Total</b>	<b>39</b>	<b>100%</b>	<b>39</b>	<b>100%</b>
<b>MARITAL STATUS</b>				
Never married	35	89.7	36	92.3
Married or Common-law	4	10.3	3	7.7
<b>Total</b>	<b>39</b>	<b>100%</b>	<b>39</b>	<b>100%</b>



Demographic	Non-Maltreated		Maltreated	
	<i>n</i>	%	<i>n</i>	%
<b>LIVING ARRANGEMENTS</b>				
Parents/relatives	21	53.8	28	71.8
Friend/roommate	7	17.9	5	12.8
Alone	5	12.8	0	0.0
Spouse or partner	4	10.3	5	12.8
Other	2	5.1	1	2.6
<b>Total</b>	<b>39</b>	<b>100%</b>	<b>39</b>	<b>100%</b>
<b>CHILDHOOD COMMUNITY SIZE</b>				
>500,000	12	30.8	11	28.2
100-500,000	10	25.6	8	20.5
50-100,000	2	5.1	3	7.7
10-50,000	5	12.8	4	10.3
<10,000	10	25.6	13	33.3
<b>Total</b>	<b>39</b>	<b>100%</b>	<b>39</b>	<b>100%</b>
<b>GRADE POINT AVERAGE</b>				
<1.0	0	0.0	0	0.0
1.0-1.9	0	0.0	1	2.6
2.0-2.4	4	10.3	0	0.0
2.5-2.9	3	7.7	9	23.1
3.0-3.4	15	38.5	11	28.2
3.5-3.9	12	30.8	9	23.1
4.0-4.5	3	7.7	5	12.8
(omitted)	2	5.1	4	10.3
<b>Total</b>	<b>39</b>	<b>100%</b>	<b>39</b>	<b>100%</b>

Demographic	Non-Maltreated		Maltreated	
	<i>n</i>	%	<i>n</i>	%
<b>ANNUAL FAMILY INCOME DURING CHILDHOOD</b>				
< \$15,000	1	2.6	1	2.6
\$15,000 – \$24,999	3	7.7	3	7.7
\$25,000 – \$39,999	5	12.8	5	12.8
\$40,000 – \$54,999	7	17.9	7	17.9
\$55,000 – \$70,000	9	23.1	9	23.1
> \$70,000	12	30.8	12	30.8
(omitted)	2	5.1	2	5.1
<b>Total</b>	<b>39</b>	<b>100%</b>	<b>39</b>	<b>100%</b>
<b>MOTHER'S HIGHEST EDUCATION LEVEL</b>				
< High School	0	0.0	4	10.3
High school grad	10	25.6	4	10.3
Non-univ. training	10	25.6	9	23.1
University – no degree	4	10.3	4	10.3
University degree	14	35.9	17	43.6
Unknown	1	2.6	1	2.6
<b>Total</b>	<b>39</b>	<b>100%</b>	<b>39</b>	<b>100%</b>
<b>FATHER'S HIGHEST EDUCATION LEVEL</b>				
< High School	7	17.9	5	12.8
High school grad	9	23.1	3	7.7
Non-univ. training	4	10.3	5	12.8
University – no degree	1	2.6	4	10.3
University degree	18	46.2	19	48.7
Unknown	0	0.0	2	5.1
(omitted)	0	0.0	1	2.6
<b>Total</b>	<b>39</b>	<b>100%</b>	<b>39</b>	<b>100%</b>

Demographic	Non-Maltreated		Maltreated	
	<i>n</i>	%	<i>n</i>	%
<b>MOTHER'S EMPLOYMENT STATUS</b>				
Mostly full-time	21	53.8	27	69.2
Mostly part-time	10	25.6	6	15.4
Equal full & part-time	4	10.3	2	5.1
Rarely/never worked	3	7.7	2	5.1
On pension/disability (omitted)	0 1	0.0 2.6	2 0	5.1 0.0
<b>Total</b>	<b>39</b>	<b>100%</b>	<b>39</b>	<b>100%</b>
<b>FATHER'S EMPLOYMENT STATUS</b>				
Mostly full-time	34	87.2	36	94.7
Mostly part-time	2	5.1	1	2.6
Equal full & part-time	1	2.6	1	2.6
Rarely/never worked	0	0.0	0	0.0
On pension/disability (omitted)	2 0	5.1 0.0	0 1	0.0 2.6
<b>Total</b>	<b>39</b>	<b>100%</b>	<b>39</b>	<b>100%</b>

belief in God  $\chi^2(1, N = 78) = 10.29, p = .006$ . Distribution of protective factor responses for the two groups are displayed in Table 22.

Comparison of the means of the two groups on the attachment and resilience variables found the maltreated group reported statistically greater attachment anxiety ( $M = 3.51, SD = 1.09$ ) than the non-maltreated group ( $M = 3.00, SD = .1.01$ ),  $t(76) = 2.14, p < .05$ . No differences were found between the two groups on the variables attachment avoidance or resilience.

The participants in Part II of the study, in addition to having completed all the measures in Part I, completed the Rorschach Inkblot Method. The Rorschach variables of interest were those that were hypothesized to measure aspects of attachment anxiety and attachment avoidance. Tables 23 displays the descriptive statistics for both the maltreated and non-maltreated groups of participants on the ECR and Rorschach variables related hypothesized to measure attachment anxiety. Table 24 displays the descriptive statistics for the two groups on the ECR and Rorschach variables hypothesized to measure attachment avoidance.

Table 22

## Protective Factors Endorsed by Participants in Part II

Protective Factor	Non-Maltreated		Maltreated	
	<i>n</i>	%	<i>n</i>	%
<b>SUPPORTIVE ADULT</b>				
No	16	41.0	17	43.6
Yes	23	59.0	22	56.4
<b>Total</b>	<b>39</b>	<b>100%</b>	<b>39</b>	<b>100%</b>
<b>THERAPY</b>				
No	30	76.9	29	74.4
Yes	9	23.1	10	25.6
<b>Total</b>	<b>39</b>	<b>100%</b>	<b>39</b>	<b>100%</b>
<b>TWO-PARENT FAMILY</b>				
No	2	5.1	7	17.9
Yes	37	94.9	32	82.1
<b>Total</b>	<b>39</b>	<b>100%</b>	<b>39</b>	<b>100%</b>
<b>MARITAL STABILITY</b>				
Mostly stable	33	84.6	17	43.6
Somewhat stable	0	0.0	10	25.6
Mostly unstable	0	0.0	2	5.1
(omitted)	6	15.4	10	25.6
<b>Total</b>	<b>39</b>	<b>100%</b>	<b>39</b>	<b>100%</b>

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Protective Factor	Non-Maltreated		Maltreated	
	<i>n</i>	%	<i>n</i>	%
<b>PARENTAL RESILIENCE</b>				
No	7	17.9	2	5.1
Yes	13	33.3	22	56.4
Unsure	19	48.7	15	38.5
<b><i>Total</i></b>	<b>39</b>	<b>100%</b>	<b>39</b>	<b>100%</b>
<b>BELIEF IN GOD</b>				
No	9	23.1	11	28.2
Yes	24	61.5	11	28.2
Unsure	6	15.4	17	43.6
<b><i>Total</i></b>	<b>39</b>	<b>100%</b>	<b>39</b>	<b>100%</b>
<b>OPTIMISM</b>				
No	1	2.6	2	5.1
Yes	34	87.2	31	79.5
Unsure	4	10.3	6	15.4
<b><i>Total</i></b>	<b>39</b>	<b>100%</b>	<b>39</b>	<b>100%</b>

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Table 23

Attachment Anxiety Variables - Descriptive Statistics

Variable	<i>f<sub>a</sub></i>		<i>M</i>		<i>Mdn</i>		<i>Mod</i>		<i>SD</i>		<i>Min</i>		<i>Max</i>	
	Non	Mal	Non	Mal	Non	Mal	Non	Mal	Non	Mal	Non	Mal	Non	Mal
<b>ECR</b>														
Anxiety	39	39	3.00	3.51	2.94	3.72	2.72 <sub>b</sub>	3.17 <sub>b</sub>	1.01	1.09	1.11	1.00	4.88	5.00
<b>Rorschach</b>														
Afr	39	39	.54	.50	.53	.47	.50 <sub>b</sub>	.36	.15	.16	.23	.23	.85	.86
CF	24	23	1.27	1.18	1.00	1.00	.00	.00	1.29	1.35	.00	.00	4.00	6.00
ColShdBld	19	20	.56	.64	.00	.00	.00	.00	.64	.81	.00	.00	2.00	3.00
Y	26	29	1.67	1.67	1.00	1.00	.00	1.00	1.91	1.85	.00	.00	7.00	9.00
M	27	32	1.62	1.85	2.00	1.00	.00	1.00	1.46	2.22	.00	.00	6.00	11.00
MOR	25	21	1.49	1.13	1.00	1.00	.00	.00	1.41	1.42	.00	.00	4.00	5.00
Food	9	11	.33	.38	.00	.00	.00	.00	.66	.67	.00	.00	2.00	2.00

Note. Non = non-maltreated, Mal = maltreated. ECR = Experiences in Close Relationships Questionnaire <sup>a</sup>Frequency of non-zero responses. All other statistics use *n* = 39 with zeros replacing missing values. <sup>b</sup>Multiple modes exist, smallest value shown.

Table 24

Attachment Avoidance Variables - Descriptive Statistics

Variable	<i>f<sub>a</sub></i>		<i>M</i>		<i>Mdn</i>		<i>Mod</i>		<i>SD</i>		<i>Min</i>		<i>Max</i>	
	Non	Mal	Non	Mal	Non	Mal	Non	Mal	Non	Mal	Non	Mal	Non	Mal
<b>ECR</b>														
Avoidance	39	39	2.62	3.00	2.44	2.89	1.44 <sup>b</sup>	1.78 <sup>b</sup>	.93	1.05	1.00	1.39	5.00	5.33
<b>Rorschach</b>														
FM	34	37	3.03	2.82	2.00	2.00	2.00	2.00	2.85	1.88	.00	.00	11.0	8.00
L	39	39	1.35	.97	1.00	.75	1.00	.50	1.32	.91	.21	.08	8.00	4.67
Fr + rF	11	13	.36	.69	.00	.00	.00	.00	.63	1.28	.00	.00	2.00	5.00
Cg	29	28	1.92	1.49	1.00	1.00	1.00	1.00	1.98	1.41	.00	.00	7.00	6.00

Note. Non = non-maltreated, Mal = maltreated. ECR = Experiences in Close Relationships Questionnaire

<sup>a</sup>Frequency of non-zero responses. All other statistics use *n* = 39 with zeros replacing missing values. <sup>b</sup>Multiple modes exist, smallest value shown.



## Main Hypotheses

### *Hypothesis 1*

The primary hypothesis examined in the current study was that individuals who reported having experienced childhood psychological maltreatment would be more likely than those who reported no maltreatment to demonstrate an insecure attachment style (versus a secure attachment style) in their adult romantic relationships when attachment style was determined by self-report questionnaire. This first hypothesis was confirmed, with 68.3% of psychologically maltreated individuals versus 52.8% of non-maltreated individuals reporting an insecure attachment style,  $\chi^2(1, N = 248) = 6.15, p = .01$  (see Table 25).

Similar results arose when groups were compared based solely on the presence or absence of psychological maltreatment, irrespective of the presence of other types of maltreatment (see Table 26). In this case, 55.1% of the non-psychologically maltreated individuals fell into the insecure grouping. Comparing this to the 68.3% of individuals who were psychologically maltreated, the difference was once again significant,  $\chi^2(1, N = 278) = 5.10, p = .02$ . Looking at Hypothesis 1 from the perspective of the securely attached individual, individuals who reported experiencing either no maltreatment or no psychological maltreatment were more likely to be securely attached (47.2% and 44.9%, respectively) than their counterparts who reported experiencing psychological maltreatment (31.7%, see Tables 25 and 26).

Table 25

Frequencies of Secure and Insecure Attachment: Comparison of Psychologically Maltreated and Non-Maltreated Individuals

Attachment Type	Psychologically Maltreated		Not Maltreated		$\chi^2$
	<i>n</i>	%	<i>n</i>	%	
Secure	45	31.7	50	47.2	6.15*
Insecure	97	68.3	58	52.8	
<b>Total</b>	<b>142</b>	<b>100</b>	<b>106</b>	<b>100</b>	

\* $p < .05$ .

Table 26

Frequencies of Secure and Insecure Attachment: Comparison of Psychologically Maltreated and Non-Psychologically Maltreated Individuals

Attachment Type	Psychologically Maltreated		Not Psychologically Maltreated		$\chi^2$
	<i>n</i>	%	<i>n</i>	%	
Secure	45	31.7	61	44.9	5.10*
Insecure	97	68.3	75	55.1	
<b>Total</b>	<b>142</b>	<b>100</b>	<b>136</b>	<b>100</b>	

\* $p < .05$ .

Table 27 displays the attachment statistics for the psychologically maltreated and non-maltreated maltreated individuals with the insecure group divided into the three insecure attachment categories (fearful, preoccupied, and disorganized). A statistically significant difference continues to be demonstrated between the maltreated and non-maltreated groups when the insecure group is sub-divided into the three insecure attachment categories  $\chi^2(3, N = 248) = 23.87, p = .001$ . Similarly, Table 28 shows the attachment statistics for the psychologically maltreated and the non-psychologically maltreated individuals with the insecure group divided into these same three sub-groups. Here as well, a statistically significant difference continued to be demonstrated between the psychologically maltreated and non-psychologically maltreated individuals when the insecure group was sub-divided into the three insecure attachment categories  $\chi^2(3, N = 278) = 27.29, p = .001$ .

Based on the literature which suggests that attachment dynamics should be examined based on a two-dimensional model rather than based on categorization into attachment groupings (see Brennan, Clark, & Shaver, 1998), Hypothesis 1 was also examined via analysis of the two underlying attachment dimensions, attachment anxiety and attachment avoidance. Individuals identified as securely attached thus become those individuals who have low scores on both the attachment anxiety and attachment avoidance scales.

Comparing the psychologically maltreated individuals ( $M = 3.56, SD = 1.16$ ) to those individuals who had not been psychologically maltreated ( $M = 3.02, SD = .86$ ) on the measure of self-reported attachment anxiety, it was found that the psychologically

Table 27

Frequencies of Each Attachment Type: Comparison of Psychologically Maltreated and Non-Maltreated Individuals

Attachment Category	Psychologically Maltreated		Not Maltreated		$\chi^2$
	<i>n</i>	%	<i>n</i>	%	
Secure	45	31.7	50	47.2	23.87**
Fearful	36	25.4	13	12.3	
Preoccupied	39	27.5	11	10.4	
Dismissing/Avoidant	22	15.5	32	30.2	
<b>Total</b>	<b>142</b>	<b>100</b>	<b>106</b>	<b>100</b>	

\*\* $p < .001$ .

Table 28

Frequencies of Each Attachment Type: Comparison of Psychologically Maltreated and Non-Psychologically Maltreated Individuals

Attachment Category	Psychologically Maltreated		Not Psychologically Maltreated		$\chi^2$
	<i>n</i>	%	<i>n</i>	%	
Secure	45	31.7	61	44.9	27.29**
Fearful	36	25.4	23	16.9	
Preoccupied	39	27.5	12	8.8	
Dismissing/Avoidant	22	15.5	40	29.4	
<b>Total</b>	<b>142</b>	<b>100</b>	<b>136</b>	<b>100</b>	

\*\* $p < .001$ .

maltreated individuals exhibited significantly greater attachment anxiety,  $t(276) = 4.45, p = .001$ . On the other hand, comparing the psychologically maltreated individuals ( $M = 3.02, SD = 1.17$ ) to the individuals who were not psychologically maltreated ( $M = 2.82, SD = 1.03$ ) on the measure of self-reported attachment avoidance, it was found that although the psychologically maltreated individuals exhibited a higher mean score for avoidance, the difference did not reach the level of statistical significance,  $t(276) = 1.50, p = .14$ .

Similar results were once again obtained in comparing the group of individuals who reported psychological maltreatment to those who reported no maltreatment of any type. Again, the psychologically maltreated group ( $M = 3.56, SD = 1.16$ ) in comparison to the non-maltreated group ( $M = 3.30, SD = 1.06$ ) exhibited a significantly greater level of attachment anxiety,  $t(246) = 4.24, p = .001$ . On the measure of attachment avoidance the psychologically maltreated group ( $M = 3.02, SD = 1.17$ ) as compared to the non-maltreated group ( $M = 2.29, SD = 1.11$ ) exhibited greater attachment avoidance but here again the difference did not reach the level of statistical significance,  $t(246) = 1.45, p = .14$ .

Notably, earlier analyses had shown that psychological maltreatment score was positively correlated with *both* attachment anxiety and attachment avoidance (see Table 20). The seeming difference between these two results is a factor of whether psychological maltreatment status was characterized as a dichotomous variable versus whether it was examined on a continuum representing the range of maltreatment scores. If we simply characterize individuals as psychologically maltreated or not, the difference

between these two groups on the measure of attachment avoidance falls short of statistical significance, due to a loss of power associated with dichotomizing a variable. On the other hand, if we look at psychological maltreatment on a continuum, with higher scores indicating greater frequency and/or more subtypes of psychological maltreatment, we find that the greater the degree of psychological maltreatment, the greater the attachment avoidance reported by the individual.

In summary, Hypothesis 1, that psychologically maltreated individuals would be more likely to be insecurely attached than their non-maltreated counterparts, was confirmed. The result occurred whether psychologically maltreated individuals were compared to those who experienced no maltreatment at all or to those who experienced no psychological maltreatment, irrespective of whether or not they had experienced other types of maltreatment. When attachment was examined as a two-dimensional space rather than as distinct categories, it was found that both attachment anxiety and attachment avoidance increased as levels of self-reported childhood psychological maltreatment increased; however, only attachment anxiety increased at a level that reached statistical significance. It would appear then, that psychological maltreatment affects level of security/insecurity in attachment relationships, but has a more significant impact on attachment anxiety than on attachment avoidance.

### *Hypothesis 2*

The second and third hypotheses were multi-part hypotheses, the essence of which was to determine whether the Berant et al. (2005) findings would be replicable in two different groups of individuals. Bonferroni corrections were not employed in

examining Hypotheses 2 and 3 to allow greater ability to detect correlation trends in the MTMM correlation matrices. Hypothesis 2 examined Berant's attachment avoidance and attachment anxiety constellations for a group of non-maltreated individuals, while Hypothesis 3 examined these same constellations for a group of psychologically maltreated individuals. Berant's sample was not queried as to maltreatment status, but was described as never having been hospitalized psychiatrically and never having been treated in an outpatient clinic. Similar to the current study, Berant's sample was composed mostly of university students, and most were single.

Table 29 presents an MTMM correlation matrix (see Campbell & Fiske, 1959) that displays all the necessary correlations for testing Hypothesis 2. For ease of readability, the essence of Hypothesis 2 can be summarized as follows: the greyed-out boxes in the correlation matrix should display significant and positive correlations, while the white boxes should display correlations that are weak or non-significant.

Looking at Hypothesis 2 in detail, part (a) stated that Rorschach scores associated theoretically with attachment anxiety would be correlated (i) with each other and (ii) with self-reported attachment anxiety. Looking at Hypothesis 2, part (a) subsection (i), as Table 29 shows, only 6 of the 21 correlations among the seven Rorschach markers of attachment anxiety were positive and statistically significant, suggesting only partial agreement with Hypothesis 2, part (a) subsection (i). None of the remaining 15 correlations were statistically significant. Looking at Hypothesis 2, part (a), subsection (ii), whether any of the seven Rorschach markers of attachment anxiety correlated with



Table 29

Multitrait-Multimethod Correlations Among Assessed Scores for Non-Maltreated Part II Participants

Measures	1	2	3	4	5	6	7	8	9	10	11	12
<b>Self-Report</b>												
1. Anxiety												
2. Avoidance	-.12											
<b>Rorschach</b>												
Anxiety												
3. Afr	<u>.05</u>	.13										
4. CF	<u>-.21</u>	-.14	<u>-.11</u>									
5. ColShdBld	<u>-.18</u>	.06	<u>-.17</u>	<u>.43**</u>								
6. Y	<u>-.13</u>	-.04	<u>.01</u>	<u>.04</u>	<u>.44**</u>							
7. m	<u>-.26</u>	-.17	<u>-.06</u>	<u>.44**</u>	<u>.35*</u>	<u>.27</u>						
8. MOR	<u>.06</u>	.12	<u>-.01</u>	<u>.33*</u>	<u>.18</u>	<u>.10</u>	<u>.39*</u>					
9. Food	<u>-.35*</u>	.08	<u>-.03</u>	<u>.30</u>	<u>.23</u>	<u>-.08</u>	<u>.22</u>	<u>.22</u>				
Avoidance												
10. LowFM <sup>a</sup>	.16	<u>.00</u>	.01	-.16	-.14	-.12	-.29	-.64**	-.25			
11. L	.27	<u>.26</u>	.09	-.31	-.19	-.31	-.46**	-.18	.03	<u>.34*</u>		
12. Fr + rF	-.01	<u>-.19</u>	-.31	.14	.01	-.03	.30	.27	.08	<u>-.47**</u>	<u>-.15</u>	
13. Cg	.05	<u>-.27</u>	-.13	.12	.20	.28	.39*	.28	-.02	<u>.22</u>	<u>-.22</u>	<u>.07</u>

Note. Correlations that are underlined and highlighted in grey are those that were expected to be significant and positive. <sup>a</sup>Berant et al. (2005)

hypothesized that low FM scores would be associated with avoidant attachment, so the FM score was reversed in all statistical analyses.

\* $p < .05$ . \*\* $p < .01$ .

self-reported attachment anxiety, the table shows that 6 of the 7 variables were not correlated with this measure, and the one variable which was correlated (Food), was in the opposite direction to what was hypothesized. Overall, we must conclude that there was no support for Hypothesis 2, part (a) subsections (i) or (ii).

Hypothesis 2, part (b), suggested that Rorschach scores associated theoretically with attachment avoidance would be (i) correlated with each other and (ii) correlated with self-reported attachment avoidance. Hypothesis 2, part (b), subsection (i) can be examined by looking at Table 29 again, where we see that two of the six correlations among the Rorschach markers for attachment avoidance were statistically significant, but only one of these, the correlation between L and LowFM, was in the predicted positive direction. Note that because low FM scores were predicted to be associated with avoidant attachment, the FM scores were reversed in all statistical analyses. Looking at Hypothesis 2, part (b), subsection (ii), we find that none of the Rorschach markers of attachment avoidance was correlated with the self-report measure of attachment avoidance. Overall, there was no support for Hypothesis 2, part (b), subsections (i) or (ii).

Hypothesis 2, part (c), indicated that markers of attachment anxiety and attachment avoidance should be independent of each other. Table 29 indicates that for 25 of the 28 correlations between Rorschach markers of attachment avoidance and attachment anxiety, there were weak and statistically non-significant associations, suggesting the independence of the two constructs. However, among the 3 cases in which there was a statistically significant correlation, one of these was in fact the strongest correlation in the matrix ( $r = -.64, p < .01$ ). As predicted, independence of constructs was

suggested by the weak and statistically non-significant correlations found between self-reported anxiety and Rorschach markers of avoidance as well as between self-reported avoidance and Rorschach markers of anxiety. For the most part, we have concurrence with Hypothesis 2, part (c); however, given the overall pattern of non-significance in the data, and because parts (a) and (b) of Hypothesis 2 were not supported, Hypothesis 2 must be deemed as not supported overall.

### ***Hypothesis 3***

Hypothesis 3 examined Berant's model with a group of 39 psychologically maltreated individuals. Table 30 presents the necessary correlations to examine this hypothesis, with the greyed-out boxes indicating those correlations that should be statistically significant and correlated positively. Hypothesis 3, part (a), postulated that Rorschach scores theoretically associated with attachment anxiety would be (i) correlated with each other and (ii) correlated with self-reported attachment anxiety. Examining Hypothesis 3, part (a), subsection (i), we find in Table 30 that 10 of the 21 correlations between the Rorschach markers of attachment anxiety were statistically significant and correlated positively. If the Rorschach variables Afr (Affective ratio) and Food were removed from the analyses, there would be perfect results for this part of the hypothesis, as these were the only two variables not correlated with any of the other Rorschach attachment anxiety variables. On the other hand, examining Hypothesis 3, part (a), subsection (ii), none of the Rorschach markers of attachment anxiety were found to correlate with the measure of self-reported attachment anxiety. Hypothesis 3, part (a) can therefore only be considered partially supported.

Table 30

Multitrait-Multimethod Correlations Among Assessed Scores for Psychologically Maltreated Part II Participants

Measures	1	2	3	4	5	6	7	8	9	10	11	12
<b>Self-Report</b>												
1. Anxiety												
2. Avoidance	.11											
<b>Rorschach</b>												
Anxiety												
3. Afr	<u>.08</u>	.01										
4. CF	<u>-.04</u>	-.03	<u>.27</u>									
5. ColShdBld	<u>-.10</u>	.16	<u>.08</u>	<u>.52**</u>								
6. Y	<u>.20</u>	-.00	<u>.05</u>	<u>.43**</u>	<u>.56**</u>							
7. m	<u>.03</u>	-.02	<u>-.03</u>	<u>.41*</u>	<u>.52**</u>	<u>.63**</u>						
8. MOR	<u>-.19</u>	-.04	<u>.04</u>	<u>.33*</u>	<u>.34*</u>	<u>.52**</u>	<u>.50**</u>					
9. Food	<u>.22</u>	-.09	<u>.04</u>	<u>-.05</u>	<u>.21</u>	<u>.13</u>	<u>.31</u>	<u>.16</u>				
Avoidance												
10. LowFM <sup>a</sup>	-.25	<u>.30</u>	.04	-.17	-.06	-.25	-.41*	-.11	-.24			
11. L	-.21	<u>.01</u>	.20	-.24	-.16	-.22	-.21	-.08	.06	<u>.39*</u>		
12. Fr + rF	-.36*	<u>.04</u>	-.23	.22	.17	.17	.45**	.09	-.03	<u>-.10</u>	<u>-.09</u>	
13. Cg	.32*	<u>.05</u>	.16	.24	.23	.36*	.32*	.26	.30	<u>-.30</u>	<u>-.16</u>	<u>-.01</u>

Note. Correlations that are underlined and highlighted in grey are those that were expected to be significant and positive. <sup>a</sup>Berant et al. (2005)

hypothesized that low FM scores would be associated with avoidant attachment, so the FM score was reversed in all statistical analyses.

\* $p < .05$ . \*\* $p < .01$ .

Hypothesis 3, part (b), asserted that Rorschach scores associated theoretically with attachment avoidance would be (i) correlated with each other and (ii) correlated with self-reported attachment avoidance. Again turning to Table 30, we see that for Hypothesis 3, part (b), subsection (i), only one of the six correlations among the Rorschach markers of attachment avoidance was statistically significant and correlated positively. Looking at Hypothesis 3, part (b), subsection (ii), we find that none of the four Rorschach markers of attachment avoidance was significantly correlated with the self-reported attachment avoidance. Overall, Hypothesis 3, part (b) was not supported.

Hypothesis 3, part (c) proposed that markers of attachment anxiety and attachment avoidance would be shown to be independent of each other. Table 30 shows that 24 of the 28 correlations between the Rorschach markers of anxiety and those of avoidance were not associated with each other, suggesting some degree of support for the independence of the two constructs. Similarly, none of the Rorschach markers of attachment anxiety were correlated with the self-report measure of attachment avoidance, again suggesting the possible independence of the two constructs. Examining the correlations between the Rorschach markers of attachment avoidance and the self-report value for attachment anxiety, we find that two of the four associations were correlated, and one of these in the opposite direction to what was hypothesized.

Overall, Hypothesis 3, part (c) cannot be considered supported, based on the lack of a consistent finding of independence of the constructs, and in consideration of the larger pattern of non-significance in the MTMM correlation matrix. In looking at

Hypothesis 3 as a whole, results suggest that Berant's (2005) findings were not replicated with the group of psychologically maltreated individuals in the current study.

Given the lack of anticipated results for Hypothesis 2 and Hypothesis 3, consideration was given to the impact of using two different Rorschach administrators. ANOVA tests showed a significant difference between participants' scores on three Rorschach variables (i.e., CF, m, and Fr + rF) when participants were grouped according to which Rorschach administrator had tested them. However, grouping the participants by Rorschach administrator and comparing the resulting MTMM correlation matrices, neither administrator's results demonstrated any noticeable improvement over the non-grouped results.

### **Supplementary Analyses**

A number of additional questions arose out of the initial data analysis, including the following: 1) what specific characteristics differentiated the psychologically maltreated individuals who had developed secure attachments from those who had developed insecure attachments, 2) what specific characteristics differentiated the psychologically maltreated individuals with higher resilience from those with lower resilience, 3) would different results emerge if the hypotheses were examined separately for males versus females and/or for white versus non-white individuals, 4) were there other Rorschach variables that had not been included in the Berant study that would emerge as correlated with self-reported attachment avoidance and attachment anxiety, and 5) would results similar to those of Berant and colleagues (2005) emerge if the maltreated and non-maltreated individuals were grouped together, thereby creating a

larger sample size. Results of these analyses, as described below, should be considered entirely exploratory.

First, among the 142 psychologically maltreated individuals, it was of interest to examine what differentiated those who had developed secure attachments ( $n = 45$ ) from those who had developed insecure attachments ( $n = 97$ ). Analysis of all the variables examined in the current study (i.e., demographics and main variables) resulted in statistically significant differences being found between the secure and insecure psychologically maltreated individuals on the following: resilience score, physical abuse score, and father's level of education. Specifically, individuals who reported secure adult romantic relationships despite childhood psychological maltreatment tended to have greater resilience ( $t = -4.24, p = .00$ ), were less likely to have been physically abused ( $t = 2.56, p = .01$ ), and were more likely to have a father who had attained an education level of high school or better,  $\chi^2(5, N = 137) = 12.10, p = .03$ . Similar to earlier results, these results suggest that the negative impact of psychological maltreatment on attachment status may be moderated by the presence of resiliency. These results also demonstrate the incremental impact of multiple types of abuse, given that when psychological maltreatment was combined with physical abuse, the individual's attachment status was more likely to be negatively impacted. The relationship between father's education level and likelihood of being securely attached in spite of psychological maltreatment suggests a socio-economic status connection, perhaps related to income level and availability of resources, for example.

The second supplementary question examined what differentiated those with high resilience ( $n = 67$ ) from those with low resilience ( $n = 75$ ) among the 142 psychologically maltreated individuals.<sup>2</sup> Among the demographic variables, the only item which neared significance was GPA,  $\chi^2(6, N = 134) = 12.42, p = .05$ , with the trend being that a greater percentage of the high resilience individuals had GPAs of 3.5 and above (42%, versus 26% for the low resilience group). Due to the anticipated positive impact of the protective factors, these variables were examined with one-tailed statistical analyses. Among the protective factors, the following were significantly different between the high and low resilience psychologically maltreated individuals: therapy,  $\chi^2(1, N = 140) = 3.03, p = .04$ ; coming from a two-parent family,  $\chi^2(1, N = 140) = 3.46, p = .03$ ; seeing one or both parents as resilient,  $\chi^2(2, N = 139) = 6.88, p = .02$ ; and feeling optimistic about the future,  $\chi^2(2, N = 140) = 6.76, p = .02$ . Each of these results fell in the expected direction except for therapy, for which a greater percentage of the low resilience individuals had participated in therapy (42% compared to 28% of the high resilience individuals). Comparing the high and low resilience groups on the self-report measure of attachment, results indicated that the more resilient individuals had lower attachment anxiety ( $t = 3.05, p = .00$ ) as well as lower attachment avoidance ( $t = 4.09, p = .00$ ). No significant differences were found between the high and low resilience groups on any of the maltreatment variables, although a trend emerged suggesting lesser amounts of psychological maltreatment in the high resilience group ( $t = 1.87, p = .06$ ).

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<sup>2</sup> High and low resilience groupings were created by dividing the psychologically maltreated individuals according to whether their resilience scores fell above or below the mean resilience score of the group.



To summarize the results of the second area of supplementary analysis, psychologically maltreated individuals with greater resilience had higher grade point averages, were more likely to come from a two-parent family, were more likely to have a parent they described as resilient, and were more likely to see themselves as optimistic about the future, all of which can be seen as logical protective factors. These individuals were also less likely to have attended therapy, suggesting not necessarily that therapy does not have a protective effect, but that it is more commonly made use of by those who are feeling the least resilient. Consistent with earlier findings, the individuals who were resilient in spite of psychological maltreatment also experienced less attachment anxiety and less attachment avoidance. Notably, the resilient individuals, although psychologically maltreated, tended to experience lesser *degrees* of maltreatment than those who were not resilient, a finding which again highlights the significant negative impact of this type of maltreatment, particularly in terms of a dosage-response effect.

A third supplementary question that arose was whether or not gender or ethnicity differences would be found on the main hypotheses. Hypothesis 1, that individuals who were psychologically maltreated would be less likely to have secure adult romantic attachments than their non-maltreated counterparts, was examined separately for males and females in Table 31 and for white and non-white individuals in Table 32. Log-linear analysis indicated a statistically significant difference between females and males on their security versus insecurity status depending on whether or not they had been psychologically maltreated  $G^2(4, N = 278) = 12.86, p < .03$ . As can be seen in Table 31, non-psychologically maltreated females were more likely to report secure attachment

Table 31

Percentage of Securely Attached Individuals by Gender and Psychological Maltreatment

Status	Male	Female
Psychologically Maltreated	31.6	32.0
Not Psychologically Maltreated	35.4	51.2

Table 32

Percentage of Securely Attached Individuals by Ethnicity and Psychological

Maltreatment Status

	White	Non-White
Psychologically Maltreated	33.3	28.6
Not Psychologically Maltreated	43.4	57.1

relationships than were both psychologically maltreated females and males regardless of their maltreatment status.

Similarly, log-linear analysis indicated a statistically significant difference between white and non-white individuals on their security versus insecurity status, again depending on whether or not they had been psychologically maltreated  $G^2(4, N = 278) = 14.93, p < .005$ . Table 32 shows that those who reported no psychological maltreatment were more likely to have secure attachment relationships, regardless of ethnicity, but that overall the individuals who were most likely to be securely attached were those of non-white ancestry who had not experienced psychological maltreatment. Conversely, the individuals who were least likely to be securely attached were non-white individuals who had experienced psychological maltreatment, suggesting that the presence or absence of psychological maltreatment has a more significant impact on the attachment status of non-white than white individuals.

Hypotheses 2 and 3 were also examined separately for males and females, and then for white and non-white individuals. No significant patterns of results were discernable from the MTMM correlation matrices for these various groupings. The MTMM correlation matrices are not displayed here due to the lack of significant findings, the smaller sample sizes involved in each matrix as a result of dividing the participants into these groupings, and the increased likelihood of Type I errors due to large numbers of statistical analyses.

Summarizing supplementary analysis area three, comparing males and females, looking at both psychological maltreatment status and attachment status, it was found that

non-maltreated females were more likely to be secure than non-maltreated males and also more likely to be secure than maltreated individuals of either gender. Comparisons between those of white and non-white ancestry found that non-white individuals who had not been maltreated were more likely to be secure than white individuals, regardless of their maltreatment status, and that non-white individuals who had been maltreated were the group least likely to be secure. The results of these two group-based supplementary analyses suggest that the degree of impact that psychological maltreatment has upon one's attachment status differs to some extent by gender as well as by race and that these two factors should be considered in research conducted in this area.

The fourth area of supplementary analysis investigated the possibility that Rorschach variables other than those identified in the Berant (2005) study may have been significantly correlated with the self-report attachment variables. In particular, the variables M, T, F, C', the Egocentricity Index, and the Erlebnistypus ratio (Sum M to Weighted Sum C) were considered.<sup>3</sup> Among these variables, the non-maltreated individuals showed correlations between attachment avoidance and F ( $r = .346, p = .03$ ), as well as between attachment anxiety and M ( $r = -.316, p = .05$ ). The positive correlation

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<sup>3</sup> According to Exner (1993), the human movement response, M, when present, suggests the use of a delaying tactic through which the stimulus field and potential responses are sorted more extensively than might otherwise be the case. Elevations in the texture response, T, suggest greater needs for closeness, or a tendency to be dependent on others. Pure form responses, F, are related to a defensive, avoidant, or simplistic style of responding. The achromatic colour response, C', relates to affective restraint and the possible presence of depression. Higher Egocentricity Index values suggest favourable self-judgments whereas lower values suggest negative estimations of one's personal worth. The Erlebnistypus ratio (EB) identifies individuals whose problem-solving style tends to rely on internal evaluations (introversives) versus individuals who tend to rely on external feedback such as trial and error activity (extratensives), based on whether the left or right side of the ratio, respectively, is larger. Individuals whose ratio is not largely weighted to one side or the other are considered ambients, while individuals with high lambda values are considered to fall into a fourth grouping (lambda) defined by a tendency to oversimplify complex stimulus demand situations.

between attachment avoidance and F value indicates a defensive, avoidant, or simplistic style of responding. The negative correlation between attachment anxiety and human movement responses (M) indicates less of a tendency to delay and sort through potential responses to the inkblots (Exner, 1993), which in this context may suggest that the anxious individual felt a greater need to please the Rorschach administrator and thereby not keep him or her waiting for a response, or perhaps a desire to complete the anxiety-inducing task as quickly as possible.

By contrast, the psychologically maltreated individuals were found to exhibit correlations between attachment anxiety and the Egocentricity Index ( $r = -.362, p = .02$ ), and between attachment avoidance and the EB ratio ( $r = .362, p = .02$ ). In other words, for psychologically maltreated individuals, the more attachment anxiety they reported, the more likely their profile would indicate a negative evaluation of their own self-worth, and the more attachment avoidance they reported, the more likely their Rorschach profile would indicate introversive tendencies.

Notably, when all Part II participants were grouped together, no significant correlations were identified between the two attachment variables and any of the above-indicated Rorschach variables. Comparisons between the maltreated and non-maltreated groups did find, however, that the maltreated individuals exhibited a higher EB ratio ( $t = -2.16, p = .03$ ) than the non-maltreated individuals. This result is indicative of greater introversive rather than extratensive tendencies among those participants deemed to be psychologically maltreated, meaning that these individuals were more likely to engage in a problem-solving style based on internal evaluations rather than external feedback. This

result suggests a turning-inward may occur as a result of psychological maltreatment, or a decrease in the degree of confidence the psychologically maltreated individual feels he or she can place on the information received from the outside world.

The results of these supplementary analyses suggest that there may indeed be differences between maltreated and non-maltreated individuals that can be picked up by the Rorschach Inkblot Method. Further, they show that for this sample there were some markers of attachment avoidance and attachment anxiety among the Rorschach variables, although these differed depending upon one's maltreatment status and were not consistent with those from the Berant (2005) study.

The final area of supplementary analysis examined the possibility that the small sample size in Part II may have had some impact on the results. For this reason, an analysis was conducted using a larger group size by combining maltreated and non-maltreated participants from Part II (i.e., all 78 individuals). Given that Berant and colleagues (2005) obtained significance with a sample of 72 individuals, the possibility existed that with a group of 78 individuals, albeit from different backgrounds in terms of maltreatment status, significant results might be found for Berant's hypotheses. The combined group of 78 participants from Part II also did not demonstrate any convincing support for Berant's (2005) hypotheses regarding the correlations between self-report and Rorschach markers of attachment anxiety or attachment avoidance (see Table 33). Once again, there was no significant correlation between the self-report variable of attachment anxiety and the hypothesized Rorschach markers of attachment anxiety. Similarly, there

was no significant correlation between the self-report variable of attachment avoidance and the hypothesized Rorschach markers of attachment avoidance.

Looking at all three of the MTMM correlation matrices for Part II (Tables 29, 30, and 33), in which participants were grouped either into maltreated, non-maltreated, or combined groups, the only prediction which corresponded to Berant's hypotheses was the fact that certain Rorschach variables hypothesized to be significantly and positively correlated with each other were indeed found to be so (these being CF, ColShdBld, Y, m, and MOR).

Table 33

Multitrait-Multimethod Correlations Among Assessed Scores for All Part II Participants

Measures	1	2	3	4	5	6	7	8	9	10	11	12
<b>Self-Report</b>												
1. Anxiety												
2. Avoidance	-.06											
<b>Rorschach</b>												
Anxiety												
3. Afr	<u>.03</u>	.04										
4. CF	<u>-.08</u>	-.05	<u>.09</u>									
5. ColShdBld	<u>-.12</u>	.13	<u>-.03</u>	<u>.47**</u>								
6. Y	<u>.03</u>	-.02	<u>.03</u>	<u>.22*</u>	<u>.49**</u>							
7. m	<u>-.08</u>	-.07	<u>-.05</u>	<u>.42**</u>	<u>.46**</u>	<u>.45**</u>						
8. MOR	<u>-.10</u>	.01	<u>-.04</u>	<u>.33**</u>	<u>.26*</u>	<u>.29**</u>	<u>.44**</u>					
9. Food	<u>-.04</u>	-.00	<u>-.01</u>	<u>.16</u>	<u>.22</u>	<u>.02</u>	<u>.27*</u>	<u>.19</u>				
Avoidance												
10. LowFM <sup>a</sup>	.00	<u>.13</u>	.01	-.16	-.09	-.17	-.32**	-.42**	-.24*			
11. L	.00	<u>.10</u>	.16	-.26*	-.17	-.27*	-.33**	-.11	.03	<u>.34**</u>		
12. Fr + rF	-.19	<u>-.00</u>	-.27*	.18	.13	-.09	.40**	.12	.01	<u>-.22</u>	<u>-.13</u>	
13. Cg	.13	<u>-.14</u>	-.02	.17	.20	.31*	.33**	.28*	.11	<u>-.25*</u>	<u>-.17</u>	<u>-.00</u>

Note. Correlations that are underlined and highlighted in grey are those that were expected to be significant and positive. <sup>a</sup>Berant et al. (2005) hypothesized that low FM scores would be associated with avoidant attachment, so the FM score was reversed in all statistical analyses.

\* $p < .05$ . \*\* $p < .01$ .



## CHAPTER 4 - DISCUSSION

The primary goal of the current study was to compare the attachment styles of individuals who reported a history of childhood psychological maltreatment to the attachment styles of individuals who reported no maltreatment in their childhood history. The study also examined the comparable utility of two different measures of attachment, one a self-report measure and the other a hypothesized group of attachment-related variables taken from a projective test known as the Rorschach Inkblot Method. A previous study (Berant et al., 2005) had found that certain constellations of Rorschach variables hypothesized to measure aspects of attachment avoidance and attachment anxiety were significantly correlated with self-report measures of attachment avoidance and attachment anxiety. Thus, in addition to comparing the attachment styles of individuals from maltreated and non-maltreated backgrounds, this study aimed to replicate Berant's findings in a non-maltreated group and to extend the findings to a psychologically maltreated group.

### Summary of the Results

The primary goal of the study, to compare the attachment styles developed by individuals who had been psychologically maltreated to those of their non-maltreated counterparts, was accomplished through the use of two measures, the Experiences in Close Relationships Inventory (ECR) and the Childhood Maltreatment Questionnaire (CMQ). Fifty-one percent of the university students sampled in the current study reported childhood experiences of psychological maltreatment, a value that falls within the range described in the literature by others such as Doyle (1997, 27%) and Demare (2000, 62%).

A similarly large number of students (60.8%) were found to report an insecure attachment style in their adult romantic relationships. Interestingly, the percentage of individuals who reported secure attachment styles (39.2%) was almost identical to the percentage of individuals who reported experiencing no maltreatment of any form (38.1%); however, there was not a one-to-one correspondence between reports of absence of maltreatment and development of a secure attachment style.

Results of the current study confirmed the hypothesis that individuals who reported a childhood history of psychological maltreatment were more likely to describe their adult romantic relationships as characterized by an insecure attachment style (as opposed to a secure attachment style) than were their counterparts who had experienced no maltreatment of any sort. Similar results were obtained when comparing individuals who reported childhood psychological maltreatment to individuals who reported no psychological maltreatment (irrespective of whether they reported other types of maltreatment). These results suggest that the absence or presence of psychological maltreatment in childhood has a significant impact upon one's adult relationships by rendering them, respectively, more or less likely to be secure in nature. The clinical significance of this finding lies in the fact that, even when other types of abuse are present, it appears that the presence or absence of psychological maltreatment is the most important factor in determining whether or not attachment in adult romantic relationships will be impacted. Much as Runtz (1992) demonstrated that the negative effects of physical maltreatment were more significant than the negative effects of sexual maltreatment, this study has shown that, at least in the area of attachment, the negative

effects of psychological maltreatment were more significant than the negative effects of either physical or sexual maltreatment.

Given that much current research suggests that attachment style should be considered as a continuum rather than as categorical (i.e., as falling into one of four attachment groups), this study also examined attachment via analysis of the two major axes of attachment style space: attachment anxiety and attachment avoidance (Bartholomew & Horowitz, 1991). Analyses of these two variables, measured by the two scales of the ECR, found that both variables increased in proportion to the degree of psychological maltreatment reported.

Whether psychologically maltreated individuals were compared to individuals who reported having experienced no maltreatment at all or to individuals who simply reported no *psychological* maltreatment, it was found that the psychologically maltreated individuals had less secure adult attachment relationships when attachment was examined in terms of categories (secure versus insecure). When attachment was examined in terms of a two-dimensional space characterized by two continuous axes measuring attachment anxiety and attachment avoidance, the maltreated and non-maltreated groups differed on the measure of attachment anxiety and the difference between the groups approached statistical significance on the measure of attachment avoidance.

Notably, when the attachment and psychological maltreatment variables were all treated as continuous, attachment anxiety ( $r = .46, p < .01$ ) and attachment avoidance ( $r = .22, p < .01$ ) were both found to be significantly correlated with psychological maltreatment score (see Table 20, p. 104). This finding highlights the fact that the

concepts of attachment and maltreatment are best considered in terms of the degree to which each is present rather than via the creation of artificial cut-off points that dichotomize these concepts into “present” or “not present”. Although categorization using cut-off points facilitates the development of prevalence estimates and allows for stable categories that are useful in research, in real-world applications, consideration of differing levels of severity may be more useful (Furer, Walker, & Stein, 2007).

The finding that childhood psychological maltreatment impacts negatively upon individuals’ level of security in their adult attachment relationships is consistent with Bowlby’s (1977) postulate from attachment theory that a strong causal relationship exists between individuals’ experiences with their parents and their later capacity to make affectional bonds. Furthermore, it extends the research findings of those who have observed that maltreatment in childhood has a negative impact on the attachment relationship with the caregiver (e.g., Cicchetti, Toth & Bush, 1988; Crittenden & Ainsworth, 1989; Egeland & Sroufe, 1991; Erickson & Egeland, 1987; Erickson, Egeland, & Pianta, 1989) by showing that the negative sequelae of childhood psychological maltreatment extend well beyond the child’s relationship with his or her caregiver. Results of the current study suggest that not only are the negative effects of childhood psychological maltreatment of a longstanding duration (i.e., while the maltreatment occurred in childhood, the effects were measurable in these individuals after they had reached adulthood), but also that they reach beyond the bounds of the individuals’ relationship with the perpetrator of the maltreatment, impacting negatively upon the individual’s romantic relationships in adulthood.

Additional measures used in the current study assisted in the development of a more complete picture of the psychologically maltreated individual. The data collected from these measures indicated, firstly, that individuals with higher psychological maltreatment scores, in addition to their increased attachment difficulties, were also more likely to have experienced additional forms of abuse (i.e., physical abuse, parental sexual abuse, and/or non-parental sexual abuse). Furthermore, results from the demographic questionnaire showed that the more psychologically maltreated individuals tended to be older, to have come from a lower income family, to be non-white, and to have participated in therapy. The more psychologically maltreated individuals were also found to be less likely to have come from a two-parent family and less likely to report high levels of resilience.

Comparing this study's findings to those from a large, nationally representative database of child abuse and neglect cases in the United States (Sedlack, 1997), there was consistency in the finding of a relationship between psychological maltreatment and lower family income. Similarly, this study's results were consistent with Sedlack's results regarding the relationship between ethnicity and psychological maltreatment status, although Sedlack's study specifically identified minorities *other than whites, blacks, or Hispanics* as those at greatest risk. Also consistent with Sedlack, results of this study indicated no relationship between psychological maltreatment and gender or between psychological maltreatment and size of community.

Similar to the results of the current study, Sedlack (1997) also found a relationship between psychological maltreatment and age; however, the meaning of the

results differs due to the different samples used. Sedlack's results were based on child abuse data and indicated that older children were at greater risk for maltreatment than younger children. By contrast, the current study used a sample of adults who reported on their childhood maltreatment experiences retrospectively. The finding of increased psychological maltreatment among the older participants in this study instead suggests the possibility of a societal-level decrease in psychological maltreatment of children over the years or, alternatively, the possibility that those individuals who experienced high levels of psychological maltreatment were more likely to delay their university education. Results of the current study also differed from those of Sedlack in finding a negative correlation between psychological maltreatment and two-parent family status given that Sedlack's study found no relationship between family structure and psychological maltreatment status.

As noted above, there was not a one-to-one correspondence between absence of maltreatment and the development of a secure attachment style. Rather, there was a subgroup of individuals who developed secure attachment in spite of a history of maltreatment, suggesting that there are additional factors besides the presence or absence of maltreatment that impact on attachment. Similarly, there were individuals who had developed high levels of resilience, despite having been maltreated. The unique characteristics of these individuals were considered worthy of further investigation to assist in understanding why some individuals are more negatively impacted by abuse than others.

Supplementary analyses were employed to examine the characteristics that separated those who had developed secure attachment styles, despite their experiencing of psychological maltreatment, from their insecurely attached counterparts. Results of this analysis found that those variables that distinguished the secure from the insecure, in spite of being psychologically maltreated, were less physical abuse, more resilience, and a higher level of education of one's father. Here we see the positive impact of resilience, in the presence of psychological maltreatment, on attachment status. We also see the incremental impact of multiple types of abuse, given that when psychological maltreatment was combined with physical abuse, the individual's attachment status was more likely to be negatively impacted. The relationship between father's education level and likelihood of being securely attached in spite of psychological maltreatment suggests a socio-economic status connection, perhaps related to income level and availability of resources, for example.

In a similar vein, it was of interest to compare individuals who had developed high levels of resilience to those who had not, despite their having been psychologically maltreated. Analyses indicated that those with higher resilience had higher grade point averages, were more likely to come from a two-parent family, were more likely to have a parent they described as resilient, and were more likely to see themselves as optimistic about the future, all of which can be seen as logical protective factors. These results can be compared to those of Runtz (1992) who found that among physically and sexually maltreated individuals, positive psychological adjustment was associated with having adequate social supports, seeing oneself as a survivor, and having a tendency to be

expressive. Interestingly, resilient individuals in the current study were less likely to have attended therapy, suggesting not necessarily that therapy does not have a protective effect, but perhaps that it is more commonly made use of by those who are feeling the least resilient. Individuals who were resilient in spite of psychological maltreatment also experienced less attachment anxiety and less attachment avoidance. Notably, although psychologically maltreated, the more resilient individuals tended to experience lesser *degrees* of maltreatment than those who were not resilient.

Comparing males and females, and looking at both psychological maltreatment status and attachment status, it was found that non-maltreated females were more likely to be secure than non-maltreated males and also were more likely to be secure than maltreated individuals of either gender. Comparisons between white and non-white individuals found that non-white individuals who had not been maltreated were more likely to be secure than white individuals regardless of their maltreatment status, and that non-white individuals who had been maltreated were the group least likely to be secure. The results of these two group-based supplementary analyses suggest that the degree of impact that psychological maltreatment has upon one's attachment status differs to some extent by gender as well as by race and that these two factors should be considered in further research conducted in this area.

Turning to the secondary goal of the study, it was hypothesized that the results of a study by Berant and colleagues (2005) could be replicated in a group of Canadian university students who had not experienced psychological maltreatment and could be extended to a group who *had* experienced psychological maltreatment. Berant had shown



that certain constellations of Rorschach variables hypothesized to measure aspects of attachment avoidance and attachment anxiety were correlated with self-report measures of attachment avoidance and attachment anxiety. The replication study involved a group of 39 individuals who reported experiencing no maltreatment in childhood, and the extension study involved an additional 39 individuals who reported psychological maltreatment (and no other form of maltreatment) in childhood. Neither the replication study nor the extension study found support for Berant's hypothesized constellations of Rorschach variables in terms of their correlation with self-report measures of attachment anxiety and attachment avoidance. A number of Berant's hypothesized Rorschach markers of attachment anxiety were found to correlate with each other, as predicted by Berant; however, they were not found to correlate with the self-report measure of attachment anxiety. Thus, in contrast to the results of the Berant study, this study found more support for the idea that the hypothesized Rorschach markers of attachment anxiety and attachment avoidance measure something qualitatively different than that which is measured by self-report measures of attachment anxiety and avoidance.

There were a number of differences between the current study and the Berant study that may have impacted the results. These include a smaller sample size, use of the original ECR (as opposed to the shorter Hebrew language version used by Berant), use of the scores from two different scorers rather than one, cultural differences between Canadian university students and Israeli university students, and the impact of a communal living system given that many Israeli students may have been brought up in a Kibbutz environment. It does not appear, however, that these factors provide an entirely

satisfactory explanation of the differences in the findings. The smaller sample size affected the power of the study, but the results should have still demonstrated a trend in the direction of the Berant findings. Furthermore, there appeared to be sufficient power to find statistically significant results, even with the smaller sample size, given that many of the Rorschach variables were found to be correlated with each other.

The cultural differences argument also is not particularly convincing. Living on a Kibbutz may cause individuals to have either less or more security in their attachment relationships, but if the Rorschach and self-report questionnaire were truly measuring the same thing (i.e., attachment avoidance and attachment anxiety), the two measures should still be correlated with each other irrespective of the proportion of students who were securely or insecurely attached in a given sample. The use of two scorers rather than one also should have had limited impact on the results of the study given that inter-rater reliability ratings were high.

Perhaps one of the better explanations for the difference between these results and those of the Berant study is the different self-report measure used in each. Although the Hebrew-language version was described as comparable to the English-language ECR, it had fewer items, and may have tapped slightly different meanings due to translation issues. For example, some languages do not have a word for a concept that another language does, and therefore a direct translation of that concept is not possible.

Assuming that the Berant study was more *correct* in its findings of the correlation between self-report and projective measures of attachment, perhaps Israeli students are more self-aware and, therefore, more accurate in their self-report responses. Another

possibility is that Israeli students are more forthright in admitting their interpersonal difficulties than are Canadian students. As a result, the face-valid ECR would not be as accurate a measure of attachment-related dynamics in Canadian students as the less face-valid Rorschach, for which students would have no idea how their responses reflected information about their attachment dynamics.

Another issue that may have contributed to the difference in results found in this study compared to the Berant (2005) study may be the fact that the current study used contrived groups. Individuals were selected to participate in Part II of this study based on their childhood maltreatment status, whereas no such qualifier was used in the Berant study. An additional factor that may help explain the different results in the two studies is that individuals in the Berant study were queried as to recent major stressors and reported none over the preceding year. By contrast, the individuals in the current study were not queried as to recent stressors, and therefore some individuals' results may have been significantly impacted by the presence of a recent stressor.

As to the question of whether the Rorschach could detect differences in the maltreated versus non-maltreated groups, it was found that there were no differences in the mean values for any of Berant's (2005) Rorschach variables when comparing these two groups. On the other hand, looking specifically at whether the Rorschach variables were impacted by *degree* of psychological maltreatment, it was found that among those classified as non-maltreated (indicating that they had a low psychological maltreatment score), the higher the individual's psychological maltreatment score, the lower his or her scores on the variables CF and m. These same variables, however, were not found to

correlate with psychological maltreatment score among those in the maltreated group, nor were any other Rorschach variables, calling into question the meaningfulness of this finding. Overall, these results do not provide convincing support that the Rorschach variables examined in this study can differentiate individuals based either on psychological maltreatment status or on psychological maltreatment score.

### **Strengths and Limitations**

Among the strengths of the current study is the fact that the primary measures used (the ECR, CMQ, and Rorschach) were well-known, well-validated measures. Not only does this lend confidence to the results, but it also allows for more ready comparisons with other studies that have made use of these same measures. Furthermore, the two lesser-known measures used in this study (the Protective Factors Questionnaire and the Resiliency Scale) were used only as supplementary measures rather than as a part of the analyses of the major hypotheses.

Another strength of the study was the use of two different Rorschach scorers, with a test for scoring consistency that lent confidence to each individual's scoring due to the high level of inter-scorer reliability demonstrated. Additionally, the well-researched and highly standardized Exner scoring system was used for scoring the Rorschach protocols. Furthermore, the computerized score entry system (RIAP) was used, and this in itself is a double-check for accuracy of scoring due to its ability to detect numerous violations of scoring rules.

One of the significant limitations of this study was the use of a sample composed only of university students. Although Berant et al.'s (2005) study was composed

primarily of university students, 26% of their sample was also derived from outside the university setting, allowing for a potentially greater experience base and greater applicability of results. In a similar vein, this study was limited by the fact that the severity of maltreatment experiences found in a university sample was likely far less than what would be found in, say, a clinical sample. With a more limited range of maltreatment experiences in this sample, the ability to find significant results was reduced. Another significant limiting factor related to the use of a sample of university students is the fact that the majority of the sample was of a relatively young age (77% were 20 years of age or younger) and likely had limited experience in the domain of adult romantic attachment relationships, one of the primary variables being studied. Indeed, the sample of individuals examined in this study was highly homogeneous not only in age and university status, but also in race (approximately 77% white), birthplace (95% born in Canada or the United States), first language (98% English), marital status (91% had never been married), and socioeconomic status (72% came from families with a combined gross annual income greater than \$40,000; 87% of participants' mothers and 80% of fathers had completed at least high school). The impact of the homogeneity of the sample was that it severely limited the range of information available and the generalizability of the results.

Other limitations of the study included the use of two different Rorschach administrators given that this introduced an extra degree of variability in the results. For comfort of the participants, the Rorschach testing sessions were not recorded by video or audio tape, so there was no way to double-check the accuracy of each administrator's

compliance with the rules of administration of the Exner system. Both administrators had experience in Rorschach administration; however, one was considerably more experienced than the other. The more experienced Rorschach administrator had been a lecturer of Rorschach administration and scoring courses for many years and had administered considerably more Rorschachs over her career than the other administrator, who was a recent graduate from a clinical psychology program. Another consideration is that individual differences between the two administrators may have pulled for different types of responses from the participants, although grouping the participants by Rorschach administrator and comparing the results, neither group's results demonstrated any particular improvement over the non-grouped results.

Another limitation of the current study was the sample size used for testing hypotheses two and three. In the original study by Berant (2005), a sample size of 72 was used to test the hypothesized correlation between the purported Rorschach markers of attachment avoidance and attachment anxiety and the self-reported scores for attachment avoidance and attachment anxiety. Limitations in time and resources for the current study rendered it too difficult to obtain a sample size this large for each of the two hypotheses. In the end, a sample size only slightly greater than half that used in the original Berant study was used to test each of the two hypotheses.

Another limitation, in retrospect, involved the items on the Protective Factors questionnaire designed by the author. These items would have yielded more useable results had they been designed as Likert-scale items with a range from, say, 1 = never to 5 = very often, rather than as dichotomous yes-or-no items. Correlations between the

items on the Protective Factors scale and other measures would have been more appropriate for statistical analyses had they been written in the Likert-scale manner. Also, in retrospect, the Protective Factor question regarding a supportive adult should not have added the caveat “other than you parents” as parents can most definitely also be supportive adults in a child’s life.

### **Areas for Further Study**

Given the very different results obtained in this study as compared to the study by Berant and colleagues (2005), the impact of language, culture, and country of residence should be further studied to determine if these factors contributed to the differences. Replication studies could be conducted in other countries and other languages to determine whether the Berant results are unique to an Israeli population. Furthermore, the Berant study could be repeated in an Israeli population but this time with the full ECR (albeit translated into Hebrew), as opposed to the shorter Hebrew attachment scale, which was merely *highly similar* to the English language ECR. For consistency with the Berant study, future studies also should inquire about exposure to recent stressors, as this study did not.

Studies with individuals of different ages rather than with University students alone, given that their ages tend to cluster in the early adulthood range, would also be worthwhile in order to determine whether the same results would be found in different populations. Similarly, studies with individuals in clinical settings would also expand our understanding of the extent to which the study results are replicable in other populations.

Another worthwhile follow-up study could make use of the Adult Attachment Interview (AAI) rather than a self-report attachment instrument and compare the results of this measure to the hypothesized Rorschach markers of attachment anxiety and avoidance. The AAI would provide information about the attachment between the individual and his or her parents, as opposed to between the individual and his or her romantic partners. Given that it is the parents who generally commit the psychological maltreatment in childhood, it would be interesting to examine the impact of this maltreatment upon the individual's adult attachment to the perpetrator(s) of the maltreatment and to see whether this impact would be discernible with the Rorschach.

A recent study conducted by Muller, Gragtmans, and Baker (2008) found that attachment mediated the relationship between childhood physical abuse and adult social support. A similar study could be conducted to examine whether a relationship also exists between psychological maltreatment and adult social support, and if it too is mediated by attachment. The study could then compare the relative impacts of physical abuse and psychological maltreatment on adult social support.

Results of the supplementary analyses conducted in this study suggest the need for further research to more fully examine and explain the gender and race differences that arose here in relation to the impact of maltreatment upon attachment. Supplementary analyses also suggested the possibility that a different set of Rorschach variables than those identified by Berant and colleagues (2005) may be better markers of self-reported attachment anxiety and attachment avoidance in Canadian university students. Further



research could more fully examine other possible Rorschach correlates of these attachment dynamics.

Qualitative studies would also be a worthwhile endeavour to more fully describe and convey the impact of psychological maltreatment on attachment. These could include methods such as interviews, focus groups, and case studies in order to obtain more in-depth insights from persons who have gone through the experience of psychological maltreatment. Another worthwhile endeavour would be studies employing the concepts of intersectionality to look at the combined impact of various “axes of power” such as gender, race/ethnicity, class, disability/ability, age, and sexual orientation on psychological maltreatment and attachment. Studies such as these would allow for a broader analysis and description of the populations most greatly affected by maltreatment.

### **Conclusions and Clinical Implications**

The results of this study indicate that the experience of psychological maltreatment in childhood has a significant impact upon self-reported attachment dynamics in one’s adult romantic relationships. Individuals who experienced higher levels of psychological maltreatment reported greater amounts of both attachment anxiety and attachment avoidance in their relationships, which is indicative of attachments tending towards insecurity rather than security. This study also found that certain protective factors, most notably a sense of personal resilience, decreased the negative impact of psychological maltreatment upon these attachment dynamics.

This study was unable to replicate the results of Berant et al. (2005) in finding a correlation between self-reported attachment variables and their hypothesized projective test counterparts. Rather, the results suggested that Berant's hypothesized markers of attachment anxiety and avoidance may measure something qualitatively different than what is measured by the self-report attachment measure. Further replication studies clearly need to be conducted, and with differing populations, to understand and explain the very different results found in this study versus Berant's.

Even if similar results to Berant's had been found, this finding in itself would not suggest that the Rorschach should be used clinically to predict the attachment dynamics of a particular individual. Rather, if the results of the Berant study were assumed to be correct, it would merely demonstrate that *on average*, in a large group of individuals, the hypothesized Rorschach attachment variables correlate with the self-report attachment variables. If the two measures truly measured the very same concept, the correlations would be near perfect, which they were not. Thus, based on the very different findings in this study compared to the Berant study, and the fact that the Berant study did not find a near-perfect correlation between the Rorschach variables and the self-report variables, one cannot conclude that in clinical practice, the Rorschach could be used as an alternative to the self-report ECR.

The correlation found between psychological maltreatment and both attachment avoidance and attachment anxiety highlights for clinicians the importance of considering more than just the effects of sexual and physical abuse on their clients. Psychological maltreatment was in fact found to be more highly correlated with attachment avoidance

and anxiety than were physical or sexual abuse, a finding that strongly suggests the presence or absence of psychological maltreatment is a more significant factor in the attachment process than are either physical or sexual abuse. Clinicians working with children and families should consider the possibility that psychological maltreatment may be occurring within the family, given that over fifty percent of this relatively high-functioning sample of university students had experienced psychological maltreatment. Clinicians working with adults should consider the fact that psychological maltreatment in the childhood history of the individual may still be exerting a significant impact on their adult relationships. In individual therapy, the therapeutic relationship may act as a form of re-parenting for the individual and over time assist in the building up of secure attachment schemas which would hopefully eventually generalize into their other relationships. With families, clinicians would be well advised to work directly on decreasing any psychological maltreatment that is occurring, perhaps by drawing attention to the detrimental impact this type of abuse can have on an individual. A family-oriented and holistic clinical approach that acknowledges the significance of the relationships that each individual has been or is currently a part of may be an important factor in addressing the damage caused by psychological maltreatment.

For child-welfare organizations that historically have focused much greater attention on helping children who have experienced sexual or physical abuse, the findings of this study might serve as a wake-up call as to the impact of psychological forms of abuse. Although psychological maltreatment is more difficult to detect due to the absence of physical markers, child-welfare organizations should invest more effort into finding

means to detect its presence and assisting families to overcome this detrimental form of abuse.

Results of this study suggested that there are factors that may be protective such that they assist individuals in developing secure attachments despite having experienced psychological maltreatment in childhood. These included the absence of other forms of abuse (physical abuse in particular), a higher level of education of one's father, and greater self-reported resilience. A higher level of resilience, despite psychological maltreatment, was associated with higher grade point averages, having come from a two-parent family, having a parent who modelled resilience, and being optimistic about the future. Programs designed to develop resilience in children may be another area where community organizations can make a significant impact on decreasing the negative sequelae of abuse.

Perhaps even more important than finding ways to assist individuals who have been maltreated is to prevent maltreatment from occurring in the first place. Community and/or government organizations that work with parents and children, such as the Healthy Child Initiative in Manitoba, would do well to find ways to help parents understand the damaging effects of psychological maltreatment. This could include discussion of research findings such as these that demonstrate the negative and long-standing impact of maltreatment. These organizations also need to focus efforts on teaching parents how to deal with their children in a non-abusive manner. Reaching parents as early as possible in their children's development and helping them to interact with their children in a healthy

and non-abusive manner could have far-reaching beneficial effects on the child's future relationships.

Psychological maltreatment in childhood is an area of research that historically has received little attention but that has slowly been gaining momentum over time. The results of this study confirm the significant long-term negative impact this type of maltreatment exerts and suggest the importance of continued research in this area.

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## Appendix A

### Brassard and Hardy's (1997) Forms of Psychological Maltreatment

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A repeated pattern or extreme incident(s) of the conditions described in this table constitute psychological maltreatment. Such conditions convey the message that the child is worthless, flawed, unloved, endangered, or valuable only in meeting someone else's needs.

*Spurning* (hostile rejecting/degrading) includes verbal and nonverbal caregiver acts that reject and degrade a child. Spurning includes:

- Belittling, degrading, and other non-physical forms of overtly hostile or rejecting treatment
- Shaming and/or ridiculing the child for showing normal emotions such as affection, grief, or sorrow
- Consistently singling out one child to criticize and punish, to perform most of the household chores, or to receive fewer rewards
- Public humiliation

*Exploiting/Corrupting* includes caregiver acts that encourage the child to develop inappropriate behaviours (self-destructive, anti-social, criminal, deviant, or other maladaptive behaviours). Exploiting/corrupting includes:

- Modeling, permitting, or encouraging antisocial behaviour (e.g., prostitution, performance in pornographic media, initiation of criminal activities, substance abuse, violent to or corruption of others)
- Modeling, permitting, or encouraging developmentally inappropriate behaviour (e.g., parentification, infantilization, living the parent's unfulfilled dreams)
- Encouraging or coercing abandonment of developmentally appropriate autonomy through extreme overinvolvement, intrusiveness, and/or dominance (e.g., allowing little or no opportunity or support for child's views, feelings, and wishes; micromanaging child's life)
- Restricting or interfering with cognitive development

*Denying Emotional Responsiveness (Ignoring)* includes caregiver acts that ignore the child's attempts and needs to interact and show no emotion in interactions with the child. Denying emotional responsiveness includes:

- Being detached and uninvolved through either incapacity or lack of motivation
  - Interacting only when absolutely necessary
  - Failing to express affection, caring, and love for the child
-

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**Appendix A (continued)**

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*Terrorizing* includes caregiver behaviour that threatens or is likely to physically hurt, kill, abandon, or place the child or child's loved ones/objects in recognizably dangerous situations. Terrorizing includes:

- Placing a child in unpredictable or chaotic circumstances
- Placing a child in recognizably dangerous situations
- Setting rigid or unrealistic expectations with threat of loss, harm, or danger if they are not met
- Threatening or perpetrating violence against the child
- Threatening or perpetrating violence against a child's loved ones or objects

*Isolating* includes caregiver acts that consistently deny the child opportunities to meet needs for interacting/communicating with peers or adults inside or outside the home.

Isolating includes:

- Confining the child or placing unreasonable limitations on the child's freedom of movement within his/her environment
- Placing unreasonable limitations or restrictions on social interactions with peers or adults in the community

*Mental Health, Medical, and Educational Neglect* includes unwarranted caregiver acts that ignore, refuse to allow, or fail to provide the necessary treatment for the mental health, medical, and educational problems or needs of the child. Mental health, medical, and educational neglect include:

- Ignoring the need for or failing or refusing to allow or provide treatment for serious emotional/behavioural problems or needs of the child
- Ignoring the need for or failing or refusing to allow or provide treatment for serious physical health problems or needs of the child
- Ignoring the need for or failing or refusing to allow or provide treatment for services for serious educational problems or needs of the child.

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*Source:* Brassard and Hardy (1987)



## Appendix B

### Demare's (1993) Subcategories of Psychological Maltreatment

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1. *Rejecting*: active expressions of rejection, as opposed to passively ignoring a child (e.g., scapegoating, actively refusing to help a child);
  2. *Degrading*: actions that depreciate the child including verbal derogation (e.g., insulting, publicly humiliating);
  3. *Isolating*: acts that separate the child from others (e.g., refusing to allow interactions with others outside the family);
  4. *Corrupting*: acts that teach or encourage antisocial behaviours or orientations, or that encourage the child to develop orientations that are destructive to himself or herself (e.g., encouraging criminal behaviour or substance abuse by the child, inculcating racist values);
  5. *Denying Emotional Responsiveness*: acts of omission in which the caregiver fails to provide the sensitive, responsive caregiving necessary to facilitate healthy social and emotional development; the caregiver is detached, and interacts with the child only when necessary (e.g., ignoring a child's attempts to interact.);
  6. *Exploiting (Nonsexual)*: situations in which a child is used for advantage or profit (other than sexually) (e.g., keeping a child at home in the role of a servant or surrogate parent in lieu of school attendance);
  7. *Verbal Terrorism*: verbal threats directed toward the child of harm or of other severely negative or frightening consequences (e.g., threatening to physically hurt or kill a child);
  8. *Physical Terrorism*: consists of two forms of physically threatening behaviours, namely (a) those that occur with physical, verbal, or symbolic reference to the child but that do not involve physical contact with him or her (e.g., using physically threatening gestures, striking an object while emotionally engaging the child), and (b) those that do involve physical contact with the child, but are very low-risk in terms of immediate or lasting physical harm to the child, and additionally, have emotional versus physical harm at their core (e.g., holding a child down as a means of aggravating him or her; touching or handling a child in a rough way);
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**Appendix B (continued)**

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9. *Witness to Family Violence*: involves violent parental behaviours (including verbal violence and threats of harm) directed toward a person or object other than the child, but without specific physical, verbal, or symbolic reference to the child (e.g., physically hurting a family member other than the child, when the child is present);
  10. *Unreliable and Inconsistent Care*: Contradictory and ambivalent demands are made of the child, parental support or caregiving is inconsistent and unreliable, familial stability is denied to her or him (e.g., communicating unpredictable and changing expectations of the child);
  11. *Controlling or Stifling Independence*: The parent exerts excessive control over the child's behaviours, thought, opinions, and decisions. Such control extends to the point of interfering with the child's attempts to perform task, to act independently, and to establish and maintain relationships with others (e.g., interfering in a child's relationships with other family members, checking up on a child without good reason);
  12. *Physical Neglect*: The child's basic needs are not met adequately by a parent who has the ability or resources to do so. The subcategory is intended to identify situations in which parents were disinterested or negligent in attending to the child's needs, as opposed to situations in which parents were unable to provide adequate care due to financial hardship (e.g., failing to provide proper nourishment for the child when the means to do so are available, failing to care for the child's injuries when he or she is physically hurt).
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Source: *Demare (1993)*.

## Appendix C

### Demographic Data Questionnaire

Demographic data is collected for statistical purposes only. Demographic data will be examined as group data only and will not be used to identify any individual.

Instructions: Please circle the response which best characterizes your personal demographic information.

1. **Gender:** a) Male                      b) Female
2. **Current Age:** a) 17              b) 18              c) 19              d) 20              e) 21-25  
f) 26-30              g) 31-35              h) 36 - 40              i) 41 - 48              j) 49 +
3. **Race:** a) White              b) Asian              c) Aboriginal              d) Black  
e) Hispanic              f) East Indian              g) Other
4. **Place of Birth:** a) Canada or United States              b) Asia              c) Europe  
d) India              e) Mexico/South America/Central America  
f) Africa              g) Other
5. **Primary Language Spoken and Understood:** a) English              b) French  
c) Asian              d) Other European              e) Other
6. **Number of University Courses Completed:** a) <5              b) 5-9  
c) 10-14              d) 15-19              e) >19
7. **Cumulative Grade Point Average (CGPA) or anticipated CGPA:**  
a) <1.0              b) 1.0-1.9              c) 2.0-2.4              d) 2.5-2.9  
e) 3.0-3.4              f) 3.5-3.9              g) 4. 0- 4.5
7. **Marital Status:** a) Never married              b) Married or Common-law  
c) Separated              d) Divorced              e) Widowed

**Appendix C (continued)**

8. **Living Arrangements:** a) Parents or relatives    b) Friends or roommates  
c) Alone    d) Spouse or partner    e) Other
9. **Size of Community During Childhood:**  
a) < 10,000    b) 10,000 – 50,000    c) 50,000 – 100,000  
d) 100,000 – 500,000    e) > 500,000
10. **Average Annual Family Income During Childhood:**  
a) <15,000    b) \$15,000 – \$24,999    c) \$25,000 – 39, 999  
d) \$40,000 - \$54,999    e) \$55,000 - \$70,000    f) > \$70,000
11. **Mother's Highest Education Level:**  
a) < High School    b) High School grad    c) Non-university training  
d) University – non degree    e) University degree    f) Unknown
12. **Father's Highest Education Level:**  
a) < High School    b) High School grad    c) Non-university training  
d) University – non degree    e) University degree    f) Unknown
13. **Mother's Employment Status:**  
a) Mostly full-time    b) Mostly part-time    c) Equal full and part-time  
d) Rarely or never worked    e) On pension/disability
14. **Father's Employment Status:**  
a) Mostly full-time    b) Mostly part-time    c) Equal full and part-time  
d) Rarely or never worked    e) On pension/disability

**Appendix C (continued)**

**15. Primary Caretaker when you were a child (you may circle more than one):**

- |                    |                  |                 |                |
|--------------------|------------------|-----------------|----------------|
| a) Mother          | b) Father        | c) Step-mother  | d) Step-father |
| e) Grandmother     | f) Grandfather   | g) Aunt         | h) Uncle       |
| i) Female guardian | j) Male guardian | k) Other female | l) Other male  |

## Appendix D

### Protective Factors Questionnaire

Instructions: Please circle the most appropriate response to each question.

1. Other than the person(s) who provided your primary care when you were a child, was there an adult whom you felt was a strong source of support for you?  

Yes                      No

If yes, who was that person? (you may circle more than one response)

a) Family friend    b) Teacher    c) Pastor/Rabi/Minister/Priest  
d) Relative            e) Other
  
2. Have you ever participated in any form of therapy or counselling?  

Yes                      No

If yes, approximately how many session of counselling or therapy have you participated in?

a) 1 – 5                  b) 6 – 10              c) 11 – 20              d) 21 – 40              e) >40
  
3. Did you live in a two-parent household for most or all of your childhood years?  

Yes                      No

If yes, how would you characterize the relationship between your parents?

a) Mostly stable              b) Somewhat stable    c) Mostly unstable
  
4. Would you describe one or both of your primary caretakers as “resilient”?  

Yes                      No                      Unsure
  
5. Do you both believe in and feel loved by God?  

Yes                      No                      Unsure
  
6. Would you describe yourself as optimistic about the future?  

Yes                      No                      Unsure

**Appendix E****Comprehensive System Rorschach Codes**


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Abbreviation	Description
<b>Location</b>	
W	Use of the whole inkblot.
D	A common detail area.
Dd	Unusual detail area.
S	Use of white space (coded in conjunction with one of the above).
<b>Development Quality</b>	
+	Synthesized response in which two or more separate objects are described as related and at least one object has a specific form requirement.
v/+	Synthesized response in which two or more separate objects are described as related and none have specific form requirements.
o	Ordinary response describes a single object or unrelated objects with specific form requirements.
v	Vague response describes a single object or unrelated objects lacking specific form requirements (e.g., cloud).

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**Appendix E (continued)**


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Abbreviation	Description
<b>Determinants</b>	
F	Form features contribute to the response
M	Human movement or other character described in a human-like activity.
FM	Animal movement response that is consistent with the species described.
m	Inanimate movement response.
C	The use of chromatic colour.
Cn	Naming of colours as a response.
C'	Achromatic colour (use of grey, black, or white).
T	Texture responses in which shading is seen as depth or dimensionality.
V	Vista responses in which shading is used but not in reference to texture or vista.
Y	Diffuse shading in which shading is used but not in reference to texture or vista.
FD	Form dimension is similar to V but uses size or shape rather than shading.
(2)	Pair response reports two identical objects based on the symmetry of the blot.
r	Reflection response, symmetry is described as a reflection or mirror image.

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**Appendix E (continued)**


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Abbreviation	Description
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**Form Quality**

+	Superior-overelaborated responses are unusually precise in their articulation.
o	Ordinary, commonly reported responses with appropriate form use.
u	Unusual responses that are less commonly reported but are easily seen and do not violate blot contours.
-	Distorted use of form that disregards actual blot contours.

**Organizational Activity**

z	Numerical score accorded the type of organizational and complexity of stimuli used in the response (based on use of W, S, and adjacent or distant detail areas).
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**Contents**

H	Whole human.	Cg	Clothing
(H)	Fictional or mythological whole human.	Cl	Clouds.
Hd	Human detail.	Ex	Explosion.
(Hd)	Fictional or mythological human detail.	Fi	Fire.
A	Whole animal.	Fd	Food.
(A)	Fictional or mythological whole animal.	Ge	Geography.
Ad	Animal detail.	Hh	Household Object.

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**Appendix E (continued)**


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Abbreviation	Description
(Ad)	Fictional or mythological animal detail.
Ab	Abstract concept.
Al	Alphabet letters or arabic numerals.
An	Anatomy.
Art	Art objects or paintings.
Ay	Anthropology.
Bl	Blood.
Bt	Botany.
Ls	Landscape.
Na	Nature.
Sc	Science.
Sx	Sex.
Xy	X-ray.
Vo	Vocational.
Id	Idiographic.

**Populars**

P Popular responses.

**Special Scores**

DV Deviant verbalization.

DR Deviant response.

INCOM Incongruous combination of blot details into a single object.

FABCOM Fabulized combination positing an implausible relationship between objects.

CONTAM Contamination fuses two or more impressions into a single response.

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**Appendix E (continued)**

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Abbreviation	Description
ALOG	Inappropriate logic is used to justify a response.
PSV	Perseveration.
AG	Aggressive movement.
MOR	Morbid content.
PER	Personalized response in which personal knowledge or experience is used to justify a response.
CP	Colour projection in which achromatic areas are identified as chromatic.

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## Appendix F

### Consent Form

**Research Project Title:** Attachment: Comparisons Among University Students (a Doctoral Thesis in Clinical Psychology)

**Form:** Consent

**Researcher:** Pamela L. Holens, M.Ed., M.A.  
Doctoral Candidate, Clinical Psychology  
University of Manitoba  
e-mail: pholens@cc.umanitoba.ca  
phone: XXX-XXXX

**Advisor:** Rayleen V. De Luca, Ph.D., C.Psych.  
Supervising Psychologist  
University of Manitoba  
e-mail: delucarv@cc.umanitoba.ca  
phone: XXX-XXXX  
Office: XXX Duff Roblin Bldg

This consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. **Please take time to read this carefully and to understand any accompanying information.**

The purpose of this research is to compare the attachment styles that have developed among university students with varying childhood experiences. Part I of the study will involve completion of questionnaires inquiring about demographic information, childhood experiences, attachment style, protective factors and resilience. **Some of the questions are of a personal and potentially sensitive nature.** Based on their responses to questions in Part I, approximately one third of participants will be asked to complete Part II of the study. In Part II, participant will be administered the Rorschach Inkblot Method, which involves looking at a series of inkblots and telling the examiner what they look like to you. **Your name will not be associated with your questionnaire responses** or, for Part II, your Rorschach responses.

**Matching of participants' information from Part I and Part II of the study will occur through use of a specialized code.** If you are interested in participating in Part II of the study, you will complete a form that matches your special code with your name and contact information. This form will be kept separate from your questionnaire data and will not be associated with your questionnaire data. The only person who will have access to this form will be the principal researcher. The form will be destroyed once you

have been contacted for Part II of the study, so that no possibility of matching a participant's name with their questionnaire data will be possible.

Data collected from this study will be analyzed and reported in terms of group information, not individual information. Your data, which will not have your name attached to it, will be stored in a locked cabinet at the residence of the principal researcher and will be accessible only to the principal researcher. Data will be destroyed via shredding after seven years.

A summary of the results of the study will be posted outside Dr. Rayleen De Luca's office (XXX Duff Roblin Building) upon completion of the study, which is expected to occur in the Summer of 2007. Participants who wish to receive a summary of the results by e-mail may provide their e-mail address here: \_\_\_\_\_

Part I of the study will take under one hour to complete and will therefore be worth 2 experimental credits.

Part II of the study will take up to 90 minutes to complete and will therefore be worth 3 experimental credits.

Your signature on this form indicates that you 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. You are free to withdraw from the study at any time, and/or refrain from answering any questions you prefer to omit, without prejudice or consequence. 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.

This research has been approved by the Psychology/Sociology Research Ethics Board. If you have any concerns or complaints about this project you may contact any of the above-named persons or the Human Ethics Secretariat at XXX-XXXX, or e-mail [margaret\\_bowman@umanitoba.ca](mailto:margaret_bowman@umanitoba.ca). A copy of this consent form has been given to you to keep for your records and reference.

\_\_\_\_\_  
Participant's Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Researcher and/or Delegate's Signature

\_\_\_\_\_  
Date

## Appendix G

### Debriefing Form – Part I

**Research Project Title:** Attachment: Comparisons Among University Students

**Form:** Debriefing, Part I

**Researcher:** Pamela L. Holens, M.Ed., M.A.  
e-mail: pholens@cc.umanitoba.ca  
phone: XXX-XXXX

**Advisor:** Rayleen V. De Luca, Ph.D., C.Psych.  
e-mail: delucarv@cc.umanitoba.ca  
phone: XXX-XXXX  
Office: XXX Duff Roblin Bldg

Thank you for participating in Part I of this study on Attachment. The overall purpose of this study is to compare the attachment styles that have developed among university students with varying childhood experiences. In Part I, you have completed a series of questionnaires. The demographic information questionnaire is used for statistical purposes, to allow the researcher to describe the sample of participants in broad terms. The childhood experiences questionnaire is used to determine whether individual participants have or have not experienced parental maltreatment of a physical, sexual, or psychological nature. The attachment style questionnaire is used to determine participants' levels of anxiety and avoidance related to relationships. Information gathered from the childhood experiences questionnaires and the attachment style questionnaires will be examined to determine whether there is a trend towards greater levels of anxiety and avoidance of relationships among individuals who have experienced certain types of maltreatment. Information from the protective factors and resiliency questionnaires may be used to help explain some of the results of the study

It is possible that the completion of these questionnaires may have caused you to think about some events in your life that were unpleasant. Should you feel the need to discuss these matters further with a counsellor, you may contact the principal researcher or her advisor, or consider making use of the free counselling services offered by the Student Counselling and Career Centre on campus (XXX-XXXX) or the Psychological Service Centre on campus (XXX-XXXX).

Thank you again for your participation and your contribution to the field of research in the area of maltreatment and attachment.

## Appendix H

### Debriefing Form – Part II

**Research Project Title:** Attachment: Comparisons Among University Students

**Form:** Debriefing, Part II

**Researcher:** Pamela L. Holens, M.Ed., M.A.  
e-mail: pholens@cc.umanitoba.ca  
phone: XXX-XXXX

**Advisor:** Rayleen V. De Luca, Ph.D., C.Psych.  
e-mail: delucarv@cc.umanitoba.ca  
phone: XXX-XXXX  
Office: XXX Duff Roblin Bldg

Thank you for participating in Part II of this study on Attachment. The overall purpose of this study is to compare the attachment styles that have developed among university students with varying childhood experiences. In Part I, you completed a series of questionnaires that involved a demographic information questionnaire, a childhood experiences questionnaire, an attachment style questionnaire, a protective factors questionnaire and a resiliency questionnaire.

In Part II of the study, you completed the Rorschach Inkblot Method. The Rorschach is a well-known psychological instrument that is used by psychologists and researchers to make hypotheses about personality. Particular hypotheses about an individual's tendency towards relationship avoidance and anxiety can be garnered from the Rorschach, and this information will be compared to your Part I responses to the attachment questionnaire, which also focused on avoidance and anxiety. In this way, the Rorschach can be compared to the attachment questionnaire in terms of its efficacy as a measure of attachment dimensions.

It is possible that the completion of the Rorschach may have caused you to think about some events in your life that were unpleasant. Should you feel the need to discuss these matters further with a counsellor, you may contact the principal researcher or her advisor, or consider making use of the free counselling services offered by the Student Counselling and Career Centre on campus (XXX-XXXX) or the Psychological Service Centre on campus (XXX-XXXX).

Thank you again for your participation and your contribution to the field of research in the area of maltreatment and attachment.