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**The Role of Emotional Intelligence, Attachment, and Coping
in Mediating the Effects of Childhood Abuse**

by

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A thesis submitted to the Psychology Department
in partial fulfillment of the requirements for
the degree of Doctor of Philosophy

Department of Psychology

Carleton University

Ottawa, Ontario

February, 2004

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Abstract

Emotional intelligence (EI) is comprised of a number of skills in the processing and managing of emotions. Although EI is commonly heralded as the panacea for success in life, research on EI is in its infancy. In particular, no research has examined the predictors of the unified model of EI as a set of interrelated abilities. Consequently, how the development of EI may be disrupted by experiences of childhood maltreatment, and how these disruptions in EI may, in turn, affect psychological functioning and well-being, were examined. Further, in order to explore the convergent and discriminant validity of EI, the relations between EI and attachment were assessed, and how EI and attachment mediated the relationship between childhood maltreatment and adult well-being were compared. In addition, the extent to which EI was associated with individuals' coping mechanisms was examined. Participants' ($N = 223$) EI, experiences of childhood maltreatment, attachment, coping, and well-being were assessed. Findings suggest that EI is disrupted by the experience of childhood maltreatment, which, in turn, is detrimental to well-being. EI and attachment were intercorrelated and, although both mediated the effects of childhood maltreatment on well-being, they were not redundant, as both made independent contributions to individuals' well-being. Further, individuals with lower EI tended to use less adaptive coping strategies, which, in turn, were detrimental to their well-being. Strengths and limitations of this investigation and issues relevant to the construct validity and the appropriate measurement of EI are discussed.

Acknowledgements

I would like to take this opportunity to thank the people who have played important parts in the successful completion of this dissertation.

I wish to thank my advisor, Dr. Kimberly Matheson, for her interest, her expertise, and above all, her enduring guidance and support throughout this project. Working with Kim throughout the years has been invaluable and I am better for the experience. I would also like to thank my dissertation committee members, Dr. Janet Mantler, Dr. John Zelenski, Dr. Katharine Kelly, & Dr. John Telner for their valuable time and suggestions. Special thanks to Marta Kadziolka for her interest and contribution.

I am also deeply thankful to my friends and colleagues who have been important to me in so many ways. I am most grateful for their love, friendship, and support, and for the fun and special times we have shared. Warm thanks to my parents, Raisa and Mikhail Goldenberg, and to my in-laws, Lillian and Mark Zunder for their encouragement, guidance, and assistance of all kinds throughout the years. I am blessed to have two sets of remarkable parents. I am profoundly grateful to my husband and best friend, Eric Zunder, for his love, constant companionship, and unfailing faith, in sunshine and in rain. I must also thank my canine companion, Phantom Goldenberg – he is truly an angel in a dog's body.

Last, but certainly not least, I would like to thank the individuals who took the time to participate in this study and to share from their experiences. This research would not have been possible without them.

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The Role of Emotional Intelligence, Attachment, and Coping in Mediating the Effects of Childhood Abuse

At the intersection of cognition and emotion lies a construct labeled ‘emotional intelligence’ (EI). The concept of EI was introduced and defined by Salovey and Mayer in 1990, and has since received a great amount of interest in both the scholarly and popular literature. EI, defined as an ability, is comprised of a number of skills in the area of emotion, including emotional perception and expression, emotional facilitation of thinking, emotional understanding, and emotional regulation. At the heart of EI are the propositions that emotion can make thinking more intelligent, and that one can think intelligently about emotions (Mayer & Salovey, 1993; 1995; 1997; Salovey & Mayer, 1990).

Research on EI is in its infancy and, to date, no research has examined the predictors of the unified model of EI conceptualized as a set of interrelated abilities. Thus, a central issue of interest in the present investigation was the identification of factors that may promote or disrupt EI. Given that the family is likely a primary agent for teaching children emotional competencies and abilities (Denham, Renwick-DeBardi, & Hews, 1994; Eisenberg, Fabes, Losoya, 1997; Gottman, Katz, & Hooven, 1996), the family environment during childhood development is likely to be an important contributor to EI. Although prospective analysis of the development of EI abilities would be ideal for tracking the role of family factors, an alternative strategy is to assess whether EI is limited when the early life family environment is not conducive to the child’s healthy psychological or emotional development. In particular, this study investigated how the development of EI may be disrupted by experiences of childhood abuse. It was predicted that childhood abuse would detrimental to the development of EI. To the extent that childhood abuse restricts EI,

and given that EI may be an important contributor to well-being (Ciarrochi, Chan, & Caputi, 2000; Cobb & Mayer, 2000; Martinez-Pons, 1997; Trinidad & Johnson, 2002), it was further predicted that EI would mediate the long-term impact of childhood abuse on psychological functioning and well-being.

Although the implications of EI for understanding adult well-being was the primary focus of the present investigation, there is reason to believe that it was not alone in terms of being disrupted by an abusive childhood and its relation to adult well-being. Indeed, it has been asserted that the construct validity of EI entails demonstrating its convergent validity, or its relationship to other theoretically related variables, albeit at the same time showing that it predicts aspects of well-being not accounted for by these other variables (Matthews et al., 2002; Mayer et al., 2002). A review of the EI and attachment literatures suggests that these two constructs may be highly similar, perhaps even redundant. Previous research has shown that quality of individuals' attachment security is affected by childhood abuse and that individuals' attachment styles subsequently mediated the relationship between childhood abuse and well-being. The connections between EI and attachment have yet to be empirically examined, but would clearly be informative in terms of providing a better understanding of what EI entails. Thus, this study examined the relations between EI and attachment both directly, and in terms of the extent to which EI and attachment similarly mediated the relationship between childhood maltreatment and adult well-being.

Finally, it has been proposed that EI mediates the relationship between childhood abuse and well-being, possibly because it provides the skills and personal resources to effectively cope with life stressors. For example, individuals who are less adept at regulating negative emotions may use less adaptive coping mechanisms, such

as avoidance or acting out, than individuals who are better at regulating their emotions. As is the case with attachment, the extent to which coping mediates the relationship between childhood abuse and well-being has already received some empirical attention. However, the extent to which EI is associated with the coping mechanisms individuals tend to use has not previously been examined. It was predicted in the present investigation that individuals with higher EI would use more adaptive coping strategies than individuals with lower EI, and this may be the more proximal mediator of adult well-being.

Emotional Intelligence

Ability Models versus Mixed Models of Emotional Intelligence

In recent years, there has been considerable popular interest in the concept of emotional intelligence. Emotional intelligence is an umbrella term that comprises elements such as 'soft skills,' 'people skills,' and an individual's general ability to cope with life's demands. The attraction for this construct of EI likely stems from the popular view that it takes more than just traditional intelligence to succeed in life. People are aware that some individuals of seemingly average intelligence do well in life, whereas others struggle with life's challenges despite possessing a high IQ. Thus, the underlying theme of work on emotional intelligence is that general intelligence and academic success are not necessarily good predictors of life success and that other attributes may be better determinants (Gardner, 1995; Goleman, 1995; Sternberg, 1993; 1996; Tapia, 2001). Goleman (1995), for example, notes that IQ at best contributes about 20 percent of the variance in life success (with respect to most areas of life, including emotional, interpersonal, and occupational success) and that EI can

explain the majority of the rest of that variance. Consequently, EI is now commonly heralded as the panacea for predicting success in life.

The concept of emotional intelligence was coined and defined by Salovey and Mayer in 1990. Despite this recent debut, there are already a number of different conceptualizations that propose competing definitions of EI and include vastly different components. These conceptualizations, or frameworks, may be divided into two general streams: Ability models in which EI is defined as a set of cognitive abilities in emotional functioning (Mayer & Salovey, 1997), and mixed trait-ability models which incorporate a wide range of personality characteristics and other traits (Bar-On, 2001; Goleman, 1995; 1998).

Ability models of EI conceptualize this construct as a form of intelligence that involves emotion (Mayer & Salovey, 1997; Mayer, Salovey, & Caruso, 2000a; Salovey, Woolery, & Mayer, 2001). EI is thought to have a number of similarities to other types of intelligence (i.e., it should reflect a type of ability or mental performance; it should be related to other types of abilities; and it should develop with age and experience) (Guttman & Levy, 1991; Neisser et al., 1996; Sternberg, 2001). Therefore, according to ability models, EI is defined as a set of cognitive abilities that relates specifically to intelligence in the processing and use of emotional information.

The more popularized mixed trait-ability models of EI also often include what may be thought of as abilities in the processing and use of emotional information, but combine these abilities with many other traits and characteristics such as optimism, motivation, and capacity to engage in relationships (Bar-On, 2000; 2001; Cooper & Sawaf, 1997; Goleman, 1995; 1998; Weisinger, 1998). These models embody a wide range of characteristics and personality traits that appear to be beneficial and seem to reflect 'good character.' Thus, many of the dimensions included in these models seem

more like valued traits or talents (such as extroversion and zeal) than abilities. These formulations conceive EI as a disposition or an affective characteristic rather than focusing on the cognitive components of this construct. For example, Bar'On, who is arguably the most influential contributor to mixed trait-ability models of EI, (1997, as cited in Newsome, Day, & Catano, 2000) specifically defines EI as "an array of noncognitive abilities, competencies, and skills" (p. 14). It may be argued that while such qualities may be of value to personal functioning, to call them 'intelligence' is incongruent with established definitions of intelligence (Mayer & Salovey, 1997). Further, these latter conceptualizations blend the dimensions of EI with some factors that may best be considered to be outcomes, such as well-being, happiness, and success in relationships.

The differences between the ability based and the mixed trait-ability models of EI are therefore considerable. This likely leads to confusion for readers of this literature and for other consumers who want to apply EI in organizational, educational, and other settings. Mixed trait-ability models are potentially of value in that they examine multiple aspects of personality at once. However, they do not appear to represent any new conceptualization of emotional functioning per se and do not seem to relate specifically to the concepts of either emotion or of intelligence. Ability models, by contrast, are more theory-driven than mixed trait-ability models as they stem largely from theories in the areas of affect (e.g., Forgas, 2001) and intelligence (e.g., Sternberg, 2001). Consequently, ability models speak specifically to the emotional domain and they attempt to define EI as involving cognitive capacities, similar to other forms of intelligence. As a result, it is the 'ability' conceptualization of EI that was considered in this thesis.

It should be noted that other constructs that comprise, or are related to, this ability model have been considered. Some of the most popular of these constructs relating to emotional abilities include intrapersonal intelligence (Gardner, 1983), emotional control (Roger & Najarian, 1989), somat awareness (Bernet, 1996; 1997), emotional awareness (Lane & Schwartz, 1987), alexithymia (Taylor, 2001; Taylor & Bagby, 2000), affective intelligence (Forgas, 2001), empathic accuracy (Flury & Ickes, 2001), and emotional creativity (Averill, 2001; Averill & Thomas-Knowles, 1991). The research conducted with respect to these constructs provided a useful starting point in the development of a more comprehensive conceptualization of EI.

Ability Model of Emotional Intelligence

Mayer and Salovey (1997) point out that emotion and intelligence have often been seen as being in opposition with one another. Emotions have been viewed as essentially irrational and disruptive. However, it is now increasingly recognized by researchers in the area of affect and cognition, that, in many cases, emotional reactions promote intelligence by interrupting ongoing processing and directing attention toward what may be important (Forgas, 2001; Mayer & Salovey, 1997).

Thus, the study of EI emerged, in part, from the research area of affect and cognition – an area that is concerned with how emotion changed thought, and vice versa (Mayer, 2001b). This framework of EI stems from previous research concerning individual differences in processing and adapting to affective information (Mayer & Salovey, 1993), and implies that there are individual differences in people's abilities to have effective control over, and make effective use of, their emotions (Mayer, DiPaolo, & Salovey, 1990; Salovey, Hsee, & Mayer, 1993; Salovey & Mayer, 1990). The underlying premise is that many intellectual problems contain emotional information that must be processed and that this processing may proceed

differently than the processing of non-emotional information (Mayer & Salovey, 1993).

Components of emotional intelligence. According to Mayer, Salovey, and their colleagues, EI is comprised of four levels of abilities ranging from basic to more complex processes. The components of this framework include: 1) the ability to perceive and express emotion; 2) the ability to use emotions to facilitate thought; 3) the ability to understand emotions and their meanings; and 4) the ability to regulate emotions (Mayer, Caruso, & Salovey, 2000b; Mayer & Salovey, 1997; Mayer, Salovey, & Caruso, 2000a). The perception, appraisal, and expression of emotion are viewed as the most basic processes, while the regulation of emotions is thought to require more complex processing. Furthermore, each of these four components has associated with it subcomponent abilities (Mayer & Salovey, 1997; Mayer, Caruso, & Salovey, 2000a) (see Table 1).

Factor analyses show that EI represents a two-level hierarchy. At the top of the hierarchy there is a general EI factor that represents a set of inter-related skills. Although the component abilities are inter-correlated, they may also be broken down further into the four subsidiary factors of emotional perception and expression, emotional facilitation, emotional understanding, and emotional management (Mayer, Caruso, & Salovey, 2000a).

Table 1.

The Four-Branch Model of Emotional Intelligence

The Four-Branch Model of Emotional Intelligence (reproduced from Salovey, Mayer, & Caruso, 2002, p. 162)
Emotional Perception and Expression Ability to identify emotion in one's physical and psychological states Ability to identify emotion in other people Ability to express emotions accurately and to express needs related to them Ability to discriminate between accurate/honest and inaccurate/dishonest feelings
Emotional Facilitation of Thought Ability to redirect and prioritize thinking on the basis of associated feelings Ability to generate emotions to facilitate judgment and memory Ability to capitalize on mood changes to appreciate multiple points of view Ability to use emotional states to facilitate problem solving and creativity
Emotional Understanding Ability to understand relationships among various emotions Ability to perceive the causes and consequences of emotions Ability to understand complex feelings, emotional blends, and contradictory states Ability to understand transitions among emotions
Emotional Management Ability to be open to feelings, both pleasant and unpleasant Ability to monitor and reflect on emotions Ability to engage, prolong, or detach from an emotional state Ability to manage emotions in oneself Ability to manage emotions in others

Empirical Findings on the Relation Between EI and Well-Being

Perhaps the most important criterion for establishing the construct of EI is whether it ultimately predicts life success in various domains related to personal functioning. Thus far, it seems that there is no shortage of powerful claims about the importance of EI in the popular literature and in self-help writings, but some researchers in the field, including proponents of this construct, have somewhat less ambitious, more realistic expectations regarding the predictive value of EI. For example, Mayer, Salovey, and Caruso (2000a) write:

According to popular writing, if intelligence predicts 20% of the variance of some success, emotional intelligence can help fill in the 80% gap. To the unsophisticated reader, bringing up the "80% unaccounted-for variance" figure

suggests that there may indeed be a heretofore overlooked variable that truly can predict huge portions of life success. Although that is desirable, no variable studied in a century of psychology has made such huge contributions” (p. 412).

These researchers recognize that other important variables, such as IQ and personality variables, have much explanatory power with respect to most aspects of life success. Consequently, they posit that additional prediction that can be gained over and above other explanatory variables is likely to range from 1 – 5 percent (e.g., Mayer, Salovey, & Caruso, 2000a).

Some studies have examined how total EI (defined as a set of abilities) relates to various aspects of mental health and general well-being. For example, it has been found that EI is related to life satisfaction (Martinez-Pons, 1997) even after controlling for personality traits (such as extroversion and neuroticism), IQ (Ciarrochi et al, 2000), and participants’ adaptive goal orientation (Martinez-Pons, 1997). There are also findings that suggest that EI is predictive of people’s behaviour, and that those with high levels of EI engage in fewer ‘negative’ behaviours such as engaging in fights and arguments, smoking, and substance abuse than individuals with low levels (Cobb & Mayer, 2000; Trinidad & Johnson, 2002). Although there is a paucity of predictive studies, together, this research suggests that EI is related to a number of aspects of well-being.

However, research focusing on the individual components of EI also contributes to its predictive validity. Emotional perception, which is on the lowest branch of the ability EI model (e.g., Mayer & Salovey, 1997, Salovey et al., 2002), has been found to be related to better mental health, contentment, creativity, and personal warmth (Bernet, 1996), lower defensiveness (Salovey, Mayer, Goldman,

Turvey, & Palfai, 1995; Mayer & Geher, 1996), and to facilitate maintenance of, and return to, better moods (Ciarrochi et al., 2000). There is also evidence that high scores on emotional perception in and of themselves, may not always be beneficial and that, perhaps counter-intuitively, emotionally perceptive people sometimes respond more strongly to stress (Salovey, Woolery, & Mayer, 2001; Salovey et al., 1995; Sternberg, 2001; Swinkels & Giuliano, 1995). This may be because they are more aware of the interpersonal and other contextual circumstances that precipitate stress. Perhaps it is the accuracy with which people perceive their emotions, rather than a generally high level of attention to emotions, that is predictive of well-being.

Ability to express emotions, also on the lowest branch of the ability EI model (Mayer & Salovey, 1997; Salovey et al., 2002), has also been found to relate to well-being. The ability to express emotions appropriately has been found to be related to the frequency of reporting negative moods (King & Emmons, 1990; 1991; Pennebaker & Beall, 1986) and psychiatric symptomatology (Greenberg & Stone, 1992; King & Emmons, 1990; 1991; Parker, 2000; Taylor, 2001). Expression of emotionally-laden content is also associated with fewer physician visits (Greenberg & Stone, 1992; Pennebaker & Beall, 1986) enhanced immune functioning (Pennebaker, 1993; Pennebaker, Kiecolt-Glaser, & Glaser, 1988) and lower levels of self-reported physical symptoms (Greenberg & Stone, 1992).

Emotional clarity or understanding is considered to be a higher-order ability within the EI model than perception and expression of emotion (e.g., Mayer & Salovey, 1997; Salovey et al., 2002). Clarity about one's moods has been found to relate to lower social anxiety (Salovey, Stroud, Woolery & Epel, 2000; Swinkels & Giuliano, 1995), depression (Salovey et al., 1995; Salovey, Stroud, Woolery, & Epel, 2000), physical symptomatology (Salovey, Stroud, Woolery, & Epel, 2000), general

distress (Salovey et al., 1995) and to higher self-esteem, and life satisfaction (Swinkels & Giuliano, 1995). Those with high emotional clarity have also been found to respond less extremely to laboratory stressors (Salovey, Stroud, Woolery, & Epel, 2000) and to rebound more quickly from negative moods (Salovey et al., 1995). Interestingly, those high in emotional clarity were found to engage in less rumination about their moods (Salovey et al., 1995). Thus, it seems that a great deal of attention to feelings is related to rumination, but if one is clear about those feelings, perhaps less attention needs to be paid to those feelings, resulting in less ruminative thinking.

Abilities in the management, regulation, and repair of moods comprise the highest-order EI abilities within the ability EI model (e.g., Mayer & Salovey, 1997; Salovey et al., 2002). It has been found that those who score highly on emotional repair experience less social anxiety, depression, physical symptoms (Catanzaro & Mearns, 1990; Salovey et al., 1995; Salovey, Woolery, & Mayer, 2001), less suicidal ideation (Ciarrochi, Chan, Caputi, & Roberts, 2001) and lower levels of general distress (Salovey et al., 1995) than low scorers. In addition, these individuals tend to be more optimistic than those who do not attempt to repair their moods (Salovey et al., 1995; Salovey, Woolery, & Mayer, 2001).

Summary. Research to date supports the utility of EI and its components in predicting certain aspects of health and well-being. Thus, it seems that EI is related to well-being. However, some negative findings regarding the importance of EI, or at least of some of its components, have also emerged. In addition, no research to date has examined the predictors of the unified model of EI conceptualized as a set of interrelated abilities. At this point, it is important for research to continue in order to inform the refinement of the construct of EI, including factors that contribute to the development of EI and how EI, in turn, contributes to individual functioning. Thus,

the present research examined the extent to which EI mediated the relationship between childhood abuse and well-being.

Childhood Abuse

Prevalence of Childhood Abuse

According to the National Clearinghouse on Child Abuse and Neglect published by the US department of Health and Human Services (2002), child abuse is defined as “Any recent act or failure to act on the part of a parent or caretaker which results in death, serious physical or emotional harm ... An act or failure to act which presents an imminent risk of serious harm.” Abuse may be evident in a multitude of forms. Specifically, physical abuse “is characterized by the infliction of physical injury as a result of punching, beating, kicking, biting, burning, shaking, or otherwise harming a child. The parent or caretaker may not have intended to hurt the child; rather, the injury may have resulted from over-discipline or physical punishment.” Child neglect “is characterized by failure to provide for the child’s basic needs.” Physical neglect includes “refusal of, or delay in, seeking health care; abandonment; expulsion from the home or refusal to allow a runaway to return home; and inadequate supervision”. Emotional neglect “includes such actions as marked inattention to the child’s needs for affection; refusal of or failure to provide needed psychological care; spouse abuse in the child’s presence; and permission of drug or alcohol use by the child”. Sexual abuse includes “fondling a child’s genitals, intercourse, incest, rape, sodomy, exhibitionism, and commercial exploitation through prostitution or the production of pornographic materials.” Emotional Abuse (also referred to as psychological or verbal abuse) “includes acts or omissions by the parents or other caregivers that have caused, or could cause, serious behavioral, cognitive, emotional, or mental disorders.” For example, the parents or caregivers may use extreme or

bizarre forms of punishment, such as confinement of a child in a dark closet. Other acts, such as habitual scapegoating, belittling, or rejecting treatment, are also considered to be emotionally abusive. In addition, there are many aspects within the various types of abuse and neglect, including subtype, severity, frequency, and chronicity (Manly, Cicchetti, & Barnett, 1994). As well, the child's particular characteristics, such as age, gender, and temperament, may make him or her more vulnerable to particular forms of abuse or neglect (Glaser, 2000).

The prevalence of childhood abuse is difficult to estimate in Canada because each province and territory has different definitions of abuse and different laws regarding its reporting and investigation. Not all provinces and territories have central registries of child abuse and neglect (Kotch, Muller, & Blakely, 1999). The most comprehensive estimates come from Ontario, which has mandatory reporting laws for child abuse and neglect and the cases are investigated by Ontario's 54 children's aid societies. Estimates based on these data indicate that 21 in every 1000 children (2.1%) are victims of some form of childhood abuse (Trocme, McPhee, & Tam, 1995; Trocme, McPhee, Tam, & Hay, 1994). It should be noted that the definition of abuse adopted is important in influencing prevalence estimates (Brooker, Cawson, Kelly, & Wattam, 2001; Creighton, 1988).

Researchers generally use one of two methods to estimate the prevalence of childhood abuse. These include official estimates, which are based on the number of cases of childhood abuse reported to governmental social service agencies and self-report surveys which examine the proportions of individuals in a population that have experienced childhood abuse. According to the American Association for Protecting Children (AAPC), which conducted an annual survey of official reports of childhood abuse documented by child protective services agencies, 47 out of 1000 children

(4.7%) have been victims of some type of childhood abuse (Weise & Daro, 1995). Similarly, the US department of Health and Human Services, National Center on Child Abuse and Neglect reported that official child protective service agencies investigated 3 million reports of childhood abuse in 1995, which is a rate of 43 in every 1000 (4.3%) children (Kotch et al., 1999). Eighty percent of the perpetrators of these acts of childhood abuse were parents (Kotch et al., 1999). Because many incidents of childhood abuse are never reported (Zellman, 1990) these figures likely underestimate the actual prevalence of childhood abuse.

Estimates of childhood abuse that capture some of the cases that have not been officially reported come from using self-report surveys of the general population. Brooker, Cawson, Kelly, and Wattam (2001) conducted a national survey of childhood abuse, sponsored by the National Society for Cruelty to Children using a large ($N = 2869$) random probability sample of young adults between the ages of 18 and 24 years of age (it was reasoned that their experiences of child abuse would be most recent). They found that 7% of the respondents had experienced physical abuse, 1% had experienced physical neglect concerning lack of food and appropriate shelter whereas 5% had experienced physical neglect concerning serious absence of supervision, 6% had been emotionally abused, and 11% (7% of males and 16% of females) had experienced sexual abuse.

In a national survey of 2626 adults conducted specifically to explore the prevalence of childhood sexual abuse, 27% of women and 16% of men reported at least one experience of childhood sexual abuse, ranging from exposure and “grabbing” to oral sex and intercourse (Finkelhor, Hotelling, Lewis, & Smith, 1990). Finkelhor (1994) conducted a review of self-report surveys and concluded that at least

20% of women and between 5% and 10% of men in North America have experienced some form of child sexual abuse.

The prevalence of emotional abuse on children is difficult to determine because of serious problems with definitions of the problem, under-reporting of the problem, as well as a relative lack of research into the issue (Barnett et al., 1997; Briere, 1992; Hamarman & Bernet, 2000). However, because this type of abuse frequently co-occurs with other types of abuse, but can occur in isolation as well, a recent review suggests that this is the most common form of childhood maltreatment (Hart, Binggeli, & Brassard, 1998).

Thus, it seems that childhood abuse is a common problem in our society. It should also be noted that although the various types of child abuse may be found to occur alone, they often occur in combination. Emotional abuse is almost always present during the occurrence of other forms of abuse (Crittenden, Claussen, & Sugarman, 1994; National Clearinghouse on Child Abuse and Neglect, 2000).

Effects of Childhood Abuse on Adult Well-Being

Much research has focused on investigating the long-term effects of childhood abuse on adult functioning. Aggregate research indicates that childhood abuse is associated with a number of pathologies. These might include depression (Liem & Boudewyn, 1999), anxiety disorders (Schechter, Marshall, Salman, Goetz, Davies, & Liebowitz, 2000), substance abuse (Millar & Stermac, 2000), dissociation (van der Kolk, Perry, & Herman, 1991), posttraumatic stress disorder (PTSD; Paivio & Shimp, 1998), eating disorders (van der Kolk et al., 1991), disturbances in sense of self (Millar & Stermac, 2000) and lower self-esteem (Liem & Boudewyn, 1999), borderline personality disorder (Herman, Perry, & van der Kolk, 1989; Wilkins & Warner, 2001); self-destructive behavior (Liem & Boudewyn, 1999; Schechter et al.,

2000; van der Kolk et al., 1991), social difficulties (Varia, Abidin, & Dass, 1996) and suicidality (van der Kolk et al., 1991).

Childhood abuse often occurs in association with other problems within the environment and the family, such as marital discord and violence, parental alcohol or drug abuse, and parental psychopathology (Barnett et al., 1997; Browne & Anderson, 1991; Crittenden et al., 1994; Kotch et al., 1999). Thus, it is likely that the long-term effects of the various forms of childhood abuse are more similar than different, and that these effects are confounded with the occurrence of many other factors. Consistent with this, a review of research regarding the long-term sequelae of various types of childhood maltreatment indicates a general negative effect of childhood abuse rather than more specific effects of different types of abuse (Alexander, 1992; Hobfoll et al., 2002), although different types of abuse may also have effects that are more specific to them (Hart et al., 1998; Marcy, 1998). In addition, research indicates that more severe childhood abuse is associated with more deleterious effects on well-being (van der Kolk et al., 1991). For example, when individuals have been exposed to multiple forms of childhood abuse, they exhibit more psychological problems (Browne & Anderson, 1991).

Childhood Abuse and Emotional Intelligence

Development of EI in childhood, characteristics of abusive parents, and EI of abused children. The family is likely the primary agent for teaching children emotional competencies and abilities (e.g., Denham et al., 1994; Eisenberg et al., 1994; Gottman et al., 1996; Greenberg & Snell, 1997; Gregely & Watson, 1996; Parke et al., 1989; Scharfe, 2000). For example, children's competence at expressing emotions clearly and effectively has been found to be related to parental modeling of both positive and nonhostile negative emotions in the home (Balswick & Avertt,

1977; Denham & Grout, 1993; Eisenberg et al., 1997; Halberstadt, 1986). In addition, research indicates that parents who show concern for, and encouragement of, the expression of emotion in their children have children who are better able to express their emotions accurately and appropriately (Eisenberg et al., 1997; Malatesta-Magai, Leak, Testman, Shapard, Culver, & Smaggia, 1994) and who have greater empathy or insight into the emotions of others (Eisenberg, Fabes, Schaller, Carlo, & Miller, 1991; Gergely & Watson, 1996).

Parental behaviour has also been linked to children's understanding of emotion (Dunn & Brown, 1994; Fivush & Kuebli, 1997). Specifically, children develop better understanding of emotions, including their causes and consequences, when parents generally pose facial expressions in a clear and nonambiguous manner (Camras, Ribordy, Hill, Martino, Spaccarelli, & Stefani, 1988) and when they more often engage in discussions about feelings with their children (Dunn, Bretherton, & Munn, 1987; Dunn & Brown, 1994; Dunn, Brown, & Beardsall, 1991; Dunn, Brown, Slomkowski, Telsa, & Youngblade, 1991).

A considerable amount of research indicates that the ability to manage or regulate emotions is influenced by parental behaviour, such as, the extent of parents' responsiveness to the child's feelings and encouragement of the child's emotional expressions (Calkins, 1994; Cummings, Zahn-Waxler, & Radke-Yarrow, 1984; Denham, 1993; Eisenberg et al., 1997; Eisenberg et al., 2001; El-Sheikh, 1994; Field, 1994; Garber, Braafladt, & Zeman, 1991; Gottman et al., 1996; Miller, Kliewer, Hepworth, & Sandler, 1994; Nolen-Hoeksema, Wolfson, Mumme, & Guskin, 1995). These parental behaviours have also been shown to influence children's abilities in dealing with and managing the emotions of others (Denham & Grout, 1993; Denham et al., 1994; McCoy & Masters, 1990; Parke, 1994).

Given the importance of parenting on the development of children's EI, it is relevant to consider the impacts of abusive parenting on children's emotional development. An examination of the existing literature indicates that abusive parents evidence a number of problematic parenting behaviors and parenting deficits that may have detrimental effects on the emotional development of their children (Alessandri & Lewis, 1996; Balge & Milner, 2000; Calkins, 1994; Camras et al., 1988; Camras, Sachs-Alter, & Ribordy, 1996; Dix, 1991; During & McMahon, 1991; Paivio & Laurent, 2001; Pollak, Cicchetti, Hornung, & Reed, 2000; Reider & Cicchetti, 1989; Roberts & Strayer, 1987; van der Kolk & Fisler, 1994). Research indicates that abusive parents tend to be less emotionally expressive toward, and less engaged with, their children (Camras et al., 1996; Cicchetti & Beegley, 1987; Dix, 1991; During & McMahon, 1991; Pollak et al., 2000), to exhibit emotional expressions that tend to be more confusing, ambiguous, and situationally inappropriate (Camras et al., 1988; Camras et al., 1996; During & McMahon, 1991; Howe, Tepper, & Parke, 1998), to express more negative emotion, less positive emotion, and greater hostility towards their children (Alessandri & Lewis, 1996; Camras et al., 1996; During & McMahon, 1991; Pollak et al., 2000), to be less attentive to, as well as less accurate and more negatively biased in perceiving the behaviour and emotional expressions of their children (Alessandri & Lewis, 1996; Balge & Milner, 2000; Dix, 1991; During & McMahon, 1991), and to respond to these emotional expressions in insensitive, negative, unpredictable, or inconsistent ways (Dix, 1991; Howe et al., 1998; Reider & Cicchetti, 1989; van der Kolk & Fisler, 1994).

Given the importance of parental influence on the development of children's emotional abilities, and that the behaviour of abusive parents towards their children may be problematic and less conducive to the development of necessary emotional

abilities, it is not surprising that research findings indicate that the emotional development of abused children is impaired (Field, 1994). A number of research studies have demonstrated that abused children are less skilled at accurately identifying others' facial expressions of emotion (Camras, Grow, & Ribordy, 1983; Camras et al., 1988; Camras et al., 1996; During & McMahon, 1981; Pollak et al., 2000) and emotions presented in the form of audiotaped scenarios (Baharal, Waterman, & Martin, 1981) than their nonabused counterparts. Furthermore, it has been found that children who have experienced abuse have difficulty in expressing their own emotions appropriately (Camras et al., 1988), and employ facial expressions that may be characterized as blank or difficult to interpret (Gaensbauer, Mrazek, & Harmon, 1981; Gaensbauer & Sands, 1979).

Several studies indicate that children who have experienced abuse may have impaired emotional understanding (Camras et al., 1988; Camras et al., 1996). Furthermore, researchers in the area of emotional development have highlighted the childhood years as paramount to the development of affect regulation (e.g., Cole, Michel, & Teti, 1994; Field, 1994; Gergely & Watson, 1996; Shields & Cicchetti, 1997). Thus, it is not surprising that another fundamental effect of childhood abuse is its hindrance on children's ability to regulate the quality and intensity of their emotions (e.g., Cole et al., 1994; Field, 1994; Gergely & Watson, 1996; Glaser, 2000; Gottman et al., 1996; Shields & Cicchetti, 1997; Shields, Cicchetti, & Ryan, 1994; Shields, Ryan, & Cichetti, 2001; van der Kolk & Fisler, 1994). Children who have been abused have been found to respond to other children's distress inappropriately, including with anger, fear, and aggression, rather than the empathy and concern typically seen in nonabused children (Main & George, 1985). In light of these findings regarding the impaired emotional abilities of children who have experienced

maltreatment, it is likely that the emotional abilities of adults who have experienced childhood maltreatment would also be compromised.

Emotional Intelligence in Adults Abused as Children

Impairments in EI are evident in individuals who have suffered childhood abuse. Furthermore, impairments in the component abilities of EI seem to co-occur, as suggested by Mayer, Salovey, and colleagues' hierarchical model of EI (Mayer & Salovey, 1997; Mayer, Salovey, & Caruso, 2000a; 2000b; Salovey, Mayer, & Caruso, 2002). For example, Millar and Stermac (2000) conducted an in-depth qualitative study examining the recovery of six adult women who had a history of childhood abuse. One of the three core themes that emerged was 'managing emotions' (along with developing a new sense of identity and creating adaptive attachment styles). This managing emotions factor of recovery "consists of women's experience of identifying, labeling, understanding, and altering their affective states" (p. 177). More specifically, the women identified four stages in the process of managing emotions. The first stage included identifying emotions accurately, which was described as being important to connecting with one's psychological interior and to facilitating the resolution of negative or harmful affective states. The next stage identified involved finding meaning in emotions or gleaning insight into the question of "why am I feeling this way?" (p. 178). Finding meaning in emotions was described as being dependent on the ability to be aware of, and connected to, one's emotions. The following stage entailed the need to confront painful emotions and being able to get rid of unwanted or painful feelings. In facilitating this process, women reported the need to express their emotions and to talk openly and honestly about their emotional pain. The final stage identified by these women was the importance of cultivating positive emotions. Respondents reported that they were able to achieve this by

learning to view experiences, even negative experiences, from multiple perspectives, including seeing their positive aspects, and by establishing a 'safe place' to experience their feelings. This small-scale qualitative study illustrates how many of the emotional abilities encompassed by the EI model co-occur together, and how the development of some abilities facilitates the improvement of others, at least in the interpretation of these six women's stories.

Most research regarding the effects of childhood abuse has focused on the examination of the component EI abilities individually. This research suggests that those who have experienced childhood abuse evidence difficulties in emotional perception and expression, emotional facilitation of thought, emotional understanding, and emotional management.

Emotional perception and expression. Krystal (1978) was amongst the first researchers to discuss how childhood abuse results in an inability to identify specific emotions, an effect he referred to as 'affect dedifferentiation.' This affect dedifferentiation may stem from the finding that those who have experienced childhood abuse often report feeling emotionally cut off from, or numb to, their emotions (Cole et al., 1994; Paivio & Shimp, 1998). This emotional style, which likely developed to protect a young victimized child from distress typically associated with abuse, may be continued into adulthood, resulting in "a profound truncation of emotionality that has serious long-term consequences for adult functioning" (Cole et al., 1994, p. 82). Survivors of childhood abuse may also feel disconnected from their feelings because in abusive environments, feelings such as anger and sadness are frequently unsupported or dismissed (Paivio & Shimp, 1998).

Although survivors of childhood abuse avoid their own emotions, they may become 'externally vigilant' and pay a great deal of attention to the emotions of

others, which may have stemmed from having to live in a dangerous or unpredictable environment (Brown, 1992; Paivio & Shimp, 1998). A number of studies indicate that individuals who have been abused have greater expectation of, and thus a greater need for, detecting signals of danger, which leads them to be especially vigilant of others (Fish-Murray, Kolby, & van der Kolk, 1987; Herman, 1992; Linehan, 1993; Terr, 1991). As a result of this careful monitoring, survivors of childhood abuse may be more perceptive to, and better able to identify, the feelings of others (Carter & Rinsley, 1977; van der Kolk, 1996). As described by Herman (1992), those who have been abused

become minutely attuned to their abuser's inner states. They learn to recognize subtle changes in facial expression, voice, and body language as signals of anger, sexual arousal, intoxication, or dissociation. This nonverbal communication becomes highly automatic and occurs for the most part outside of conscious awareness (p. 99).

Paradoxically, due to their sensitivity to signals of threat and their anticipation of abuse, there is also evidence that survivors of childhood abuse are likely to go beyond the available information and are likely to 'jump the gun' and perceive threat or danger, especially in ambiguous situations (Briere & Runtz, 1993; Root, 1992; van der Kolk, 1996). For example, in an experimental study that examined the accuracy of facial recognition in a set of facial pictures, it was found that those who had experienced childhood sexual abuse were less accurate in identifying the emotions in neutral facial expression pictures than those who had not experienced sexual abuse (Wagner & Linehan, 1999). Abuse survivors were more likely to misinterpret neutral facial expressions negatively, and particularly, showed a tendency to overreport fear in nonfear pictures (Wagner & Linehan, 1999).

Those who have been abused in childhood may also be less able to express their emotions to others. This is likely because these individuals have often experienced unempathic responses to their attempts at emotional expression (Alessandri & Lewis, 1996; Balge & Milner, 2000; Dix, 1991; During & McMahon, 1991). Their demonstrations of feelings such as fear and sadness have often been disregarded or even punished (Dix, 1991; Howe et al., 1998; Paivio & Shimp, 1998; Reider & Cicchetti, 1989; van der Kolk & Fisler, 1994). Furthermore, fears of being rejected may inhibit survivors of childhood abuse from reaching out (Paivio & Shimp, 1998).

Corroborative evidence of impairments in EI in individuals who have experienced childhood abuse also comes from research on alexithymia. Like EI, alexithymia is not a categorical concept, but rather is conceptualized as a dimensional phenomenon that is distributed normally in the general population (Taylor & Bagby, 2000). The features of alexithymia include difficulty in identifying and expressing feelings; difficulty in distinguishing between feelings and bodily changes of emotional arousal; constricted imaginal capacities, as evidenced by a lack of fantasies; and an externally oriented cognitive style (Taylor, 2000; Taylor & Bagby, 2000). Thus, it is clear that the alexithymia construct encompasses many of the components subsumed under the definition of EI and suggests a number of intercorrelations between these constructs. For example, features of alexithymia are related to deficits in the cognitive processing of emotions (Lane, Sechrest, Reidel, Weldon, Kaszniak, & Schwartz, 1996; Taylor, Bagby, & Parker, 1997). A recent review also suggests that individuals high in alexithymia have difficulty identifying emotions in the facial expressions of others and more generally, in empathizing with others' emotional states (Taylor & Bagby, 2000). Difficulty with emotional regulation are also thought to be reflected by

the association between alexithymia and a number of medical and psychiatric disorders in which emotions are poorly regulated (e.g., panic disorder, posttraumatic stress disorder, substance use disorders, hypertension, gastrointestinal disorders, and somatization) (Taylor & Bagby, 2000). Thus, there is clearly much overlap between EI and alexithymia. Indeed, when the relationship between these two constructs was directly examined in a recent study using a small ($N = 25$) university and community sample, the two constructs were found to be strongly and inversely correlated ($r = -0.65$) (Schutte et al., 1998). With respect to childhood abuse, Taylor and Bagby (2000) posit that “alexithymia originates, at least in part, from failures in early caregiver-child relationships that adversely affect the development of neural and cognitive systems involved in the processing of emotional information” (p. 40) (also see Krystal, 1978; 1988; Taylor, Bagby, & Parker, 1997). Empirical studies have found that alexithymia is related to the history and severity of childhood sexual abuse (Zlotnick et al., 1996) and with dysfunctional family functioning involving fear of separation (Mallinckrodt, King, & Coble, 1998). Alexithymia is also common in other traumatized groups, such as Vietnam veterans with PTSD and survivors of the Nazi concentration camps (Krystal, Giller, & Cicchetti, 1986).

Emotional facilitation of thought. Krystal (1978) and others (e.g., Cole et al., 1994; van der Kolk, Pelcovitz, Roth, Mandel, McFarlane, & Herman, 1996) also discuss how impairment in the capacity to differentiate emotions interferes with childhood abuse survivors’ ability to identify relevant from irrelevant information and thus to use specific emotions as guides for appropriate actions. Paivio and Shimp (1998), for example, discuss how chronic suppression or numbness to emotional experience leaves survivors of childhood abuse “cut off from the information inherent in adaptive emotions” (p. 219).

Paradoxically, adults who have been traumatized as children also tend to suffer from generalized hyperarousal, as well as from physiological reactions to specific reminders of the trauma (van der Kolk & Fisler, 1994). This hyperarousal is also thought to account for these individuals' impaired ability to use emotional states as signals (van der Kolk, 1994; van der Kolk & Fisler, 1994). Instead of using emotional states as cues to pay attention to incoming information, it is posited that "traumatized adults experience arousal as a stimulus for fight or flight reactions that make them go immediately from stimulus to response without being able to make the necessary psychological assessment of the meaning of what is going on" (van der Kolk & Fisler, 1994, p. 154).

Emotional understanding. One of the components of the 'emotional understanding' branch of EI is the "ability to understand complex feelings, emotional blends, and contradictory states" (Salovey et al., 2002, p.162). This capacity is thought to be important in being able to maintain feelings of self-worth even when disappointed or embarrassed with oneself, or the ability to realize one's fondness for a person even when the person is making you angry (Cole et al., 1994). Adults who have been abused as children often have difficulty integrating these complex and contradictory emotions and experiencing mixed feelings, a problem often referred to as 'splitting.' These individuals tend to see themselves and others as either all good or all bad (sometimes called idealization or devaluation), leading to difficulties with self-worth as well as problems in interpersonal relationships (Burland, 1994; Cole et al., 1994; Root, 1992).

Emotional regulation. One of the elemental consequences of childhood abuse involves difficulties in the regulation or management of emotion (Krystal, 1978; Paivio & Laurent, 2001; Roth, Newman, Pelcovitz, van der Kolk, & Mandel, 1997;

Schechter et al., 2000; van der Kolk & Fisler, 1994; van der Kolk et al., 1996; Wolfsdorf & Zlotnick, 2001; Zlotnick et al., 1996). For example, results of the DSM-IV Field Trials for PTSD indicated that 77% of participants who suffered from childhood physical and/or sexual abuse described difficulties with affect modulation (compared with 37% of participants whose trauma occurred in adulthood) (Roth et al., 1997; van der Kolk, 1993; 1996; van der Kolk et al., 1996). These problems with affect regulation include both underregulation and, to a lesser extent, overcontrol, of emotion (Paivio & Laurent, 2001). Each of these two problems of affect regulation may predominate in a particular individual or at a particular time, or a person may alternate between the two states (Paivio & Laurent, 2001). Difficulties in the regulation of affect that originate in childhood may interfere with development and become habitual ways of dealing with emotions, thus resulting in the many long-term psychological problems in functioning observed in adults who have experienced childhood abuse (Paivio & Laurent, 2001). Affect dysregulation may cause or be related to a number of symptoms observed in adults who have experienced childhood abuse, including overwhelming anger, sadness, anxiety, dissociation, somatization, difficulties regulating sexual involvement, substance abuse, chronic engagement in self-destructive behaviours, impulsive, and risk-taking behaviours, and suicidality (Herman, 1992; Millar & Stermac, 2000; van der Kolk et al., 1996; Wolfsdorf & Zlotnick, 2001). Affect dysregulation is also an important aspect of posttraumatic stress disorder (PTSD), a disorder that commonly characterizes survivors of childhood abuse (Paivio & Shimp, 1998; Wolfsdorf & Zlotnick, 2001). In fact, the inclusion of PTSD among the anxiety disorders was based on the consistent affect dysregulation, chronic overarousal, hyper-vigilance, and attention-narrowing seen in those with this disorder (Paivio & Shimp, 1998; Wolfsdorf & Zlotnick, 2001).

Survivors of childhood abuse have repeatedly been described as continuing to react with extremes of under- and over-arousal to even minor emotional stressors (van der Kolk et al., 1991). In accord with this, studies of habituation to a harmless acoustic startle response demonstrate that traumatized adults have difficulty modulating their responses to sensory stimuli (van der Kolk & Fisler, 1994). These individuals cannot adequately evaluate the sensory stimuli (for example, an innocuous acoustic startle), and do not have appropriate levels of physiological arousal to such stimuli. Unlike nonabused individuals, they continue to misinterpret these acoustic startles as potential threats and continue to become physiologically overaroused following the presentation of the stimulus (van der Kolk & Fisler, 1994). Trauma researchers would explain this hypersensitivity in survivors of abuse as stemming from the need for these individuals to be on permanent alert for the purpose of self-preservation (Herman, 1992; McCann, Sakheim, & Abrahamson, 1988).

Summary. Research consistently demonstrates that parental behaviour and the nature of parental responding to the feelings and needs of their children influences children's ability to recognize, label, describe, and understand emotional experience, as well as to regulate their emotions appropriately and effectively. Abusive parents have a number of problematic parenting behaviors and parenting deficits that seem to have detrimental effects on the emotional development of their children. Thus, it is not surprising that adults abused as children evidence a number of deficits in the abilities encompassed in emotional intelligence. Although there is evidence concerning the influence of childhood maltreatment on these individual emotional abilities considered in isolation, theory outlines the construct of EI as a type of intelligence that is comprised of a number of interrelated emotional abilities (Mayer & Salovey, 1997). However, no research has examined the predictors of the unified

model of EI conceptualized as a set of interrelated abilities. As cautioned by Matthews, Zeidner, and Roberts (2002) “We know little about the socialization of EI aside from research on separate competencies (emotional awareness and understanding, empathy, and emotion regulation). Research is needed to allow us to make substantiated statements on the environmental and genetic determinants of EI” (p. 541). In light of this, this investigation attempted to examine the effects of childhood maltreatment on EI conceptualized as a set of interrelated abilities and to assess whether possible disruptions in the component abilities of EI tend to co-occur.

Previous research has also shown that quality of individuals’ attachment style is affected by childhood abuse and that individuals’ attachment styles subsequently mediate the relationship between childhood abuse and well-being. EI and attachment seem to be highly similar, perhaps even redundant, constructs. This project examined the connections between EI and attachment, investigated whether childhood abuse influences attachment and EI in a similar fashion, and examined whether EI and attachment similarly mediate the relationship between childhood abuse and well-being.

Attachment

Although the present thesis focused on EI as a key mediating variable between childhood experiences and adult well-being, it is also evident that EI hold similarities to a number of other constructs, and hence may not be either novel or necessary for understanding these relations. In particular, it has been suggested that, perhaps much like EI, attachment style “is an individual difference variable that is rooted in the child’s early rearing experience and provides the context for later emotional, behavioral, and cognitive transactions with the environment” (Finzi, Ram, Har-Even, Shnit, & Weizman, 2001, p. 769).

Examination of the attachment and EI concepts indicates that there is much overlap between these two constructs and that they appear phenomenologically similar with respect to individuals' functioning. Individuals' attachment classification is related to the ability to interpret one's own emotions (Bekendam, 1997; Spangler & Zimmerman, 1999; Taylor, 2000; Zimmerman, 1999; Zimmerman, Maier, Winter, & Grossman, 2001), as well as the emotions of others (Bretherton, 1990; Crittenden, 1990; Haft & Slade, 1989; Niedenthal, Bauer, Robin, & Innes-Ker, 2002; Zeanah & Zeanah, 1989). Securely attached individuals are better able to express both positive and negative feelings (Alexander, 1992; Dozier & Kobak, 1992; Kobak & Sceery, 1988; Scharfe & Bartholomew, 1994; Shaver, Collins, & Clark, 1996; Spangler & Zimmerman, 1999). Some researchers have also suggested that insecure attachment interferes with the ability to use emotional information appropriately (Crittenden, 1997; Finzi et al., 2001), although these propositions require empirical validation. Further, there is reason to believe that insecure attachment may be evidenced by difficulties in emotional understanding (Lopez, Gover, Leskela, Sauer, Schirmer, & Wyssmann, 1997; Steele, Steele, Croft, & Fonagy, 1999), although this too requires empirical examination. Much research has focused on the relationship between attachment and emotional regulation. Evidence indicates that securely attached individuals are better able to regulate their emotions than their insecurely attached counterparts (Kobak & Sceery, 1988; Kobak, Cole, Ferenz-Gillies, & Gamble, 1993; Kobak, Ferenz-Gillies, Everhart, & Seabrook, 1994; Zimmerman, 1999). In fact, the goal of attachment behaviour has often been described in terms of emotion regulation (Bowlby, 1969; Zimmerman et al., 2001).

Much like the research regarding EI, childhood abuse appears to have deleterious effects on attachment security (Alexander, 1993; Alexander, Anderson,

Brand, Schaffer, Grelling, & Kretz, 1998; Bacon & Richardson, 2001; Bifulco, Moran, Ball, & Lillie, 2002; Riggs & Jacobivitz, 2002; Roche, Runtz, & Hunter, 1999; Styron & Janoff-Bulman, 1997; Waters, Merrick, Trebaux, Crowell, & Albersheim, 2000; Weinfield, Sroufe, & Egeland, 2000; Wiffen, Judd, & Aube, 1999).

If EI and attachment are overlapping constructs, perhaps they mediate the effects of childhood abuse on well-being in a similar fashion. Discerning whether or not the constructs of EI and attachment are similar has important implications for current knowledge and for future research on EI. Because a large amount of research on attachment has already been conducted, the resultant knowledge can be used to inform us about the more recently-introduced construct of EI (if these two constructs are indeed similar). Further, if these two constructs are found to be very highly interrelated and redundant in predicting well-being, this would lead to questions regarding the usefulness of EI.

Attachment Theory

As delineated by Bowlby (1969; 1973; 1980; 1988), attachment is a biologically based system of behavior that exists between the attachment figure (usually the parent) and the child to ensure the child's proximity to, and protection from, the caregiver. Attachment theory proposes that an infant's experiences with attachment figures (or their primary caregivers) have powerful and lasting effects on development (Bowlby, 1969; 1973; 1980; 1988). A central premise of attachment theory is that early affective experiences with caregivers gradually shape individuals' views (or what are commonly referred to as working models) of the self and of others. On the basis of caregiver responsiveness, individuals develop expectations that their feelings and expressions of distress will consistently be met with comforting from a caregiver (and thus that the self is worthy of love and attention and/or that others are

warm and helpful) or that comfort will be inconsistent or nonexistent (and thus that the self is not worthy of love and protection and/or that others are unresponsive or dangerous) (Bowlby, 1969; Bretherton, 1985; 1995; Crittenden & Ainsworth, 1989; Main et al., 1985; Schore, 1996; Shaver et al., 1996; Sroufe, 1996; Thompson, 2001). Bowlby (1969; 1980) described these representations of attachment relationships as 'working models' because he viewed them as being open to new input and modification as circumstances and relationships change.

Ainsworth and her colleagues (e.g., Ainsworth et al., 1978) operationally defined the attachment system in infants with what is referred to as the Strange Situation paradigm. They observed one-year-old children through a series of short experimental separations and reunions with their caregivers, and demonstrated that infant attachment classification was correlated with caregiver responsiveness (Ainsworth et al., 1978; Main et al., 1985). Ainsworth and her colleagues found that infants demonstrated three basic categories of response or types of attachments in response to the strange situation. Children classified as 'secure' explored the environment in the presence of their caregivers, protested at separation, and quickly greeted and were soothed by the caregivers upon being reunited, following which they resumed play and exploratory behavior. These children tended to have parents who were emotionally available, perceptive, and responsive to their children's needs and mental states. A second group of children, termed 'ambivalent' demonstrated similar protest behavior, but did not calm upon reunion, instead exhibiting continued protest and anger toward the caregiver (Ainsworth et al., 1978). These children tended to have parents who were inconsistently available, perceptive, and responsive, and tended to intrude their own mental states onto their children. A third class of 'avoidant' infants did not exhibit protest at separation, and did not exhibit marked

responses at reunion, although physiological measures indicated that there was a high degree of arousal in these children during the procedure, despite their lack of behavioral response. These children tended to have parents who were emotionally unavailable, imperceptive, unresponsive, and rejecting. Later studies (Main & Solomon, 1986) added a fourth 'disorganized' category to describe children who exhibited highly unusual behaviours, such as remaining motionless or 'frozen' during the Strange Situation, or turning in circles, approaching then avoiding the caregiver. This type of attachment is generally associated with severe trauma or abuse, or parental psychopathology that results in frightening behaviour by the attachment figure (Main, 1995). The results of this attachment operationalization have been replicated consistently across cultures (Shaver et al., 1996; Siegal, 1999).

Attachment research with adults has identified corresponding attachment classifications to the categories identified in children. The label 'secure' is used for both children and adults; the 'anxious-ambivalent' category in children corresponds to the 'preoccupied' category in adults; the 'avoidant' label in children corresponds to the 'dismissing' category in adults, and the 'disorganized/disoriented' category corresponds with the 'fearful/unresolved' category in adults (Riggs & Jacobvitz, 2002; Shaver et al., 1996). Furthermore, the rates of the different attachment categories found in samples of children in general population corresponds to similar rates in samples of adults. Research indicates that between 55 to 65 percent of individuals are securely attached, 15 to 25 percent are preoccupied, 20 to 25 percent fit the avoidant classification, and 25% fit the fearful/unresolved category (Carlson, Cicchetti, Barnett, & Braunwald, 1989; Feeney & Noller, 1990; Hazan & Shaver, 1987; Riggs & Jacobvits, 2002; Siegal, 1999; van IJzendoorn & Bakermans-Kranenburg, 1996).

Although one's attachment status is not unchangeable, longitudinal research has demonstrated attachment classification to be a relatively stable trait (see Svanberg, 1998 for a review). For example, Main et al. (1985; Main & Cassidy, 1988) found that attachment classification at 12 to 18 months was predictive of children's attachment classification at six years of age. In the longest follow-up study to date, Waters et al., (2000) assessed 60 individuals for quality of attachment as infants and re-assessed 50% of these individuals 20 years later – 72% received the same classification as in infancy. Another indication of the stability of attachment is that the quality of attachment tends to be transmitted intergenerationally (Bolen, 2000; Morton & Browne, 1998; van Ijzendoorn, 1995; Zeanah & Zeanah, 1989). Fonagy, Steele, and Steele (1991) were even able to predict the child's security versus insecurity with 75% accuracy before the baby was even born. In addition, a number of researchers have studied attachment in adulthood retrospectively and inferred its continuity from childhood by demonstrating its association with parenting behavior, styles of intimacy, and other patterns of behavior and characteristics that are theoretically consistent with attachment theory (Alexander, 1992). However, attachment may be changed in response to changes in the relationship(s) with the primary caregiver(s) and in the social environment, as a result of psychotherapy, or following the establishment of supportive adult relationships (Alexander, 1992; Crittenden, 1995; Fagot & Pears, 1996; Hodges & Steele, 2000).

Emotional Intelligence and Attachment

Attachment theory and research indicates that parents of securely attached children respond consistently and sensitively to signals of distress. Open, flexible communication between parents and children around emotion signals promotes a flexibility, balance, and range of positive and negative emotions, and more adaptive

emotion regulation (Cassidy, 1994). Working models of attachment appear to act as rules that help the individual interpret the meaning of another's behaviour (Bretherton, 1990; Crittenden, 1990; Zeanah & Zeanah, 1989) and organize strategies at regulating distress in situations that normally elicit attachment behaviour and may be closely linked to different styles of affect regulation in a variety of settings (Kobak & Sceery, 1988; Zeanah & Zeanah, 1989). It was suggested in this thesis that these functions of attachment security parallel many of the component abilities that comprise EI, to such an extent that EI may simply be another way of conceptualizing attachment. If so, it was postulated that EI and attachment should mediate the relationship between childhood abuse and well-being in similar ways.

Emotional Expression. With respect to the expression of emotion, attachment researchers suggested that communication processes are the mechanisms by which relatively stable patterns of attachment are formed and perpetuated (Shaver et al., 1996). Bretherton (1990) for example, posited that "secure relationships ... go hand in hand with the partner's ability to engage in emotionally open, fluent, and coherent communication, both within attachment relationships and about attachment relationships. Insecure relationships, by contrast, seem to be characterized by selective ignoring of signals, as well as by certain forms of incoherence and dysfluency when discussing attachment relationships" (p. 58).

Spangler and Zimmerman (1999) delineate a definitive theory regarding the relationship between attachment security and the identification and expression of emotions. Based on an analysis of the expansive theoretical attachment literature, they posit that securely attached individuals should be able to freely perceive and experience as well as openly express and communicate both positive and negative feelings. In contrast, dismissingly attached individuals should show a restricted

ability for perception and communication of negative feelings or integration of emotional information during information processing. They are thought to suppress such feelings due to having experienced rejection when communicating their feelings and emotional needs in the past. Thus, dismissing individuals are likely to evidence reduced emotional expression. Those with preoccupied attachment were expected to be overwhelmed by negative feelings during information processing, leading to inappropriate appraisal and non-adaptive expression of such emotions. These individuals are thought to display intensified and inappropriate negative emotional expression. Unresolved/fearful individuals were expected to be characterized by “verbal and mental incoherence or irrational thinking and by contradiction, confusion, or apprehension” (p. 274) when processing or expressing their emotions. Spangler and Zimmerman (1999) emphasize that although these predictions were drawn from the attachment theory literature, they are largely untested to date.

Some supportive evidence is available, however, especially when individuals were asked to recall or discuss childhood attachment relationships with parents (Main, 1991). Secure adults exhibited what Main (1991) called ‘coherence of discourse’ and ‘coherence of mind’ with respect to attachment. They seemed to be able to retrieve emotion-laden memories from childhood, and they relayed realistic, well-integrated accounts of their parents. They were able to recall both positive and negative experiences in childhood and provide interviewers with enough information, and sufficiently well-organized information without getting lost in emotional detail (Shaver et al., 1996). Dismissing or avoidantly attached adults had trouble recalling attachment-related memories from childhood and tended to proffer bland, positive memories of relations with caregivers that cannot be supported with concrete examples. Interestingly, when their skin conductance was monitored during the

attachment interview, avoidant adults produced spikes in conductance at exactly the points in where they are inclined to deny negative experiences or emotions (Dozier & Kobak, 1992). Avoidantly attached adults were also less likely to disclose experiences of childhood sexual abuse, and tended to expect less support upon disclosure (Distel, 1998). These individuals did not like to share intimate knowledge about themselves and did not approve of others who self-disclose freely (Mikulincer & Nachshon, 1991). The avoidant individual was also likely to deny fears and distress (Kobak & Sceery, 1988).

During attachment interviews, preoccupied (anxious-ambivalent) adults tended to relay attachment-related events in incoherent emotional bursts and to 'go off' on long tangents about caregivers. Unlike secure adults, these preoccupied adults seemed to not yet have integrated negative emotional experiences and appeared to still be angry and upset at recollections of memories with caregivers (Shaver et al., 1996). In romantic relationships, these individuals often assert their own feelings and needs without adequate regard for their partners (Daniels & Shaver, 1991, unpublished, as cited in Shaver et al., 1996) and may resort to sensation-seeking in expressing how they feel (Alexander, 1992).

Fearful attachment includes a combination of avoidant and preoccupied traits (Bartholomew & Horowitz, 1991). For example, like avoidant individuals, fearful individuals avoid intimacy, but they do this due to the pain of rejection or loss (Schafer & Bartholomew, 1994). When dealing with traumatic events or PTSD, fearful adults both overtly express distress in a fashion similar to preoccupied adults and also engage in conscious attempts at avoidance (whether through substance abuse or withdrawal from relationships) (Alexander, 1992; Bartholomew & Horowitz, 1991).

Research also suggests that an important mechanism for the intergenerational transmission of attachment security is the quality of communication skills, specifically the range of emotional expression allowed and explicit discussion about the expectations, motivations, and intentions of the other person (Fonagy et al., 1995; Main, 1995).

Identification of emotion. Security of attachment is also likely to be related to the ability to identify and understand feelings in oneself and in others. Working models developed in childhood are thought to be carried into adulthood and to provide a framework for evaluating new experiences (e.g., Shirk, 1998). For example, Fonagy et al. (1995) explain that attachment security influences the ability to identify emotions in both self and others in that “secure attachment experiences allow for the ‘free’ exploration of the caregiver’s mind which provides the essential interpersonal learning experience for the acquisition of mentalizing capacity, a “theory of mind,” and enhances the reflective part of the child’s self (p. 298). Similarly, Page (1999) notes, “The partnership aspect of an attachment relationship involves negotiation of mutual needs, joint planning for the satisfaction of needs, and the capacity to appreciate and accommodate the other’s point of view and occasional contradictory desires” (p. 419). Furthermore, this learned appreciation for the attachment figure’s point of view promotes the development of important skills that will ultimately enable the child to understand the points of view of other relationship partners in the future (Page, 1999).

Research shows that securely attached adults are better able to identify emotional expressions in others than insecurely attached adults. For example, attachment style has been found to be highly correlated with maternal attunement to their children’s emotions (Haft & Slade, 1989). Haft and Slade (1989) found that

secure mothers attuned correctly and responded to both positive and negative expressions by their infants; preoccupied mothers randomly attuned to both positive and negative affect states; and avoidant/dismissing mothers attuned to infants' positive expressions while failing to attune or misattuning to their infants attempts at comfort and reassurance. This study did not include the assessment of unresolved/fearful attachment.

In a recent experimental study examining the perception of posed emotional expressions, Niedenthal et al., (2002) found predicted differences in emotional perception of different attachment groups. The authors suggested that these group differences are likely to connote differences in the vigilance to emotional expression, and do not imply subsequent skill or effectiveness in using the emotional information that has been perceived (Niedenthal et al., 2002).

Adults and adolescents with insecure attachment also seemed to have greater difficulty in identifying their own emotions than their more securely attached counterparts. For example, studies of both clinical and nonclinical adult samples find that alexithymia is associated with insecure attachment styles (Bekendam, 1997; Taylor, 2000). In concordance, Zimmerman (1999) reported that securely attached adolescents were better able to identify their feelings when presented with five hypothetical stories about social rejection or social failure. In another quasi-experimental study, Spangler and Zimmerman (1999) found that dismissing participants reported more positive interpretations for both positive and negative film scenes of a variety of social interactions, which was interpreted as indicating their restricted ability to perceive negative emotions. In another study, Zimmerman and his colleagues demonstrated that securely attached adolescents, as compared to their insecurely attached counterparts, showed a greater correspondence between their

facial expressions and the emotions that they reported experiencing during a complex problem-solving task (Zimmerman et al., 2001), which the researchers interpreted as indicating that these adolescents had greater access to their subjective experience of emotions.

Emotional facilitation of thought. There is a lack of research examining what may be considered to be components of emotional facilitation of thought branch of EI and attachment. However, Crittenden (1997) has suggested some interesting propositions in this regard. Crittenden proposed that individuals whose attachment style is characterized by a negative view of self (as in pre-occupied and fearful attachment categories) over-rely on affect rather than cognition to guide their behaviours. Crittenden further suggested that because these individuals had difficulty regulating their emotions, they had highly sensitive and easily accessible emotional systems, and may have difficulty organizing their emotions into verbal meaning.

It has also been suggested that due to painful emotional experiences with parents and the resultant suppression in recognizing and expressing emotional information, those who have insecure attachment have difficulty processing some emotional information. This may have serious consequences, such as minimizing the ability to use this information to affect behaviour (Finzi et al., 2001).

In a quasi-experimental study that has relevance for the facilitation component of EI, Zimmerman, Maier, and Winter (1997, as cited in Zimmerman, et al., 2001, original article in German) found that self-rated anger was related to an increase in performance during a complex problem-solving task for securely attached participants (and was thus interpreted as being functional), whereas such anger was related to worse performance in insecurely attached participants (and was interpreted as being dysfunctional).

Emotional understanding. There is a paucity of research directly examining the relation between attachment and various components of emotional understanding, but some empirical information is available (although most of this information comes from research with children). For example, Bretherton & Beeghly (1982) found that insecurely attached children are less elaborated and complex in their descriptions of feeling states than children who are securely attached. Laible and Thompson (1998) demonstrated that securely attached children performed better than insecurely attached children at identifying the likely causes for the naturally occurring emotions of their peers during preschool. In a quasi-experimental study in which children were presented with a number of social dilemmas, Steele et al., (1999) found that children with secure attachments evidenced better understanding of mixed emotions than insecurely attached children.

With respect to research with adults, Lopez et al., (1997) found that insecurely attached adults were less well able to differentiate the emotions of shame and guilt than securely attached adults.

Emotional regulation. The goal of attachment behaviour may be described in terms of emotion regulation (e.g., Bowlby, 1969; Zimmerman et al., 2001). Sroufe and Waters (1977) for example, argued that proximity-seeking behaviour is guided by a search for a particular emotional state -- felt security. Similarly, Shaver et al., (1996) note that "attachment styles themselves can be viewed as organized complexes of emotion-regulation processes, observable manifestations of experience-based internal working models" (p. 51). Cassidy (1994) discusses how, for securely attached children, negative emotions have generally been met with caregiver sympathy and assistance, and that these negative feelings were not associated with any type of invalidation or denial of the negative feelings. She posits that these types of

sensitive responses have consequences for the child's developing emotional regulation abilities in that they enable the child to tolerate aversive emotion temporarily so that he or she can begin to make sense of the problematic situation being faced and figure out a response. Likewise, Tronick (1989) proposes that the establishment of affect regulation begins in infancy via maternal participation in regulating the infant's emotional state and which leads to structural changes in the infant's developing affect system. Maternal attunement to the infant's affect state, and particularly the ability to detect and reestablish affective synchrony with the infant when the dyad is not affectively matched is particularly crucial to this process.

Indeed, security of attachment seems to be related to emotional regulation capacities in adolescents and adults. For example, securely attached adolescents were judged by peers as being more ego resilient, less anxious, and less hostile during the transition to college than their insecurely attached counterparts (Kobak & Sceery, 1988). Likewise, in a quasi-experimental study, Kobak et al. (1993) found that secure teens and their mothers demonstrated more constructive regulation of their emotions while discussing emotionally charged issues than their insecurely attached counterparts. Similarly, Zimmerman (1999) found that securely attached adolescents evidenced better emotion regulation abilities than insecurely attached adolescents when presented with hypothetical stories about social rejection or social failure. Securely attached adolescents were also rated as evidencing greater emotional regulation by their best friend, parent, and two psychologists in this study.

With respect to adult emotional regulation, Kobak et al. (1994) found that mothers with preoccupied attachment styles had more difficulty regulating emotions during emotionally charged conversations with their teenaged children, being more anxious and intrusive in these transactions.

Regulating emotions in others is also thought to be related to attachment security (e.g., Volling, 2001). For example, in a quasi-experimental study with adolescents, Zimmerman et al. (2001) found that those with insecure attachment were less cooperative and more disruptive toward their friends during a complex problem-solving task that was intended to be frustrating and to produce feelings of failure and negative emotion. In fact, as the task became more frustrating and confusing, those in the securely attached group evidenced less disruption, whereas those in the insecurely attached group evidenced even higher frequencies of disruptive behaviour towards their friends. Corresponding results have been found with heterosexual romantic couples. Simpson, Rholes, and Nelligan (1992) induced distress in female partners and then videotaped the couple's interactions without their knowledge. It was found that avoidantly attached men showed a decline in their level of supportiveness as their partner's anxiety increased.

Summary. A consideration of the EI and attachment constructs indicates a number of theoretical connections and similarities. Indeed, empirical research provides evidence that both children and adults with more secure attachments demonstrate better functioning in what may be considered 'EI abilities' than their insecurely attached counterparts. However, the relation between attachment and the specific components that make up the Mayer and Salovey's (1997) ability model of EI have not explicitly been assessed together. In addition, the connection between the overall construct of EI defined as an ability and attachment has yet to be investigated. The present thesis examined these relations, including the concurrence in the patterns of relations associated with childhood maltreatment.

Attachment & Childhood Abuse

Given that Bowlby's formulation of attachment theory states that quality of attachment is largely dependent on the child's experiences with caregivers and includes the role of trauma and loss in influencing the quality of attachment (e.g., Bowlby, 1977; 1980; 1988), it is not surprising that childhood abuse has deleterious effects on individuals' attachment security (e.g., Bretherton, 1995; Morton & Browne, 1998; Schneider-Rosen, Braunwald, Carlson, & Cicchetti, 1985; Styron & Janoff-Bulman, 1997).

Morton and Browne (1998) conducted a review of 13 studies that provided detailed information on the quality of attachment in maltreated children as compared to control children. Taken together, these studies indicated that 76% of maltreated children were classified as being insecurely attached, compared with 34% of controls. Similar rates have been reported in a number of other studies (Carlson, Cicchetti et al., 1989; Cicchetti & Barrett, 1991; Finzi, Cohen, Sapir, & Weizman, 2000; Finzi et al., 2001; van IJzendoorn, Goldberg, Kroonenberg, & Frenkel, 1992). A number of researchers have noted that maltreated children very often develop the most serious type of insecure attachment (i.e., disorganized/disoriented) characterized by unusual attachment behaviour and subsequent problems for future development (Siegal, 1999; Svanberg, 1998). Comparable results have been found in both clinical and nonclinical samples of adults (Alexander, 1993; Alexander et al., 1998; Bacon & Richardson, 2001; Bifulco et al., 2002; Riggs & Jacobvitz, 2002; Roche et al., 1999; Styron & Janoff-Bulman, 1997; Waters et al., 2000; Weinfield et al., 2000; Wiffen et al., 1999).

Attachment and Well-Being

Insecure attachment has been identified as a significant risk factor for many types of psychological difficulties in later life. For example, a recent meta-analysis

conducted by van IJzendoorn and Bakersman-Kranenburg (1996) indicates that insecure attachment appears to be associated with a higher incidence of psychiatric disturbance, including anxiety and mood disorders. They concluded that although insecure attachment (perhaps like low EI) is not equivalent to mental disorder, but rather creates a risk of psychological and social dysfunction (also see Rosenstein & Horowitz, 1996; Svanberg, 1998).

When psychiatric populations are compared with control groups with respect to the distribution of attachment classifications, those in the clinical groups exhibit far greater rates of insecure attachments (Allen et al., 2001; Fonagy et al., 1996; Rosenstein & Horowitz, 1996; van IJzendoorn & Bakersman-Kranenburg, 1996). Recent research has implicated insecure attachment as a risk factor for the development of depressive disorders (Bifulco et al., 2002; Cole-Detke & Kobak, 1996; Fonagy et al., 1996; Murphy & Bates, 1997; Patrick, Hobson, Castle, Howard, & Maughan, 1994; Rosenstein & Horowitz, 1996;), anxiety disorders (Cassidy, 1995; Thompson, 2001; Warren, Huston, Egeland, & Sroufe, 1997), emotional distress (Cooper, Shaver, & Collins, 1998; Riggs & Jacobvitz, 2002), substance abuse (Riggs & Jacobvitz, 2000), PTSD (Alexander et al., 1998; Dieperink, Leskela, Thuras, & Engdahl, 2001; Muller, Sicoli, & Lemieux, 2000), low self-esteem (Bifulco et al., 2002; Cooper et al., 1998), lower levels of trust and relationship satisfaction (Lopez et al., 1997), BPD (Fonagy et al., 1995; Patrick et al., 1994; Stalker & Davies, 1995) and other personality disorders (Alexander, 1993; Rosenstein & Horowitz, 1996; Stalker & Davies, 1995), eating disorders (Cole-Detke & Kobak, 1996; Fonagy et al., 1996; Mallinckrodt, McCreary, & Robertson, 1995), dissociation (Bretherton, 1995), and suicidal ideation (Riggs & Jacobvitz, 2000).

A number of investigations have demonstrated that the effects of abuse on adult well-being are mediated by quality of attachment (McCarthy & Taylor, 1999; Roche, 2000; Roche et al., 1999; Shapiro & Levendosky, 1999; Styron & Janoff-Bulman, 1997). For example, Shapiro and Levendosky (1999) found that attachment style mediated the effect of childhood sexual abuse, physical abuse and neglect on psychological well-being (i.e., depression and posttraumatic symptomatology) and interpersonal functioning in maltreated female adolescents. The mediating role of attachment can also be viewed as a positive influence. Support from a secure attachment figure, such as a non-abusive parent, may serve as a buffer against the psychological impact of childhood abuse (Alexander, 1992; Egeland, Carlson, & Sroufe, 1993).

The studies stemming from the Mother-Child Project at the University of Minnesota provide an interesting longitudinal perspective on the relation between quality of attachment and well-being. This longitudinal study began in the late 1970s when the quality of attachment in 267 infants (12 to 18 months of age) was assessed (Egeland & Farber, 1984; Farrell, Erickson, Sroufe, & Egeland, 1985). In a subgroup of 48 children reassessed during preadolescence, those who were originally rated as secure were less dependent, more ego resilient, and more socially competent than those who were originally classified as insecure (Urban, Carlson, Egeland, & Sroufe, 1991). As adolescents, those who were originally classified as securely attached were emotionally healthier, more competent in interactions with their peers, and had higher ego resilience and self-esteem than those who were originally classified as insecure (Sroufe, Carlson, & Schulman, 1993).

Summary

Theory and research indicate that childhood abuse is related to insecure attachment in both children and adults. In addition, individuals who were insecurely attached were more likely to have psychological difficulties and other problems in functioning than their more securely attached counterparts. Furthermore, the effects of abuse on adult well-being appear to be mediated by quality of attachment. The present thesis compared the ways in which EI and attachment were affected by childhood abuse and how these two constructs mediated the relationship between abuse and adult-well-being.

Coping

One of the mechanisms by which EI and attachment may mediate the relationship between childhood abuse and well-being is through their influence on the coping strategies individuals utilize in dealing with stressful situations. EI is conceptualized as a set of abilities or skills for handling emotions and emotionally laden situations, which would predict adaptive outcomes and well-being (Mayer & Salovey, 1993; 1997; Mayer, Salovey, & Caruso, 2000a; 2000b; Salovey, Bedell, Detweiler, & Mayer, 1999). This conceptualization of EI is based on functionalist perspectives of emotions that view emotions as “responses that guide the individual’s behavior and serve as information that helps the individual achieve goals” (Brenner & Salovey, 1997, pp. 169-170). Thus, although there is little research directly examining the relation between the components of the ability model of EI and the use of different coping strategies, a number of likely theoretical connections are evident. For example, Salovey et al., (1999) posit that more emotionally intelligent individuals are likely to cope better because they “accurately perceive and appraise their

emotional states, know how and when to express their feelings, and can effectively regulate their mood states” (p. 161).

Similarly, it has been suggested that coping can also be viewed as a type of regulation (whether it is the regulation of emotional distress or the direct regulation of a problematic situation), and that in most situations people first need to regulate emotional distress in order to facilitate problem-focused coping (Eisenberg et al., 1997). In concordance with these suppositions, factor analyses of the relationships between coping responses consistently find that emotion regulation loads with problem-solving (Connor-Smith, Compas, Wadsworth, Thomsen, & Saltzman, 2000). Thus, it has been argued that primary-control coping involves elements of control over emotions as well as over the situation and that controlling one’s emotions is important in preventing the stressful situation from escalating (Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001; Connor-Smith et al., 2000). Hence, as Matthews and Zeidner (2000) posit “coping might be conceptualized as EI in action, supporting mastery of emotions, emotional growth, and both cognitive and emotional differentiation, allowing us to evolve in an ever-changing world” (pp. 459-460).

Coping may be defined as “an effortful (as opposed to automatic) response designed to manage external or internal demands appraised as taxing by the individual. Efforts to cope may include cognitive or behavioral responses and are not limited to those yielding successful outcomes” (Halstead, Johnson, & Cunningham, 1993, p. 337). A common approach is that coping refers to effortful activities and is a conscious choice – automatized behaviour that does not require effort or choice in any capacity does not qualify as coping (Lazarus, 1993; Parker & Endler, 1996; Schwarzer & Schwarzer, 1996; Tennen, Affleck, Armeli, & Carney, 2000). Individuals may have characteristic coping patterns or styles (Carver, Scheier, & Weintraub, 1986; Folkman,

Lazarus, Gruen, & DeLongis, 1986; Higgins & Endler, 1995). However, the choice of coping strategy an individual uses also depends on situational variables (Folkman & Lazarus, 1980; Lazarus, 1993; Pearlin & Schooler, 1978; Schwartz & Schwartz, 1996). Coping strategies play a significant role in a person's adaptation to stressful life events (e.g., Folkman et al., 1986; Higgins & Endler, 1995).

There are two dimensions of coping about which there is a good deal of agreement about in the literature: problem-focused coping, aimed at altering person-environment relationships, and emotion-focused coping (e.g., wishful thinking, seeking social support, self-blame), aimed at regulating emotional distress (Carver et al., 1989; Endler & Parker, 1994; Folkman & Lazarus, 1980; Higgins & Endler, 1995; Lazarus, 1993). Factor analyses of coping inventories indicate that there are multiple types of emotion-focused strategies and also a number of variants of problem-focused strategies (Aldwin & Revenson, 1987; Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986). Although the distinction between problem-focused and emotion-focused coping is an important one, some have demonstrated that it is too simple. In general, researchers view factors other than problem-focused coping as variations on emotion-focused coping. However, these factors often diverge quite sharply in character, to the extent of being inversely correlated (Scheier, Weintraub, & Carver, 1986). Thus, it has been argued that emotion-focused responses are very different from each other, and they may have very different implications for a person's success in coping (Carver et al., 1989).

Endler and Parker (1990) agree that the literature points to the importance of emotion- and problem-focused coping, but postulate another important coping strategy – that of avoidance. They argue that avoidance may be emotion-focused (e.g., avoiding thinking about a situation or avoiding others) or problem-focused (e.g.,

engaging in a diversion task). Similarly, Holahan and Moos (1991) propose two general dimensions of coping – active and avoidance coping, which would comprise both emotion-focused and problem-focused strategies. This conceptualization is similar to Miller's (1987; 1990) distinction between monitoring (increasing vigilance and directing attention to a stressful situation) and blunting (avoiding attending to a stressful situation) coping styles. Indeed, Parker and Endler (1992) concluded that a factor analysis of 14 coping inventories generally supports the existence of emotion-focused, problem-focused, and avoidance dimensions.

Coping and Well-Being

Theory and research have identified coping processes as a possible mediator of the relationship between stressful life events and subsequent psychological and physical well-being (e.g. Folkman et al., 1986; Higgins & Endler, 1995). Particular coping strategies can either facilitate or impede both mental and physical health (Endler & Parker, 1994). It is of note that a majority of research on the effectiveness of different coping strategies has focused on subjective well-being (Lazarus, 2000; Coyne & Racioppo, 2000).

A review of the coping literature suggests that problem-focused or active coping is usually found to be beneficial for dealing with stressful situations (Matthews & Zeidner, 2000). For example, the use of problem-focused coping has been found to reduce distress (Folkman & Lazarus, 1988; Moskowitz, Folkman, Collette, & Vittinghoff, 1996), control for increases in psychiatric symptoms in the face of increased stress (Aldwin & Revenson, 1987; Solomon, Mikulincer, & Flum, 1988) and be related to reports in the improvement of the stressful situation (Folkman et al., 1986).

Overall, research shows that emotion-focused coping strategies are associated with greater psychological distress (e.g., Aldwin & Revenson, 1987; Charlton & Thompson, 1996; Folkman et al., 1986; Higgins & Endler, 1995; Morgan, Matthews, & Winton, 1995; Solomon et al., 1988; Zeidner & Saklofske, 1996). However, the effectiveness really depends on the type of emotion-coping strategy utilized (Matthews & Zeidner, 2000), which is not surprising given that these differ considerably (Carver et al., 1989). Rumination, which involves extensive focusing on and worrying about a stressful situation is generally found to be maladaptive (Wells & Matthews, 1994). Wishful thinking is also generally associated with negative outcomes (Higgins & Endler, 1995; Zeidner & Saklofske, 1996). Likewise, self-blame has generally been found to be associated with negative outcomes (Aldwin & Revenson, 1987; Arata & Burkhart, 1998; Charlton & Thompson, 1996; Higgins & Endler, 1995). However, although characterological self-blame (blaming one's personality or particular traits) may be maladaptive, behavioural self-blame (blaming one's past behaviour) may be useful in that it provides a sense of control when dealing with certain situations (Janoff-Bulman, 1998; 1999), although some researchers that have studied these separately find both types of self-blame to be related to greater psychological symptomatology (e.g., Arata & Burkhart, 1998). Some emotion-focused coping strategies, particularly cognitive restructuring and positive reappraisal of the stressful situation are associated with decreased distress (Folkman & Lazarus, 1988; Gottlieb, 1997; Moskowitz et al., 1996; Thompson, 1985; Upton & Thompson, 1992) and with improvement in the stressful situation (Folkman et al., 1986; Janoff-Bulman, 1998; 1999).

Seeking out of social support has generally been found to predict better adaptation to stressful events (Higgins & Endler, 1995; Sarason, Sarason, & Pierce,

1988; Solomon et al., 1988; Uchino, Cacioppo, & Kiecolt-Glaser, 1996), although findings are mixed (e.g., Aldwin & Revenson, 1987; Kleber & Brom, 1992; Morgan et al., 1995). This may be because social support is a difficult strategy to define as it involves a number of elements, including tangible instrumental help to solve problems, a means to express or vent emotions, a venue for redefining the stressful situation, or a way to distract oneself from the stressful situation (Compas et al., 2001) and may depend on the quality of support available, as well as the appraisal of its quality and availability (Sarason et al., 1988). Lack of social support may be associated with greater use of maladaptive coping strategies such as self-blame and avoidance (Ruggiero, Taylor, & Lydon, 1997).

There is a great deal of empirical evidence indicating that avoidant coping strategies (such as escapism, overt efforts to deny the problem, self-distraction, suppression, and mental disengagement) are generally related to greater psychological distress and other negative consequences (Aldwin & Revenson, 1987; Bryant, Marosszeky, Crooks, Baguley, & Gurka, 2000; Folkman & Lazarus, 1988; Folkman et al., 1986; Matthews & Zeidner, 2000; McCrae & Costa, 1986; Morgan et al., 1995; Solomon et al., 1988; Wegner & Zanakos, 1994; Zeidner & Saklofske, 1996). A review of a wide range of research also shows that many forms of psychopathology can be conceptualized as unhealthy efforts to escape and avoid emotions, thoughts, memories, and other private experiences (Hayes, Wilson, Gifford, Follette, & Strosahl, 1996). However, avoidant-type coping strategies may be useful in dealing with certain types of stressful experiences (Miller, 1990). One avoidant-type strategy that has generally been shown to be beneficial is distraction (Miller & Kaiser, 2001; Nolen-Hoeksema & Morrow, 1993), which involves engaging in thoughts or behaviours that draw attention away from a stressful situation (Miller & Kaiser, 2001).

Although it was initially assumed that distraction was a way of avoiding the stressful situation, which would be expected to be associated with negative outcomes, distraction has been found to be related to other engagement coping strategies, not with disengagement-type strategies (Compas et al., 2001; Miller & Kaiser, 2001). The difference is that distraction involves a substitution of other thoughts and activities for stress-related ones, rather than efforts to stop thinking about or to deny the stressful situation (Miller & Kaiser, 2001).

It should be noted that a number of factors appear to influence the efficacy of any particular coping strategy. These include the characteristics of the stressful situation, characteristics of the individual, how the individual appraises the situation, as well as the outcome being studied (Halstead et al., 1993; Lazarus, 1993; Zeidner & Saklofske, 1996). Thus, it is often difficult to identify adaptive and maladaptive coping strategies, because, as Epstein and Meier (1989) cautioned “a particular mode of coping that is effective for a particular person in a particular setting may be ineffective when used by the same person in another situation or by a different person in the same situation” (p. 348). Although one approach to this problem is to attempt to investigate particular person-situation interactions, such interactions can be so complicated and situationally specific that their replication and their meaningfulness may be limited (Epstein & Meier, 1989). It has been found that in circumstances in which people have some control, certain strategies, such as problem-focused coping, tend to be more adaptive. However, in situations that are less controllable, different strategies (such as emotion-focused coping) may be more beneficial (Aldwin & Revenson, 1987; Eisenberg et al., 1997; Lazarus, 1993).

Coping and Childhood Abuse

Individuals may have characteristic coping patterns or styles that are developed in childhood and that are consistent over time and across different situations (Endler & Parker, 1990; Finzi et al., 2001; Hewitt & Flett, 1996; Higgins & Endler, 1995; Shapiro & Levendosky, 1999). These coping patterns may play a role in mediating the effects of childhood abuse on adult functioning (Finzi et al., 2001; Runtz & Shallow, 1997). Indeed, research indicates that the coping strategies that mediate the effects between childhood abuse and well-being function similarly to the coping strategies that mediate the effects of other stressful situations on well-being. It should be noted that the majority of this research focuses on the coping of individuals who have experienced childhood sexual abuse.

As in dealing with other stressful experiences, research indicates that the use of problem-focused coping in adults dealing with childhood sexual abuse is associated with better outcomes (Crockett, 1984), whereas greater use of emotion-focused strategies has been found to be related to greater psychological distress (Long & Jackson, 1993) and greater psychological symptomatology (Sigmon, Greene, Rohan, & Nickols, 1996).

With respect to the specific emotion-focused strategies used, self-blame is found to be a maladaptive strategy that is related to greater distress (Runtz & Schallow, 1997) and greater psychological symptomatology in survivors of childhood sexual abuse (Binder, McNiel, & Goldstone, 1996; Runtz & Schallow, 1997). Similarly, the use of rumination in survivors of childhood sexual abuse has been found to relate to greater psychological distress (Leitenberg, Greenwald, & Cado, 1992) and increased psychological symptomatology (Holman & Silver, 1998). Seeking of social support seems to be an adaptive way to ameliorate the effects of childhood abuse, and

is related to better functioning (Binder et al., 1996; Runtz & Schallow, 1992), decreased distress (Spaccarelli, 1994), and the ability to make meaning out of the experience (Silver, Boon, & Stones, 1983). The use of cognitive restructuring or meaning making is generally related to better outcomes and lower distress in survivors of childhood sexual abuse (Draucker, 1995; Roth & Newman, 1993; Silver et al., 1983), although some researchers have indicated that the effectiveness of this type of coping is not clear (Spaccarelli, 1994).

The frequent use of avoidant coping strategies is consistently found to be related to negative outcomes, including greater psychological distress (Leitenberg et al., 1992; Runtz & Schallow, 1997) and greater psychological symptoms (Shapiro & Levendosky, 1999; Sigmon et al., 1996; Spaccarelli, 1994; Varia et al., 1996), in individuals who have experienced physical and sexual abuse in childhood. Hayes et al. (1996) suggest that many of the diverse outcomes in survivors of childhood sexual abuse (e.g., dissociation, substance abuse, posttraumatic stress disorder, and self-mutilation) are actually avoidant type coping efforts.

Emotional Intelligence and Coping

A number of theoretical connections between coping and the components of EI are evident. For example, difficulties in the ability to identify or to regulate negative emotions may lead to the avoidance of such emotions in some individuals.

Alternatively, as Salovey et al. (1999) suggest, rumination may result from difficulties in the processing of emotional material. Difficulties in the ability to express emotions appropriately may inhibit individuals from seeking social support. In addition, through a review of a wide range of literature, Colby and Emmons (1997) demonstrate that individuals who are open to emotional experience and who view emotions and emotional information as important exhibit a greater tendency to approach others

when in need of support. With respect to the ability to use emotions to facilitate thought, difficulties in this arena may diminish the ability to use emotions to come up with appropriate problem-focused coping strategies. In line with this, Stanton and Franz (1999) note that adaptive processing of emotion “may enhance awareness of one’s central concerns, facilitating specification of impediments to goals and motivating action to address them” (pp. 105).

One rare study directly examined the degree to which emotional regulation (as assessed by vagal tone and two self-report measures of emotional regulation) mediated the effect of a stressful situation on the type of coping employed by participants (Fabes & Eisenberg, 1997). They found that the ability to regulate emotions was positively related to the use of more constructive coping strategies (such as problem-focused coping) and negatively related to the use of less constructive coping strategies (such as avoidance, denial, and venting). These findings were only exhibited in response to moderate- to high-intensity stressors; when the intensity of the stressor was low, the use of constructive coping was also low and emotional regulation did not predict the level of constructive coping. The researchers concluded that individuals who were not able to control high levels of negative arousal may be overwhelmed by this arousal and thus unable to use constructive coping strategies, or that they may be more likely to use coping responses aimed at addressing their emotional condition (e.g., venting, avoidance), rather than the source of the problem (e.g., problem-focused coping) (Fabes & Eisenberg, 1997).

Other evidence that points to the connection between coping and emotional abilities may be gleaned by consulting the psychotherapy literature. In one review, Stanton and Franz (1999) noted that an underlying premise for helping clients deal with stressful situations within psychotherapy is to help them gain accurate awareness

of their feelings, to accept and express their feelings and needs, and to use feelings as guides to emotion. They argued that empirical research evaluating therapeutic approaches that facilitate this processing and expression of emotions demonstrates them to be effective with individuals confronting stressful or traumatic experiences such as cancer and sexual assault (Stanton & Franz, 1999).

The connection and the distinction between EI and coping is likely to follow the connection and the distinction between what Pearlin and Schooler (1978) referred to as psychological resources and specific coping responses. These researchers suggested that resources refer not to what people do, per se, but to what is available to them in developing coping repertoires. They defined psychological resources as the personal characteristics that reside within the self that people may draw on to help them deal with stressors. The abilities encompassed by the model of EI presented in this project may represent a class of such 'psychological resources.' Coping responses were defined as the behaviours, cognitions, and perceptions that people actually engage in when dealing with stressors – they are the “things people do, their concrete efforts to deal with the life-strains they encounter in their different roles. Such responses may indeed be influenced by the psychological resources of individuals, but they are conceptually and empirically independent” (Pearlin & Schooler, 1978, p. 5). Likewise, Schwartz and Schwartz (1996) distinguish between coping and coping resources. Coping resources are the antecedents or personal or social characteristics (e.g., hardiness, self-efficacy) that may influence the coping strategies an individual may employ (Schwartz & Schwartz, 1996), and it is contended here that EI may fall into this category.

Attachment and Coping

Theory and research indicate that individuals' attachment orientation is related to their characteristic patterns of coping with distress (Alexander, 1992; Muller et al., 2000; Kobak & Sceery, 1988). Generally speaking, securely attached individuals are thought to use more adaptive coping strategies than insecurely attached individuals (e.g., Crittenden, 1990; Shaver et al., 1996). If attachment and EI are redundant constructs, they may mediate the effects of childhood abuse on well-being in a similar way partly through their effects on individuals' characteristic patterns of coping.

Securely attached individuals are thought to have learned adaptive coping strategies through positive interactions with caregivers (Cassidy, 1994). Studies show that these individuals tended to express their emotions and to seek social support when distressed (Mikulincer & Florian, 1998; Mikulincer, Florian, & Wells, 1993; Simpson et al., 1992). In addition, they used more active and less avoiding (Zimmerman et al., 2001) and emotionally-focused (Campbell, 1996) coping strategies. For example, in a sample of sexual abuse survivors, Alexander (1993) found that securely attached individuals reported a tendency to not avoid the abuse and to confront memories of the trauma.

Adults with preoccupied attachment seem to heighten attention on distress-evoking stimuli, such as magnifying expressions of distress to others and continuously monitoring the problematic situation (Niedenthal et al., 2002; Swanson & Mallinckrodt, 2001). These individuals tended to become very emotional under stress, and thus may be "forced to use emotion-focused coping techniques" (Shaver et al., 1996, p. 34). For example, Mikulincer et al., (1993) found that pre-occupied individuals depended on emotion-focused strategies following the Gulf War. In quasi-experimental studies, these individuals were also found to have difficulties with

problem-solving, perhaps due to rigid behavioral strategies and heightened emotionality (Zimmerman, 1999; also see Shaver et al., 1996).

Dismissing individuals seemed to engage in avoidant-type coping, disengaging themselves from others and from the distress-evoking stimuli (Mikulincer et al., 1993; Swanson & Mallinckrodt, 2001). For example, Simpson et al., (1992) demonstrated that whereas securely attached women used their partners as a source of comfort and reassurance in an experimentally-induced anxiety-provoking situation, avoidant women withdrew from their partners both emotionally and physically.

Fearfully attached individuals, which may be the most disturbed group and are characterized by negative working models of both self and other, seem to lack any organized strategies for dealing with stress (Morton & Browne, 1998). These individuals are thought to shy away from emotional information and to avoid seeking emotional support (not due to minimizing the need for such support, as in dismissing individuals, but due to fear of disappointment and rejection) (Niedenthal et al., 2002). For example, Alexander (1993) found that fearfully attached survivors of sexual abuse reported a lifestyle of interpersonal avoidance, although they did not endorse specific avoidance of memories of abuse. Fearfully attached individuals have also been found to report making the greatest use of emotion-focused coping strategies (Campbell, 1996).

Summary

Coping strategies play a significant role in a person's adaptation to stressful life events, including childhood abuse. The use of problem-focused coping seems to be beneficial in dealing with the effects of childhood abuse and other stressful situations, whereas the use of avoidant type strategies appears to be generally maladaptive. With respect to emotion-focused coping, strategies of self-blame and

rumination appear to be counterproductive, whereas seeking social support and cognitive restructuring tend to be associated with more positive outcomes.

The coping strategies that individuals utilize may be, in part, determined by their EI. In particular, those with higher EI are more likely to use adaptive coping strategies to deal with stressful situations and with the effects of childhood abuse. In addition, the success of any coping strategy likely depends on the type of stressful situation being coped with, the stage of that stressful situation, as well as the individual's personal characteristics (e.g., Lazarus, 1993; Schwartzer & Schwartzer, 1996). Perhaps the skills comprising EI are important for ascertaining and choosing which coping strategies to employ and when to employ them. Indeed, one of the ways in which EI may mediate the effects of childhood abuse on later functioning may be through its influence on coping. Empirical validation of these relationships, however, is meager. Thus, this project examined the links between the components of the EI ability model and a number of coping strategies, as well as how these interact to influence well-being.

Similarly, theory and research indicate that individuals' attachment orientation was related to their characteristic patterns of coping in dealing with stressful situations. Securely attached individuals tended to use more adaptive coping strategies than insecurely attached individuals. Given the possible connections between EI and attachment, the present thesis also compared the influence of EI and attachment on individuals' coping, and the implications that these influences had on adult well-being.

Present Study

The objectives of the present study were five-fold. These objectives were addressed by testing the model presented in Figure 1 below. This study aimed to assess:

1. the effects of childhood abuse on the development of EI. It was predicted that childhood abuse would be detrimental to the development of emotional abilities.
2. the extent to which EI mediated the effects of childhood abuse on well-being. It was predicted that individuals with higher EI would fare better after the experience of childhood abuse than individuals with lower EI.
3. the relations between EI and attachment; securely attached individuals were expected to have higher EI than insecurely attached individuals. This project also examined whether childhood abuse similarly influenced EI and attachment, and compared how EI and attachment functioned to mediate the relationship between abuse and well-being.
4. the influence of EI on individuals' coping. It was predicted that individuals with higher EI would use more adaptive coping strategies than individuals with lower EI. It was also predicted that coping would mediate the relation between EI and well-being.
5. commonalities and differences in the ways in which EI and attachment contribute to individuals' coping.

Figure 1.
A Mediated Model of the Relations Between Childhood Abuse, Emotional Intelligence, Attachment, Coping, and Well-Being

Method

Participants

Participants were 223 adults from the community, some of whom had experienced childhood abuse. They were recruited using university and community notices, networking among counseling and similar public services within the community, and media appeals. Two recruiting notices were distributed – a notice relevant for individuals from the ‘general population’ and a more specific notice aimed at individuals who had experienced childhood maltreatment (see Appendix A).

In depth demographic information is presented in Table 2. Participants were between the ages of 18 and 83 ($M = 38.4$, $SD = 13.7$). Approximately two thirds of the participants were female. The majority of participants were Caucasian, while others described themselves as being Native Canadian, Asian, or as being from another visible minority. On average, participants reported having 15.6 years of education ($SD = 3.0$), which translates into an average of 2.5 years of post-secondary schooling. Ninety-nine percent had completed at least secondary school and 75% had at least some post-secondary education. Most participants were either employed or were full- or part-time students. The mean family income reported by participants was between \$35,000 and \$49,999, but reported incomes ranged from less than \$15,000 (22.4%) to over \$75,000 (22.9%). One-hundred-fifty-two (68.2%) of the participants had undergone some type of psychotherapy at some point in their lives, and 63 (28.3%) were currently in therapy. For those participants who had received therapy, the average duration of the therapy was 7.1 years ($SD = 8.0$). Overall, then, the sample was largely composed of white individuals who had at least a high school diploma and engaged in a variety of occupations at a variety of income levels.

Table 2

Demographic Characteristics of the Sample

Characteristic	N	%
Sex		
Female	154	69.1
Male	69	30.9
Age		
18 – 30	73	32.7
31-40	54	24.2
41-50	41	18.4
51-60	36	16.1
61+	15	6.7
Marital Status		
Single	73	32.7
Married	48	21.5
Going out with someone	35	15.7
Living with an intimate partner	30	13.5
Divorced or separated	35	15.7
Widowed	1	0.4
Employment status		
Employed full-time	87	39.0
Employed part-time	55	24.7
Full-time student	35	15.7
Part-time student	22	9.9
Disability	26	11.7
Unemployed	27	12.1
Social assistance	13	5.8
Homemaker	22	9.9
Retired	11	4.9
Ethnic background		
Caucasian	162	72.6
Native Canadian	18	8.0
Asian	18	8.0
Other visible minority	10	4.6

Measures

Childhood Abuse. Childhood abuse was assessed through Demare's (1995) Childhood Maltreatment Questionnaire (CMQ) (see Appendix B for all research materials). Participants were directed to "Please think back to your childhood and adolescence and indicate how often you experienced each of these behaviours by at least one of your parental figures before you were 18 years old." In addition, it was noted that parents, step-parents, foster-parents, or other adults who routinely were in charge of the participants' care may be considered caregivers. Participants then indicated how often they experienced a number of parental-figure behaviours on a 5-point ranging from 1 (*never*) to 5 (*very often*). Participants also noted the frequency of their exposure to 20 types of sexual abuse by a nonparental figure.

The CMQ is comprised of four parts. The Psychological Maltreatment Questionnaire (PMQ) is made up of 72 items comprising 12 subscales (Controlling or Stifling Independence, Corrupting, Degrading, Denying Emotional Responsiveness, Exploiting, Isolation, Physical Neglect, Physical Terrorism, Rejecting, Unreliable and Inconsistent Care, Verbal Terrorism, and Witness to Violence). The Physical Abuse Questionnaire (PAQ) is a 16-item scale comprised of 2 subscales (Physical Abuse and Severe Physical Abuse). The Sexual Abuse Questionnaire – Parental Version (SAQ-P) is a 22-item scale comprised of 3 subscales (Sexual Harassment, Noncontact Sexual Abuse, and Contact Sexual Abuse). The Sexual Abuse Questionnaire – Nonparental Version (SAQ-NP) is also a 22-item scale comprised of 3 subscales (Sexual Harassment, Noncontact Sexual Abuse, and Contact Sexual Abuse). Psychological neglect was assessed by combining scores on the 6-item 'Denying Emotional Expressiveness' subscale of the PMQ. Physical neglect was assessed by combining scores from the 6-item 'Physical Neglect' and the 6-item 'Unreliable and Inconsistent Care' subscales of the PMQ. The remaining 9 subscales of the PMQ served as

the measure of psychological maltreatment. Ultimately, because psychological maltreatment, psychological neglect, and physical neglect were all highly intercorrelated ($r = .85, .90$, and $.82$ for the correlations between psychological maltreatment and psychological neglect, psychological maltreatment and physical neglect, and psychological neglect and physical neglect, respectively), it was decided to combine these subscales into one psychological maltreatment scale.

The four maltreatment subscales were internally consistent ($\alpha = .99, .95, .98$, and $.97$, for psychological maltreatment, physical maltreatment, parental sexual abuse, and nonparental sexual abuse, respectively). Test-retest reliabilities are reported as are $.85, .77$, and $.89$ for the PMQ, PAQ, and SAQ-P, respectively (and are not reported for the SAQ-NP) (Demare, 1995). The CMQ has been found to be a significant predictor of greater adult psychological symptomatology as assessed by the Trauma Symptom Checklist-40 (Demare, 1996).

As shown in Table 3, participants' scores on the four maltreatment subscales were intercorrelated. More specifically, the correlation between psychological maltreatment and physical abuse was high ($r = .76, p < .01$) and the correlation between parental sexual abuse and nonparental sexual abuse was high ($r = .57, p < .01$). Correlations between sexual abuse subscales and nonsexual abuse subscales were somewhat lower ($r_s = .34$ to $.48, p_s < .01$). In light of this pattern of correlations, it was decided to combine the psychological abuse and physical abuse subscales into a general abuse scale for all subsequent analyses. Further, given that the proposed mediators of attachment and emotional intelligence are thought to develop largely within the context of relationships with primary caretakers, it was decided to consider only the parental sexual abuse scores for all subsequent analyses.

Table 3

Intercorrelations Among Childhood Maltreatment Subscales

Subscale	1	2	3	4
1. Psychological maltreatment	--	.76***	.42***	.48***
2. Physical maltreatment		--	.34***	.41***
3. Parental sexual abuse			--	.57***
4. Nonparental sexual abuse				--

*** $p < .001$

Some difficulties exist in assessing childhood abuse through self-report methodology. These problems include the potential for distortion (e.g., repression, denial) in the recall of temporally distant and emotionally painful events and the absence of objective verification in the reporting of abuse (Bernstein et al., 1994; Briere, 1992). Accuracy of reporting may also depend on the type of abuse being assessed (McGee, Wolfe, Yuen, Wilson, & Carnochan, 1995). In one study (McGee et al., 1995) adolescents (who were clients of a child protection agency) reported greater and more severe experiences of physical maltreatment, but underreported the occurrence of emotional maltreatment relative to child protection social workers. In addition, 17% of adolescents denied the presence of documented domestic violence in their backgrounds. However, abuse survivors' assessments of their own maltreatment severity were more predictive of current behavioural adjustment relative to professionals' ratings. In fact, knowledge of "official" maltreatment added little to the prediction of adjustment (both self-reported and caretaker-reported) once the victims' perceptions were accounted for.

Emotional Intelligence. Two measures of EI were administered – the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT; Mayer, Salovey, & Caruso, 2002) and the EI Scale (Shutte et al., 1998).

The MSCEIT is a 141-item ability-based measure of EI¹. It is based on the cognitive model of EI that assesses a person's capacity to reason with emotional information. The MSCEIT operationalizes the four branch model of EI (e.g., Mayer & Salovey, 1997) and participants are asked to solve a series of emotional problems.

Participants' responses are mailed away to Multi-Health Systems for computer scoring. The MSCEIT yields a total score, two area scores (Experiential EIQ and Strategic EIQ), four branch scores (Perceiving Emotions EIQ, Facilitating Thought EIQ, Understanding Emotions EIQ, and Managing Emotions EIQ), and eight subtest scores. With respect to the four branch scores, the Perceiving Emotions EQI indicates a participants' ability to identify emotions in the self and in others; the Facilitating Thought EQI indicates the ability to access, generate, and use emotions to aid thinking; the Understanding Emotions EQI indicates one's knowledge about the complexities of emotional meanings, emotional transitions, and emotional situations; and the Managing Emotions EIQ indicates the capacity

¹ It has been argued that if EI is conceptualized as a cognitive ability or type of intelligence, then performance-based (rather than self-report) measures of this construct are preferable (e.g., Mayer, Salovey, & Caruso, 2000a; 2000b). In performance-based tests of EI, as in measures of traditional intelligence, individuals are presented with problems that are thought to have correct (or at least superior) responses (Mayer, 2001a). For example, individuals may be presented with a face or other stimulus to see if they understand the emotions expressed in that stimulus, or individuals may be asked to explain what a given emotion, such as sadness, means to see how well they understand its definition. Hence, performance tests have responses that can be evaluated against objective, predetermined scoring criteria (Ciarrochi et al., 2001). Further, as with measures of traditional intelligence, these yield optimal, rather than typical, ability scores (Petrides & Furnham, 2000). Self-report inventories, by contrast, ask people to report their own level of EI (Mayer, 2001a; Ciarrochi et al., 2001). Therefore, performance measures have the advantage of directly assessing an individual's performance level on a task, whereas self-reported EI is filtered through the individual's need for impression management. As a result, responses based on self-reported items are more vulnerable to being affected by social desirability (Ciarrochi et al., 2001; Mayer, Salovey, & Caruso, 2000; Shutte et al., 1998). Further, self-reported estimates of EI are more likely to reflect perceived rather than actual levels of emotionally intelligent functioning. That is, individuals must have a certain level of self-knowledge or insight into their own abilities in order to report on these accurately (Ciarrochi et al., 2001; Flury & Ickes, 2001; Tapia, 2001). Thus, if an individual does not have insight into his or her emotional abilities, or falsifies responses, the results are likely to be inaccurate. For more detailed discussion on performance-based measures of EI, refer to Mayer, (2001a; 2001b), Mayer, Caruso, and Salovey (2000a; 2000b); Mayer and Geher, (1996), and Salovey, Woolery, and Mayer (2001).

for emotional regulation for oneself and in others. The MSCEIT is scored according to consensus scoring in which the correct answer is the one that is considered correct by the majority of people in the standardization sample of more than 5000 people. According to this scoring technique, each response option to each item is 'worth' an amount relative to the proportion of the standardization sample that chose this option. For example, if 70% of the norm sample selected "A" as their choice for an item, the response of "A" would yield a score of .70 for that item. If 20% selected "B," then "B" responses would be coded with a score of .20, and so on. As with cognitive IQ, scores are normally distributed with a mean of 100 and a standard deviation of 15.

The MSCEIT had a full scale internal consistency of .91, with branch reliabilities ranging from .70 to .88. Thus, the MSCEIT subscales are somewhat less reliable, but the alpha coefficients are comparable to those on tests such as the WAIS-R (Mayer et al., 2002). Test-retest reliability is reported as $r = .86$. The MSCEIT has been shown to have good discriminant validity in that it has, at best, only modest correlations with major personality scales, positive affect, and with measures of traditional intelligence (Mayer et al., 2002). With respect to predictive validity, the MSCEIT has been found to relate to differences in occupational groups, with those in areas of social interest scoring higher than those in business or engineering, to predict participants' quality of relationships with others, and to relate to lower levels of problem behaviour, including smoking, drug and alcohol use, the use of interpersonal violence, and knife and gun ownership.

The Emotional Intelligence Scale (EI Scale; Shutte et al., 1998) is a self-report measure for assessing EI conceptualized as an ability. This instrument was based on Salovey and Mayer's (1990) original model of EI. This 33-item EI scale consists of three subscales including 13 items tapping appraisal and expression of emotions (e.g., "I am aware of my emotions as I experience them"), 10 items tapping regulation of emotion (e.g., "When

I am faced with obstacles, I remember times I faced similar obstacles and overcame them”), and 10 items measuring utilization of emotion (e.g., “When my mood changes, I see new possibilities”). Participants were asked to endorse the extent to which they agree with each item on a 5-point Likert-type scale. The authors report that the measure has good test-retest reliability (two-week test retest reliability = .78). With respect to convergent validity, the authors found this scale to be related to alexithymia, all three subscales of the Trait Meta-Mood Scale, and a measure of impulse control. Furthermore, this measure was useful in predicting first-year college grades, and in distinguishing between therapists and their clients, as well as between males and females (consistent with prior findings, women were found to have better ‘emotional’ abilities).

A principal components factor analysis was conducted on the 33 items of the EI Scale (see Appendix C for table of loadings). Examination of the scree plot suggested four factors that together explained 44.3% of the variance. Following a varimax rotation, these factors were labeled ‘appraisal of emotion’ (7 items), ‘utilization of emotion’ (9 items) ‘mood regulation’ (9 items) and experiencing/sharing of emotion’ (8 items). These four factor subscales had moderate to good internal consistency (α s = .83, .74, .80, and .75, for appraisal of emotion, utilization of emotion, mood regulation, and experiencing/sharing of emotion, respectively).

Attachment. Two measures of attachment were administered -- the Relationship Styles Questionnaire (RSQ; Griffin & Bartholomew, 1994a) and the Experiences in Close Relationships Scale (ECRS; Brennan, Clark, & Shaver, 1998).

The Relationship Styles Questionnaire (RSQ; Griffin & Bartholomew, 1994a) is a 30-item inventory regarding feelings about ‘close relationships.’ Participants indicated how descriptive each item was of them on a five-point Likert scale, ranging from 1 (*not at all like me*) to 5 (*very much like me*). The directions can be modified to apply to close relationships,

romantic relationships, or other specific relationships. Participants in this study were asked to describe how they function in 'close relationships.' The RSQ can be used to create a score for each participant on each of the four attachment patterns. That is, each individual can be assigned secure, fearful, preoccupied, and dismissing scores. Scores for the four attachment prototypes are derived by computing the mean of the items representing each prototype. Attachment style is then based on the highest subscale score. Four items contribute to the score for preoccupied and fearful patterns, whereas five items contribute to the scores for the secure and dismissing patterns. The RSQ can also be used to score people on the two dimensions (model of self and model of other) that underlie these attachment patterns. Within this conceptualization, securely attached individuals have positive working models of both self and other; preoccupied individuals have negative working models of themselves and positive working models of others; dismissing individuals have positive working models of themselves and negative working models of others; and fearful individuals have negative working models of both themselves and of others.

Test-retest reliability over an 8 month period was found to be .49 for men and .53 for women (Scharfe & Bartholomew, 1994). Self-reported attachment was found to be predictive of self-reported relationship satisfaction in 77 couples (Griffin & Bartholomew, 1994a). In addition, individuals' scores on working models of the self converged with direct measures of the positivity of their self-concepts, and their working models of others converged with direct measures of the positivity of their interpersonal orientations (Griffin & Bartholomew, 1994b).

Participants were also administered the Experiences in Close Relationships Scale (ECRS; Brennan, Clark, & Shaver, 1998). Brennan et al. (1998) factor-analyzed the non-redundant items from a number of self-report attachment measures to create this multi-item attachment measure. They found that two major factors (anxiety and avoidance) underlie

these measures. Thus, the ECR contains two 18-item subscales representing these anxiety and avoidance dimensions. Participants were asked to indicate how well each statement describes how they generally feel in romantic relationships on a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Participants were directed to rate their general experience of romantic relationships and not to focus on the particular experience of a current relationship.

Principal components analyses were conducted on both scales in order to compare the similarity between the resultant factors (see Appendix D for tables of factor loadings). Examination of the scree plots suggested two clear factors on both scales, which explained 40.5% and 49.0% of the variance for the RSQ and ECRS, respectively. Following varimax rotations, factors on both scales were labeled ‘avoidance’ of emotional intimacy and ‘anxiety’ about intimate relationships. Given the similarity between these measures, and given the superior psychometric properties of the ECRS, it was decided to select the ECRS as the measure of attachment to be utilized for all subsequent analyses (see Appendix D for principal component analyses and a more detailed comparison between the two measures). Both the avoidance (18 items; $\alpha = .94$) and anxiety (18 items; $\alpha = .92$) subscales of the ECRS had good internal consistency.

Coping. The COPE (Carver et al., 1989) was used to assess the coping strategies that participants utilize in response to stressful life experiences. This instrument includes some responses that are thought to be dysfunctional, as well as some that are thought to be functional. The COPE is a 60-item dispositional coping inventory where respondents indicate the extent to which they use each coping strategy on a 4-point scale ranging from 1 (*I usually don't do this*) to 4 (*I usually do this a lot*). The COPE includes five subscales to measure conceptually distinct aspects of problem-focused coping (active coping, planning, suppression of competing activities, restraint coping, seeking of instrumental social support),

five subscales to measure aspects of emotion-focused coping (seeking of emotional social support, positive reinterpretation and growth, acceptance, denial, turning to religion) and three subscales that measure coping responses that are 'arguably less useful' (focus on venting of emotions, behavioural disengagement, and mental disengagement). Each subscale is made up of 4 items. Higher scores on each scale indicate a more frequent use of that coping strategy.

Initial test-retest reliability findings indicate that COPE subscale scores are moderately stable, with 8-week correlations ranging from .46 to .77 and 6 week correlations ranging from .42 to .89 in a sample of 978 undergraduates. With respect to convergent validity, Carver et al. (1989) assessed the relationship between the COPE scales and scores on various personality measures. The pattern of correlations suggested that the coping strategies postulated to be functional were positively related to personality qualities that are widely regarded as beneficial, whereas coping mechanisms that are hypothesized to be less functional were inversely associated with desirable personality qualities. Discriminant validity was demonstrated in that 1) although the personality variables tended to predictably correlate with coping strategies, the correlations were not overly strong; and 2) the COPE scales were not strongly correlated with a measure of social desirability, even when such associations may be expected (e.g., for positive reinterpretation and growth). The factor structure of the COPE was examined and analyses produced the same structure as was hypothesized (Carver et al., 1989). Cook and Heppner (1997) reviewed a number of coping instruments and concluded that the COPE has a strong theoretical base and sound evidence of validity.

Principal components analysis was conducted on the 13 subscale scores in order to reduce the number of subscales and to minimize the issue of multicollinearity (see Appendix E for table of loadings). Examination of the scree plot suggested four factors that together

explained 57.5% of the total variance. Following a varimax rotation, these factors were labeled 'problem-focused coping' (2 items; $r = .74$), 'avoidant coping' (3 items; $\alpha = .72$), 'cognition/restraint' (4 items; $\alpha = .60$), and 'social support/emotional expression' (3 items; $\alpha = .79$). The internal consistency of these factor scores was moderate considering the small number of items (i.e., the original 13 subscales) that the four factor scores were made up of.

Psychological symptomatology. The Symptom Checklist-90-Revised (SCL-90-R; Derogatis, 1992) is a widely-used general measure of psychological symptomatology, consisting of 90 items that assess 9 symptom dimensions, including somatization, obsessive-compulsiveness, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism. One week test-retest reliabilities ranged from between .80 to .90 for the subscales. Cross-validation of the SCL-90-R with the MMPI scales in 209 'symptomatic individuals' indicated high convergent validity (Derogatis, 1992).

Participants were asked to rate the degree to which they are distressed by each of the 90 items/symptoms over the past week on a 5-point Likert scale ranging from 0 (*not at all*) to 4 (*extremely*). The SCL-90-R may be interpreted in terms of the 9 primary symptom dimensions, or it can be interpreted with respect to 3 global indices of distress. The three global indices include the Global Severity Index (GSI) which combines information on numbers of symptoms and the intensity of distress, the Positive Symptom Distress Index (PSDI) which is a pure intensity measure, and the Positive Symptom Total (PST) which provides data on the number of symptoms. Given that the 10 subscales of the Symptom Checklist were all highly intercorrelated (see Table 4), and given the high internal consistency (Cronbach's $\alpha = .98$), these 10 subscales were combined into one Global Severity Index score (Derogatis, 1994) that was used for all subsequent analyses. Further, based on past research regarding the effects of childhood abuse, the presence of general symptomatology rather than the specificity of symptoms was of interest.

Table 4

Intercorrelations Among the SCL-90-R Subscales

	2	3	4	5	6	7	8	9	10
1. Somatization	.70***	.65***	.73***	.76***	.54***	.63***	.64***	.71***	.70***
2. Obsessive-compulsive		.74***	.80***	.79***	.55***	.65***	.71***	.76***	.71***
3. Interpersonal sensitivity			.83***	.79***	.62***	.63***	.79***	.78***	.68***
4. Depression				.83***	.59***	.59***	.72***	.75***	.76***
5. Anxiety					.62***	.77***	.73***	.78***	.71***
6. Hostility						.51***	.61***	.63***	.57***
7. Phobic anxiety							.60***	.69***	.46***
8. Paranoid ideation								.80***	.61***
9. Psychoticism									.65***
10. Additional items									--

*** $p < .001$

Posttraumatic Symptomatology. The Impact of Event Scale – Revised (IES-R; Weiss & Marmar, 1997) was used to assess posttraumatic symptomatology. The IES-R consists of 22 items comprising three subscales including Intrusion (7 items), Avoidance (8 items), and Hyperarousal (7 items). Because the scale is often used to measure reactions to a single event, and the participants in this study were likely to have experienced either repeated trauma, or potentially no ‘trauma’ at all, the instructions were reworded slightly following the instructions used by Allen, Coyne, and Huntoon (1998) in their sample of psychiatric inpatients. Rather than specifying a specific traumatic event, participants were asked to rate the items “with respect to trauma you may have experienced.” Participants are asked to indicate to what degree they have been experiencing the difficulties represented by each item in the past seven days on a 5-point scale ranging from 0 (not at all) to 4 (extremely). Given that the 3 subscales of the Impact of Event Scale were all highly intercorrelated ($r = .69, p < .001$ between intrusion and avoidance; $r = .84, p < .001$ between intrusion and hyperarousal, and $r = .66, p < .001$ between avoidance and hyperarousal.), and given the high internal consistency (Cronbach’s $\alpha = .95$) of the total score, these 3 subscales were combined into one average PTSD score that was used for all subsequent analyses.

Life Satisfaction. A global measure of life satisfaction, the Satisfaction with Life Scale (SWLS; Diener, Emmons, Larson, & Griffin, 1985) was administered. The SWLS is a 5-item scale designed to assess one component of subjective well-being, namely global life satisfaction, and thus does not tap related constructs such as positive affect or loneliness. Ratings occur along a 7-point scale ranging from “strongly disagree” to “strongly agree.” Scores are obtained by summing scores on the five items, so the possible range of scores on the questionnaire is from 5 (low satisfaction) to 35 (high satisfaction). Diener et al. (1985) reported the SWLS to have good psychometric properties, including high temporal reliability (test-retest correlation coefficient = .82). They noted that scores on the SWLS correlated

moderately to highly with other measures of subjective well-being, and correlated predictably with specific personality characteristics (e.g., self-esteem, neuroticism, sociability, and impulsivity). This five-item scale had good internal consistency in this study (Cronbach's $\alpha = .90$).

Procedure

Participants either met with the researcher to complete the questionnaire package or the package was mailed to them for completion, depending on what was preferable for the individual. The participants were asked to complete the questionnaire booklet containing the measures described above, which were presented in randomized order. The CMQ was administered at the end of each questionnaire package in order to minimize mood effects.

Results

The initial analyses examined the descriptive characteristics of participants' scores on the conceptual variables of the study, including patterns of interrelations and sex differences. Relations between the remaining demographic characteristics and the conceptual variables of the study are presented in Appendix F. The main analyses included testing the hypothesized patterns of relations and mediating effects. This included conducting correlational analyses between the predictor and criterion variables as well as the correlations between each of the proposed mediating variables with both the predictor and criterion variables. Finally, hierarchical regression analyses were conducted to test for the mediating relationships in the proposed model.

Initial Analyses

Descriptive Statistics for the Childhood Maltreatment Predictor Variables

The descriptive statistics indicate that the majority of participants experienced relatively little childhood maltreatment. On average, they reported having experienced psychological/physical maltreatment "rarely" to "sometimes" ($M = 2.15$, $SD = .90$) and

parental sexual abuse between “never” to “rarely” ($M = 1.44$, $SD = .86$). Reports of these two types of abuse were found to be positively correlated ($r = .41$, $p < .001$).

Descriptive Statistics and Intercorrelations among the Mediating Variables

As delineated earlier, it was hypothesized that EI, attachment, and coping would mediate the relationship between childhood maltreatment and adult well-being. Coping was suggested as a more proximal mediator, in that, it was hypothesized that EI and attachment would influence coping strategies, which would in turn influence well-being. However, EI and attachment were also hypothesized to directly mediate the effects of childhood maltreatment on adult well-being, regardless of their effects on coping.

Emotional intelligence. Two measures of emotional intelligence were administered, the MSCEIT, a performance-based measure of EI, and the EI Scale, a self-report measure of EI. Because MSCEIT scores were not found to be related to most conceptual variables in this study, thereby precluding the relevance of considering a mediated model, the EI scale was used to represent the measure of EI for this thesis. Descriptive statistics and other analyses using the MSCEIT can be found in Appendix G.

As seen in Table 5, on average, participants reported fairly high levels of EI across all factors (means ranging from 3.46 to 3.89 on this 5-point measure) (see Table 5). The EI subscale scores were all positively moderately intercorrelated (see Table 5).

Table 5

Descriptive Statistics and Intercorrelations for the EI Scale

Subscale	<i>M</i>	<i>SD</i>	2	3	4
1. Appraisal of emotion	3.53	.80	.41***	.38***	.34***
2. Utilization of emotion	3.89	.58	--	.50***	.51***
3. Mood regulation	3.46	.70		--	.59***
4. Experiencing/sharing emotion	3.65	.71			--

*** $p < .001$

Attachment. Two measures, the RSQ and the ECRS, were administered to assess participants' attachment. Given the similarity between these measures (see Appendix D), and given the superior psychometric properties of the ECRS, it was decided to select the ECRS as the measure of attachment to be utilized for all subsequent analyses. On average, participants' avoidant attachment scores were just below the mid-point ($M = 3.44$, $SD = 1.36$), whereas their anxious attachment scores were slightly above the midpoint ($M = 3.77$, $SD = 1.28$). The two attachment subscales were positively correlated ($r = .37$, $p < .001$).

Coping. As shown in Table 6, on average, participants reported using each of the strategies to a moderate degree. Problem-focused coping, cognition/restraint, and social support/emotional expression were all positively correlated. Avoidant coping was negatively correlated with problem-focused coping but was not related to either cognition/restraint or to social support/emotional expression.

Table 6

Descriptive Statistics and Intercorrelations for the Coping Scales

Subscale	<i>M</i>	<i>SD</i>	2	3	4
1. Problem-focused	2.97	.66	-.42***	.56***	.33***
2. Avoidant coping	1.93	.57	--	-.03	-.03
3. Cognition/restraint	2.58	.47		--	.28***
4. Social support emotional expression	2.68	.74			--

*** $p < .001$

Intercorrelations between the mediating variables. Correlational analyses were conducted in order to assess the relationships between EI, attachment, and coping. With respect to the relations between EI and attachment (see Table 7), higher scores on all four EI subscales were associated with lower avoidance attachment and, with the exception of utilization of emotions, lower anxious attachment scores.

Table 7

Correlations between Emotional Intelligence and Attachment

EI	Attachment	
	Avoidance	Anxiety
Appraisal of emotion	-.27***	-.26***
Utilization of emotion	-.21**	-.11
Mood regulation	-.40***	-.48***
Experiencing/sharing emotions	-.47***	-.28***

** $p < .01$; *** $p < .001$

Similarly, as seen in Table 8, for the most part, higher scores on all four EI subscales were associated with greater use of problem-focused coping, cognition/restraint coping, and social support/emotional expression, and reduced endorsement of avoidant coping strategies.

Table 8

Correlations between Emotional Intelligence and Coping

EI	Coping			
	Problem-focused	Avoidant	Cognition/restraint	Social support/emotional expression
Appraisal of emotion	.32***	-.20**	.23**	.23**
Utilization of emotion	.42***	-.21**	.36***	.27***
Mood Regulation	.52***	-.35***	.49***	.12
Experiencing/sharing of emotion	.51***	-.42***	.27***	.42***

** $p < .01$; *** $p < .001$

Attachment styles were also consistently related to the coping strategies endorsed (see Table 9), in that more avoidant or anxious attachment was associated with lower likelihood of using problem-focused, cognition/restraint, and social support/emotional expression coping, and greater likelihood of using avoidant coping.

Table 9

Correlations between Attachment and Coping

Coping	Attachment	
	Avoidance	Anxiety
Problem-focused	-.25***	-.24***
Avoidant	.20**	.28***
Cognition/restraint	-.19**	-.20**
Social support/emotional expression	-.32***	.08

** $p < .01$; *** $p < .001$

In sum, EI, attachment, and coping were a consistently interrelated set of potential mediating variables. The tendency to seek social support or use emotional expression was the only coping strategy that showed less consistency in its relations to EI or attachment, in that it was not significantly related to mood regulation or anxious attachment styles.

Descriptive Statistics and Intercorrelations Between the Well-Being Criterion Variables

Participants' well-being was assessed with the Symptom Checklist-90-Revised (SCL-90-R), a measure of psychological symptoms and problems, the Impact of Event Scale (IES-R), a measure of symptoms of posttraumatic stress disorder, and the Satisfaction With Life Scale (SWLS), a global measure of life satisfaction.

On average, participants reported suffering from very little psychological symptomatology ($M = 1.06$, $SD = 0.75$) and moderately low levels of PTSD symptomatology ($M = 31.16$, $SD = 20.96$). On average, participants' reported that their life satisfaction was slightly above the mid-point on this 7-point scale ($M = 3.92$, $SD = 1.59$). Thus, on average, the sample appeared fairly 'psychologically healthy.'

Participants' scores on the three well-being measures were intercorrelated in the expected directions. SCL-90-R scores and the IES-R scores were positively correlated ($r = .74, p < .001$), indicating that those who reported experiencing greater general psychological symptomatology also tended to experience greater symptoms of posttraumatic stress. Conversely, life satisfaction was negatively correlated with Symptom Checklist ($r = -.52, p < .001$) and Impact of Event Scale ($r = -.40, p < .001$) scores, indicating that those who reported experiencing greater general and posttraumatic stress symptomatology tended to be less satisfied with their lives.

Sex Differences on the Conceptual Variables

A series of analyses was conducted to elucidate any sex difference along the conceptual variables in the study (see Table 10). On average, men and women did not differ on most conceptual variables of the study, with the exception that women scored more highly on parental sexual abuse, the appraisal of emotion and utilization of emotion components of EI, and social support/emotional expression coping.

Table 10

Sex Differences on the Conceptual Variables

Scale	Men		Women		t-value
	M	SD	M	SD	
Maltreatment					
Psychological/physical maltreatment	2.11	.85	2.17	.93	-.47
Parental sexual abuse	1.28	.69	1.52	.93	-2.10*
Emotional Intelligence					
Appraisal of emotion	3.33	.87	3.62	.76	2.39*
Utilization of emotion	3.71	.57	3.97	.57	-3.13**
Mood regulation	3.38	.68	3.50	.71	-1.16
Experiencing/sharing emotions	3.54	.66	3.69	.73	-1.41
Attachment					
Avoidance	3.65	1.32	3.34	1.37	1.55
Anxiety	3.77	1.23	3.77	1.31	.01

Table 10 Continued

Sex Differences on the Conceptual Variables

Scale	Men		Women		t-value
	M	SD	M	SD	
Coping					
Problem-focused	2.90	.59	3.01	.69	-1.12
Avoidant	1.94	.53	1.93	.58	.15
Cognition/restraint	2.51	.42	2.61	.48	-1.60
Social support/emotional expression	2.39	.72	2.81	.71	-4.07***
Well-being					
Symptom Checklist	1.15	.71	1.02	.77	1.23
Impact of Event Scale	1.50	.96	1.38	.95	.77
Satisfaction With Life Scale	3.85	1.42	3.95	1.67	-.41

* $p < .05$; ** $p < .01$; *** $p < .001$

Main Analyses

Baron and Kenny's (1986) procedure was used to examine whether EI, attachment, and coping mediated the relationship between childhood maltreatment and adult well-being. This involved conducting correlational analyses between the predictor and criterion variables as well as the correlations between each of the proposed mediating variables with both the predictor and criterion variables. Hierarchical regressions were then conducted to test for the mediating relationships.

While tests of the significance of a mediated model are available (e.g., Sobel's), these tests are geared to models involving a single mediating variable. As an alternative benchmark, given the multiple indicators employed in the present thesis, an indirect or mediated effect was considered to be significant if the explained variability in the outcome variable that could be explained by the predictor variable (direct effect) dropped at least 5% when the mediating variable was taken into account. This benchmark was somewhat arbitrary but was based upon Cohen's (1988) suggestion that an effect size of 1% may be considered small and an effect size of 9% may be considered medium. Thus, an effect size of 5% falls somewhere in the middle. Further, in reaction to the unrealistic claims regarding the predictive value of EI, Mayer, Salovey, and Caruso (2000a) have suggested that because many variables have already been demonstrated to have much explanatory power in predicting well-being, reasonable additional prediction that can be expected to be gained over and above other explanatory variables is likely to range from 1 – 5%.

Correlations Between the Predictor and Criterion Variables

The central indices of adult well-being used in this study were general psychological symptomatology, as assessed by SCL-90-R scores, PTSD symptomatology, as assessed by the IES, and life satisfaction, as assessed by the SWLS. As shown in Table 11, more frequent experiences of psychological/physical abuse and childhood sexual abuse were

associated with the greater levels of both general and PTSD symptomatology and decreased life satisfaction, although the associations with sexual abuse tended to be weaker than those with nonsexual abuse.

Table 11

Correlations Between Childhood Maltreatment and Adult Well-Being

Well-Being Scores	Psychological/ Physical Maltreatment	Sexual Maltreatment
SCL-90R	.49***	.18**
IES	.39***	.17*
SWLS	-.38***	-.19**

* $p < .05$; ** $p < .01$; *** $p < .001$

Correlations Between the Mediating Variables and the Predictor Variables

The zero-order correlations between childhood abuse and the three sets of mediating variables (EI, attachment, and coping) are presented in Table 12. As shown there, childhood psychological/physical maltreatment was associated with lower scores on all components of EI except utilization of emotion, as well as with attachment styles. By contrast, sexual abuse was not related to EI scores, and was only mildly related to attachment styles. However, neither psychological/physical maltreatment nor sexual abuse were related to scores on the four coping subscales, with the exception of a weak association between psychological/physical abuse and avoidant coping. Based on these results, it is clear that the impact of sexual abuse on well-being would not be mediated by emotional intelligence. Further, given that coping was not related to either dimension of childhood maltreatment, its ability to mediate the relations between maltreatment and well-being was also no longer a viable possibility. However, as noted earlier, coping was also hypothesized to be a proximal mediator in that, childhood maltreatment was expected to influence EI and attachment,

which, in turn, were associated with individuals' use of different coping strategies. Such coping strategies may ultimately influence well-being. Thus, subsequent regression analyses examined the extent to which coping mediated the relationship between EI or attachment and well-being.

Table 12

Correlations between Childhood Maltreatment and the Mediating Variables – EI, Attachment, and Coping

Mediating Variables	Childhood Maltreatment	
	Psychological/ Physical Maltreatment	Sexual Maltreatment
EI		
Appraisal of emotion	-.14*	-.07
Utilization of emotion	.05	.04
Mood regulation	-.19**	-.05
Experiencing/sharing emotions	-.27***	-.001
Attachment		
Avoidance	.49***	.24***
Anxiety	.35***	.25***
Coping		
Problem-focused	-.04	.04
Avoidance	.14*	.04
Cognition/restraint	-.06	.06
Social support/emotional expression	-.11	.08

* $p < .05$; *** $p < .001$

Correlations Between the Mediating Variables and the Criterion Variables

The zero-order correlations between the adult well-being variables and the three sets of mediating variables (EI, attachment, and coping) are presented in Table 13. As shown there, greater symptomatology on both the SCL-90-R and the IES-R was associated with lower scores on all components of EI, except utilization of emotion. Although life satisfaction was related to higher scores on all four components of EI, given that utilization of emotion was not related to SCL-90-R and IES-R scores, nor with childhood maltreatment, this component of EI was not be included in subsequent hierarchical regressions examining its mediating role.

With respect to the relations between adult well-being and attachment, the greater participants' symptomatology on both the SCL-90-R and the IES-R, the more likely they were to report both avoidant and anxious attachment. Conversely, the greater participants' life satisfaction, the lower their scores on both avoidant and anxious attachment.

With respect to the relations between well-being and coping, lower SCL-90-R scores and greater life satisfaction were associated with reporting greater use of problem-focused coping, more cognition-restraint coping, and less avoidant coping, but were unrelated to the use of social support/emotional expression. PTSD symptomatology was also associated with greater use of problem-focused coping and less avoidant coping but not with the endorsement of either cognition/restraint coping or social support/emotional expression. Due to its lack of relation with well-being, and its inconsistent relations with dimensions of attachment and EI, social support/emotional expression was not included in further higher-level analyses.

Table 13

Correlations between Adult Well-Being Criterion Variables and the Mediating Variables –
EI, Attachment, and Coping

Mediating Variables	Adult Well-Being		
	SCL-90-R	IES-R	SWLS
EI			
Appraisal of emotion	-.25***	-.22***	.23***
Utilization of emotion	-.10	.04	.27***
Mood regulation	-.49***	-.28***	.49***
Experiencing/sharing emotions	-.49***	-.33***	.43***
Attachment			
Avoidance	.53***	.45***	-.50***
Anxiety	.59***	.44***	-.43***
Coping			
Problem-focused	-.33***	-.15*	.34***
Avoidance	.45***	.38***	-.27***
Cognition and restraint	-.18**	-.01	.25***
Social support/emotional expression	-.10	-.06	.08

* $p < .05$; ** $p < .01$; *** $p < .001$

Hierarchical Regression Analyses of the Proposed Mediated Model: EI and/or Attachment in Mediating the Relationship Between Childhood Maltreatment and Well-Being

A series of hierarchical regression analyses was conducted to assess whether EI and attachment mediated the relationship between childhood maltreatment and well-being, as well as to compare the convergence and the relative importance of EI and attachment in mediating this relationship. These analyses entailed regressing each respective measure of well-being (SCL-90-R, IES, SWLS) onto EI scores on the first step and then onto abuse scores on the second step. For the sake of comparative consistency across models, sexual abuse was included in all analyses, despite its lack of relations to the dimensions of EI. In a second set of regressions, scores on each respective measure of well-being were regressed onto attachment scores on the first step and then onto abuse scores on the second step. Finally, in order to compare the overlap and relative importance of EI and attachment, the final analysis involved regressing scores on each respective measure of well-being onto both EI and attachment together on the first step, and then onto abuse scores on the second step.

The following assumptions were satisfied: Errors for the well-being criterion scores were normally distributed and were independent of one another; error in the well-being criterion scores was the same across the maltreatment scores. Relatedly, error in the well-being criterion scores was not correlated with maltreatment predictor scores; and the underlying relationship between the well-being criterion variable scores and the maltreatment predictor variables was linear. With respect to the predictor variables being fixed, although specific levels of maltreatment were not selected a priori, this assumption was likely not met nevertheless, as there was a wide range of maltreatment scores, with many values at regular intervals between the two extreme values. However, linear regression is fairly robust to the violation of this assumption. Finally, regression analyses

are also based on the assumption that variables are normally distributed. However, some of the conceptual variables included in these analyses were not normally distributed. For a description of tests of normality and the steps taken to address violations of normality, see Appendix H.

Mediation of General Symptomatology (SCL-90-R) Scores

EI as a mediator. When SCL-90-R scores were regressed first onto the three EI subscale scores, EI scores predicted a significant amount of variability in symptomatology, $R^2_{\text{adjusted}} = .293$, $F(3, 214) = 30.98$, $p < .001$. An examination of the regression weights, reported in Table 14, suggested that although all three EI subscales had significant zero-order correlations with SCL-90-R scores, only mood regulation and experiencing/sharing emotions predicted unique variability in SCL-90-R scores. Prediction of SCL-90-R scores was significantly improved when abuse scores were entered on the second step, $R^2_{\text{change}} = .132$, $F_{\text{change}}(2, 212) = 24.82$, $p < .001$. According to the 5% drop in explained variability benchmark, EI mediated the relationship between maltreatment and general symptomatology in that the direct effect of maltreatment ($R^2_{\text{adjusted}} = .236$, $F(2, 215) = 34.55$, $p < .001$) dropped 10.4% when the effect of EI was taken into account. When all predictors were considered together, mood regulation and experiencing/sharing emotions still predicted unique variability in SCL-90-R scores. However, psychological/physical maltreatment, but not parental sexual abuse², also predicted unique variability in SCL-90-R scores, suggesting that EI only partially mediated the effects of maltreatment on psychological symptomatology. Sexual abuse was not a unique predictor of SCL-90-R scores when considered together with psychological/physical maltreatment due to the intercorrelation between these two types of childhood maltreatment ($r = .41$, $p < .001$).

² Sexual abuse uniquely predicted SCL-90-R scores over and above EI abilities and psychological/physical maltreatment in men (standardized $B = .34$, semi-partial $r^2 = .10$, $t(61) = 3.59$, $p < .01$) but not women (standardized $B = -.07$, semi-partial $r^2 = .00$, $t(144) = 1.13$, ns). This is likely because the zero-order correlation between sexual abuse and SCL-90-R scores was significant for men ($r = .45$, $p < .001$) but not for women ($r = .12$, ns) in the first place.

Table 14

Regression of Emotional Intelligence and Maltreatment Scores onto General Symptomatology (SCL-90-R) Scores

	r	B	Semi-partial r^2	R^2_{change}
Step 1				.303***
Appraisal of emotion	-.25***	-.03	.00	
Mood regulation	-.49***	-.29***	.05***	
Experiencing/sharing Emotion	-.49***	-.31***	.06***	
Step 2				.132***
Appraisal of emotion	-.25***	-.01	.00	
Mood regulation	-.49***	-.28***	.05***	
Experiencing/sharing Emotion	-.49***	-.22**	.03**	
Psychological/physical maltreatment	.49***	.37***	.10***	
Sexual abuse	.18**	.02	.00	

* $p < .05$; ** $p < .01$; *** $p < .001$

Attachment as a mediator. When SCL-90-R scores were regressed onto attachment scores a significant amount of variability in psychological symptomatology was accounted for, $R^2_{\text{adjusted}} = .461$, $F(2, 215) = 93.83$, $p < .001$. An examination of the regression weights, reported in Table 15, suggests that both avoidant and anxious attachment predicted unique variability in SCL-90-R scores. Prediction of SCL-90-R scores was significantly, but modestly, improved when abuse scores were entered on the second step, $R^2_{\text{change}} = .039$, $F_{\text{change}}(2, 213) = 8.41$, $p < .001$. As the direct effect of maltreatment ($R^2_{\text{adjusted}} = .236$, $F(2,$

215) = 34.55, $p < .001$) dropped 19.7% when the effect of attachment was taken into account, it appears that attachment mediated the relationship between maltreatment and symptomatology. When all predictors were considered together, both avoidant and anxious attachment as well as psychological/physical maltreatment predicted unique variance in SCL-90-R scores, suggesting that attachment only partially mediated the effects of maltreatment on psychological symptomatology.³

Table 15

Regression of Attachment and Maltreatment Scores onto General Symptomatology (SCL-90-R) Scores

	r	B	Semi-partial r^2	R^2_{change}
Step 1				.466***
Avoidant attachment	.53***	.37***	.12***	
Anxious attachment	.59***	.46***	.18***	
Step 2				.039***
Avoidant attachment	.53***	.28***	.06***	
Anxious attachment	.59***	.43***	.15***	
Psychological/physical maltreatment	.49***	.24***	.04***	
Sexual abuse	.18**	-.09	.01	

* $p < .05$; ** $p < .01$; *** $p < .001$

³ As in the regression examining the mediating role of EI, the effects of sexual abuse were different for men and women. For men, sexual abuse uniquely predicted SCL-90-R scores over and above attachment and psychological/physical maltreatment (standardized $B = .21$, semi-partial $r^2 = .04$, $t(61) = 2.50$, $p < .05$). For women, the effect of sexual abuse were also significant (standardized $B = -.18$, semi-partial $r^2 = .03$, $t(144) = -2.80$, $p < .01$), however, this effect appeared to be due to suppression.

Combined mediation effects. Because the appraisal of emotion component of EI did not uniquely predict SCL-90-R scores when controlling for the effects of the other EI components, only mood regulation and experiencing/sharing emotions were included in this regression. Not surprisingly, when entered together, EI and attachment scores predicted a significant amount of variability in symptomatology, $R^2_{\text{adjusted}} = .508$, $F(4, 213) = 57.09$, $p < .001$. An examination of the regression weights, reported in Table 16, suggests that although both EI subscales (mood regulation and experiencing/sharing emotions) and both attachment subscales (avoidance and anxiety) had significant zero-order correlations with SCL-90-R scores, mood regulation did not predict unique variability in SCL-90-R scores when all these scores were considered. Nonetheless, given that EI and attachment were entered together the prediction of SCL-90-R scores was enhanced, and given that both the experiencing/sharing emotions subscale of EI and attachment subscales explain unique variability in SCL-90-R scores, they are likely unique additive constructs, both of which may be important in influencing well-being. Prediction of SCL-90-R scores was modestly, but significantly, improved when abuse scores were entered on the second step, $R^2_{\text{change}} = .034$, $F_{\text{change}}(2, 211) = 8.05$, $p < .001$, in that psychological/physical abuse predicted unique variability in psychological symptomatology over and above EI and attachment. Predictably, taken together, EI and attachment mediated the relationship between maltreatment and general symptomatology in that the direct effect of maltreatment ($R^2_{\text{adjusted}} = .236$, $F(2, 215) = 34.55$, $p < .001$) dropped 20.2% when the effect of these mediating variables was taken into account. However, the strength of this relation was not markedly reduced in comparison to its unique effects over and above attachment styles alone.

Table 16

Regression of Emotional Intelligence, Attachment, and Maltreatment Scores onto General Symptomatology (SCL-90-R) Scores

	r	B	Semi-partial r^2	R^2_{change}
Step 1				.517***
Mood regulation	-.49***	-.05	.00	
Experiencing/sharing Emotion	-.49***	-.23**	.03**	
Avoidant attachment	.53***	.26***	.05***	
Anxious attachment	.59***	.41***	.12***	
Step 2				.034***
Mood regulation	-.49***	-.08	.00	
Experiencing/sharing Emotion	-.49***	-.20**	.02**	
Avoidant attachment	.53***	.17**	.02**	
Anxious attachment	.59***	.37***	.09***	
Psychological/physical maltreatment	.49***	.23***	.03***	
Sexual abuse	.18**	-.05	.00	

* $p < .05$; ** $p < .01$; *** $p < .001$

Mediation of PTSD Symptomatology (IES-R) Scores

EI as a mediator. When IES-R scores were regressed first onto the three EI subscale scores, EI predicted a significant amount of variability in PTSD symptomatology, $R^2_{\text{adjusted}} = .115$, $F(3, 193) = 9.43$, $p < .001$. An examination of the regression weights, reported in Table 17, suggested that although all three EI subscales had significant zero-order correlations with IES-R scores, only experiencing/sharing emotions predicted unique

variability in PTSD symptoms. Prediction of IES-R scores was significantly improved when abuse scores were entered on the second step, $R^2_{\text{change}} = .094$, $F_{\text{change}}(2, 190) = 11.44$, $p < .001$. With respect to EI as a mediator of the relationship between maltreatment and PTSD symptomatology, the direct effect of maltreatment ($R^2_{\text{adjusted}} = .143$, $F(2, 193) = 17.24$, $p < .001$) dropped 4.9% when the effect of EI was taken into account. Whether or not this presents a significant mediational effect is arguable, given it does not quite meet the a priori 5% benchmark. However, interpreting this mediational effect as significant is consistent with theory, and is replicated by the mediational effect of EI in relation to the other indicators of well-being, namely general symptomatology and life satisfaction (see below). Thus, EI may have partially mediated the effects of maltreatment on PTSD symptomatology. When all predictors were considered together, experiencing/sharing emotions still predicted unique variability in IES-R scores. As with SCL-90-R scores, psychological/physical maltreatment, but not parental sexual abuse, also predicted unique variability in IES-R scores. Again, this suggests that sexual abuse scores were redundant with psychological/physical maltreatment scores in predicting PTSD symptoms.

Table 17

Regression of Emotional Intelligence and Maltreatment Scores onto PTSD symptomatology (IES-R) Scores

	r	B	Semi-partial r^2	R^2_{change}
Step 1				.128***
Appraisal of emotion	-.22**	-.10	.01	
Mood regulation	-.28***	-.11	.01	
Experiencing/sharing Emotion	-.33***	-.24**	.04**	
Step 2				.094***
Appraisal of emotion	-.22**	-.08	.01	
Mood regulation	-.28***	-.10	.01	
Experiencing/sharing Emotion	-.33***	-.17*	.02*	
Psychological/physical maltreatment	.39***	.30***	.07***	
Sexual abuse	.17**	.04	.00	

* $p < .05$; ** $p < .01$; *** $p < .001$

Attachment as a mediator. When IES-R scores were regressed onto attachment scores a significant amount of variability in posttraumatic symptomatology was accounted for, $R^2_{\text{adjusted}} = .279$, $F(2, 193) = 38.81$, $p < .001$. An examination of the regression weights, reported in Table 18, suggests that both avoidant and anxious attachment predicted unique variability in IES-R scores. Prediction of IES-R scores was marginally improved when abuse scores were entered on the second step, $R^2_{\text{change}} = .019$, $F_{\text{change}}(2, 191) = 2.62$, $p =$

.076⁴. According to the 5% drop in explained variability benchmark, attachment mediated the relationship between maltreatment and PTSD symptomatology in that the direct effect of maltreatment ($R^2_{\text{adjusted}} = .143$, $F(2, 193) = 17.24$, $p < .001$) dropped 12.4% when the effect of attachment was taken into account. When all predictors were considered together, both avoidant and anxious attachment as well as psychological/physical maltreatment (but not sexual abuse) predicted unique variance in IES-R scores. Thus, attachment partially mediated the effects of maltreatment on PTSD symptomatology.

Table 18

Regression of Attachment and Maltreatment Scores onto PTSD Symptomatology (IES-R) Scores

	r	B	Semi-partial r^2	R^2_{change}
Step 1				.287***
Avoidant attachment	.45***	.34***	.10***	
Anxious attachment	.44***	.31***	.08***	
Step 2				.019 [†]
Avoidant attachment	.45***	.27***	.05***	
Anxious attachment	.44***	.29***	.07***	
Psychological/physical maltreatment	.39***	.17**	.02**	
Sexual abuse	.17*	-.03	.00	

* $p < .05$; ** $p < .01$; *** $p < .001$; [†] $p = .076$

⁴ When transformed abuse scores were used, prediction of IES scores was significantly, but modestly, improved when abuse scores were entered on the second step, $R^2_{\text{change}} = .025$, $F_{\text{change}}(2, 191) = 3.44$, $p < .05$. Thus, given the slight difference between transformed scores and nontransformed scores, and given the regression weights for psychological/physical abuse were significant, this step was interpreted as being marginally significant.

Combined mediation effects. Because the appraisal of emotion component of EI did not uniquely predict IES-R scores when controlling for the effects of the other EI components, only mood regulation and experiencing/sharing emotions were included in this regression. Not surprisingly, when entered together, EI and attachment scores predicted a significant amount of variability in PTSD symptomatology, $R^2_{\text{adjusted}} = .286$, $F(4, 191) = 20.50$, $p < .001$. An examination of the regression weights, reported in Table 19, suggests that although both EI subscales (mood regulation and experiencing/sharing emotions) and both attachment subscales (avoidance and anxiety) had significant zero-order correlations with IES-R scores, only the two attachment scores predicted unique variability in IES-R scores when all these variables were considered together. Prediction of IES-R scores was marginally improved when abuse scores were entered on the second step, $R^2_{\text{change}} = .016$, $F_{\text{change}}(2, 189) = 2.19$, $p = .115^5$. Not surprisingly, taken together EI and attachment mediated the relationship between maltreatment and PTSD symptomatology in that the direct effect of maltreatment ($R^2_{\text{adjusted}} = .143$, $F(2, 193) = 17.24$, $p < .001$) dropped 12.7% when the effects of EI and attachment were taken into account. When all predictors were considered together, avoidant attachment, anxious attachment, and psychological/physical abuse predicted unique variance in IES-R scores. Thus, with respect to the overlap and relative importance of EI and attachment, when taken together, only attachment predicted unique variance in IES-R scores.

⁵ When transformed abuse scores were used, prediction of IES scores was significantly, but modestly, improved when abuse scores were entered on the second step, $R^2_{\text{change}} = .022$, $F_{\text{change}}(2, 189) = 3.14$, $p < .05$. Thus, given the slight difference between transformed scores and nontransformed scores, and given the regression weights for psychological/physical abuse were significant, this step was interpreted as being marginally significant.

Table 19

Regression of Emotional Intelligence, Attachment, and Maltreatment Scores onto PTSD Symptomatology (IES-R) Scores

	r	B	Semi-partial r^2	R^2_{change}
Step 1				.300***
Mood regulation	-.28***	.08	.00	
Experiencing/sharing Emotion	-.33***	-.15	.01	
Avoidant attachment	.45***	.29***	.06***	
Anxious attachment	.44***	.33***	.08***	
Step 2				.016 [†]
Mood regulation	-.28***	.06	.00	
Experiencing/sharing Emotion	-.33***	-.14	.01	
Avoidant attachment	.45***	.23**	.03**	
Anxious attachment	.44***	.29***	.06***	
Psychological/physical maltreatment	.39***	.15*	.02*	
Sexual abuse	.17**	-.02	-.00	

* $p < .05$; ** $p < .01$; *** $p < .001$; [†] $p = .115$

Mediation of Life Satisfaction (SWLS) Scores

EI as a mediator. When SWLS scores were regressed first onto the three EI subscale scores, EI scores predicted a significant amount of variability in life satisfaction, $R^2_{\text{adjusted}} = .259$, $F(3, 215) = 26.34$, $p < .001$. An examination of the regression weights, reported in Table 20, suggested that although all three EI subscales had significant zero-order correlations with SWLS scores, only mood regulation and experiencing/sharing emotions

predicted unique variability in SWLS scores. Prediction of SWLS scores was significantly improved when abuse scores were entered on the second step, $R^2_{\text{change}} = .073$, $F_{\text{change}}(2, 213) = 11.81$, $p < .001$. As the direct effect of maltreatment ($R^2_{\text{adjusted}} = .137$, $F(2, 216) = 18.33$, $p < .001$) dropped 6.4% when the effect of EI was taken into account, according to the 5% drop in explained variability benchmark, EI mediated the relationship between maltreatment and general symptomatology. When all predictors were considered together, mood regulation and experiencing/sharing emotions still predicted unique variability in SWLS scores. However, psychological/physical maltreatment, but not parental sexual abuse, also predicted unique variability in SWLS scores. Again, this suggests that sexual abuse scores were redundant with psychological/physical maltreatment scores in predicting life satisfaction. Thus, EI partially mediated the effects of psychological/physical maltreatment on life satisfaction.

Table 20

Regression of Emotional Intelligence and Maltreatment Scores onto Life Satisfaction (SWLS) Scores

	r	B	Semi-partial r^2	R^2_{change}
Step 1				.269***
Appraisal of emotion	.23***	.02	.00	
Mood regulation	.49***	.35***	.08***	
Experiencing/sharing Emotion	.43***	.21**	.03**	
Step 2				.073***
Appraisal of emotion	.23***	.004	.00	
Mood regulation	.49***	.34***	.07***	
Experiencing/sharing Emotion	.43***	.16*	.02*	
Psychological/physical maltreatment	-.38***	-.24***	.04***	
Sexual abuse	-.19**	-.07	.00	

* $p < .05$; ** $p < .01$; *** $p < .001$

Attachment as a mediator. When SWLS scores were regressed onto attachment scores a significant amount of variability in life satisfaction was accounted for, $R^2_{\text{adjusted}} = .313$, $F(2, 215) = 50.48$, $p < .001$. An examination of the regression weights, reported in Table 21, suggests that both avoidant and anxious attachment predicted unique variability in SWLS scores. Prediction of SWLS scores was not significantly improved when abuse scores were entered on the second step, $R^2_{\text{change}} = .010$, $F_{\text{change}}(2, 213) = 1.60$, ns , suggesting that attachment mediated the effects of abuse on well-being. Accordingly the direct effect of

maltreatment ($R^2_{\text{adjusted}} = .137$, $F(2, 216) = 18.33$, $p < .001$) dropped 12.5% when the effect of attachment was taken into account.

Table 21

Regression of Attachment and Maltreatment Scores onto Life Satisfaction (SWLS) Scores

	r	B	Semi-partial r^2	R^2_{change}
Step 1				.320***
Avoidant attachment	-.50***	-.40***	.14***	
Anxious attachment	-.43***	-.28***	.07***	
Step 2				.010
Avoidant attachment	-.50***	-.35***	.09***	
Anxious attachment	-.43***	-.26***	.06***	
Psychological/physical maltreatment	-.38***	-.12	.01	
Sexual abuse	-.19**	.01	.00	

* $p < .05$; ** $p < .01$; *** $p < .001$

Combined mediation effects. Because the appraisal of emotion component of EI did not uniquely predict SWLS scores when controlling for the effects of the other EI components, only mood regulation and experiencing/sharing emotions were included in this regression. Not surprisingly, when entered together, EI and attachment scores predicted a significant amount of variability in life satisfaction, $R^2_{\text{adjusted}} = .368$, $F(4, 213) = 32.61$, $p < .001$. An examination of the regression weights, reported in Table 22, suggests that the mood regulation subscale of EI and both attachment subscales predicted unique variability in SWLS scores. Given that when EI and attachment were entered together the prediction of

life satisfaction scores was enhanced, and given that both mood regulation and the attachment subscales explained unique variability in SWLS scores, they are likely unique constructs, both of which may be important in influencing well-being. Given that maltreatment scores did not predict variability in life satisfaction over and above attachment scores, they were not entered into this regression⁶.

Table 22

Regression of Emotional Intelligence, Attachment, and Maltreatment Scores onto Life Satisfaction (SWLS) Scores

	r	B	Semi-partial r^2	R^2_{change}
Step 1				.380***
Mood regulation	.49***	.21**	.02**	
Experiencing/sharing Emotion	.43***	.11	.01	
Avoidant attachment	-.50***	-.30***	.06***	
Anxious attachment	-.43***	-.18**	.02***	

* $p < .05$; ** $p < .01$; *** $p < .001$

Summary

EI, and in particular, mood regulation⁷ and experiencing/sharing emotions, as well as both attachment styles, partially mediated the relationship between childhood maltreatment and well-being. Nonetheless, in all cases, childhood maltreatment continued to have a direct

⁶ Psychological/physical abuse did not predict unique variability in SWLS scores when controlling for EI and attachment (standardized $B = -.13$, semi-partial $r^2 = .01$, $t(211) = -1.89$, $p = .06$). However, when transformed abuse scores were used this type of abuse did predict unique variability in SWLS scores over and above EI and attachment scores (standardized $B = -.14$, semi-partial $r^2 = .00$, $t(211) = -2.07$, $p = .04$). However, given that the second step of this analysis, where maltreatment scores were entered, was not significant in both regressions, whether or not maltreatment scores were transformed or not, the effect of abuse is interpreted as being not significant rather than marginally significant.

⁷ This EI subscale predicted unique variability over and above the other EI subscales and maltreatment scores for SCL-90-R scores and SWLS scores, but not for IES scores.

relation to well-being, with the exception of predicting unique variability in life satisfaction. However, the direct relation was entirely associated with physical/psychological maltreatment, as in no instances were the effects of sexual abuse significant over and above the mediating variables. Again, this is likely because the effects of sexual abuse were redundant in predicting well-being when considered together with the effects of psychological/physical maltreatment.

With respect to the overlap and relative importance of EI and attachment in mediating the relationship between childhood maltreatment and well-being, it is clear that attachment may have played a greater role in mediating the link between childhood maltreatment and well-being (see Table 23). When regressed onto each respective measure of well-being on the first step of these analyses, attachment scores explained a consistently greater proportion of variability across all three well-being measures than did EI scores. Consequently, when controlling for attachment the predictive utility of maltreatment was reduced almost two- to three-fold as compared to when EI scores were controlled for, and this drop was not increased when EI was included in the regression equation, despite the additive effects of EI. This was the case across all three measures of well-being. Thus, EI added little explanatory power in well-being over and above attachment scores when the two were considered together. Nonetheless, experiencing/sharing emotions explained unique variability in psychological symptomatology and mood regulation explained unique variability in life satisfaction when considered together with attachment. Taken together, these results indicate that EI and attachment were not simply redundant and both may be important in influencing well-being.

Table 23

Relative Importance of EI and Attachment in Mediating the Relationship Between Childhood Maltreatment and Well-Being

	Step 1 R^2_{adjusted}	Step 2 R^2_{change}	R^2_{adjusted} for maltreatment without controlling for EI/attachment
SCL-90-R			.236***
EI	.293***	.132***	
Attachment	.461***	.039***	
EI & Attachment	.508***	.034***	
IES-R			.143***
EI	.115***	.094***	
Attachment	.279***	.019***	
EI & Attachment	.286***	.016***	
SWLS			.137***
EI	.259***	.073***	
Attachment	.313***	.012	
EI & Attachment	.368***	.014	

*** $p < .001$

Coping in Mediating the Relationship Between EI and/or Attachment and Well-Being

As noted earlier, given that coping was not related to childhood maltreatment, its ability to mediate the relations between maltreatment and well-being was no longer a feasible.

However, coping was also hypothesized to be a proximal mediator in that, childhood maltreatment was expected to influence EI and attachment, which, in turn, were associated with individuals' use of different coping strategies. Such coping strategies may ultimately

influence well-being. Thus, a series of hierarchical regression analyses was conducted to assess whether coping mediated the relations between EI and well-being and the relations between attachment and well-being, respectively. In the first set of analyses, scores on each respective measure of well-being (SCL-90-R, IES-R, SWLS) were regressed onto coping scores⁸ on the first step and then onto EI scores on the second step. In the second set of regressions, scores on each respective measure of well-being were regressed onto coping scores on the first step and then onto attachment scores on the second step.

Mediation of General Symptomatology (SCL-90-R) Scores.

When SCL-90-R scores were regressed first onto coping scores, a significant amount of variability in symptomatology was accounted for, $R^2_{\text{adjusted}} = .221$, $F(3, 216) = 21.75$, $p < .001$. An examination of the regression weights, reported in Table 24, suggests that although all three coping subscales had significant zero-order correlations with SCL-90-R scores, only avoidant coping predicted unique variability in SCL-90-R scores when all three coping styles were considered together.

When EI scores were entered on the second step, prediction of psychological symptomatology was significantly improved, $R^2_{\text{change}} = .128$, $F_{\text{change}}(2, 214) = 21.40$, $p < .001$. However, according to the 5% drop in explained variability benchmark, coping partially mediated the relationship between EI and general symptomatology in that the direct effect of EI ($R^2_{\text{adjusted}} = .293$, $F(3, 216) = 31.27$, $p < .001$) dropped 16.5% when the effect of coping was taken into account. When all predictors were considered together, avoidant coping and both the mood regulation and experiencing/sharing emotions subscales of EI predicted unique variability in psychological symptomatology.

⁸ 'Social support/emotional expression' coping was not included in these analyses because this type of coping was not related to any of the three criterion variables.

Table 24

Regression of Coping and Emotional Intelligence Scores onto General Symptomatology (SCL-90-R) Scores

	r	B	Semi-partial r^2	R^2_{change}
Step 1				.232***
Problem-focused coping	-.33***	-.09	.00	
Cognition/restraint coping	-.18**	-.11	.01	
Avoidant coping	.45***	.41***	.13***	
Step 2				.128***
Problem-focused coping	-.33***	.06	.00	
Cognition/restraint coping	-.18**	.00	.00	
Avoidant coping	.45***	.28***	.05***	
Mood regulation	-.49***	-.28***	.04***	
Experiencing/sharing Emotion	-.49***	-.24**	.03**	

* $p < .05$; ** $p < .01$; *** $p < .001$

In the analysis in which attachment scores were entered on the second step, prediction of psychological symptomatology was significantly improved, $R^2_{\text{change}} = .303$, $F_{\text{change}}(2, 212) = 68.95$, $p < .001$ (see Table 25). According to the 5% drop in explained variability benchmark, coping again partially mediated the relation between attachment and general symptomatology in that the direct effect of attachment ($R^2_{\text{adjusted}} = .461$, $F(2, 215) = 93.83$, $p < .001$) dropped 15.8% when the effect of coping was taken into account. When all predictors were considered together, avoidant coping and both avoidant and anxious attachment predicted unique variance in psychological symptomatology.

Table 25

Regression of Coping and Attachment Scores onto General Symptomatology (SCL-90-R) Scores

	r	B	Semi-partial r^2	R^2_{change}
Step 1				.232***
Problem-focused coping	-.33***	-.09	.00	
Cognition/restraint coping	-.18**	-.11	.01	
Avoidant coping	.45***	.41***	.13***	
Step 2				.303***
Problem-focused coping	-.33***	-.04	.00	
Cognition/restraint coping	-.18**	-.01	.00	
Avoidant coping	.45***	.26***	.05***	
Avoidant attachment	.53***	.33***	.09***	
Anxious attachment	.59***	.39***	.12***	

* $p < .05$; ** $p < .01$; *** $p < .001$

Mediation of PTSD Symptomatology (IES-R) Scores

When PTSD symptomatology scores were regressed first onto coping scores, coping scores predicted a significant amount of variability in PTSD symptomatology, $R^2_{\text{adjusted}} .128 =$, $F(3,193) = 10.57$, $p < .001$. An examination of the regression weights, reported in Table 26, suggested that only avoidant coping predicted unique variability in IES-R scores when the three coping subscales were considered together.

When EI scores were entered on the second step, prediction of PTSD symptomatology was significantly, but modestly, improved, $R^2_{\text{change}} = .059$, $F_{\text{change}}(2,191) = 7.06$, $p < .01$. According to the 5% drop in explained variability benchmark, coping mediated the

relationship between EI and PTSD symptomatology in that the direct effect of EI ($R^2_{\text{adjusted}} = .115$, $F(3, 193) = 9.48$, $p < .001$) dropped 5.6% when the effect of coping was taken into account. When all predictors were considered together, only avoidant coping and experiencing/sharing emotions predicted unique variance in IES-R scores. Thus, coping, particularly avoidant coping, partially mediated the relationship between EI and PTSD symptomatology.

Table 26

Regression of Coping and Emotional Intelligence Scores onto PTSD Symptomatology (IES-R) Scores

	r	B	Semi-partial r^2	R^2_{change}
Step 1				.141***
Problem-focused coping	-.15**	.02	.00	
Cognition/restraint coping	-.01	-.01	.00	
Avoidant coping	.38***	.38***	.11***	
Step 2				.059**
Problem-focused coping	-.15**	.12	.01	
Cognition/restraint coping	-.01	.06	.00	
Avoidant coping	.38***	.29***	.06***	
Mood regulation	-.28***	-.16	.01	
Experiencing/sharing Emotion	-.33***	-.19*	.02*	

* $p < .05$; ** $p < .01$; *** $p < .001$

In the regression in which attachment scores were entered on the second step (see Table 27), prediction of IES-R scores was significantly improved $R^2_{\text{change}} = .215$, $F_{\text{change}}(2, 190) =$

31.63, $p < .001$. According to the 5% drop in explained variability benchmark, coping mediated the relationship between attachment and PTSD symptomatology in that the direct effect of attachment ($R^2_{\text{adjusted}} = .279$, $F(2, 193) = 38.81$, $p < .001$) dropped 6.4% when the effect of coping was taken into account. When all predictors were considered together, only avoidant coping and both avoidant and anxious attachment predicted unique variability in PTSD symptomatology. Thus, coping, particularly avoidant coping, partially mediated the relationship between attachment and PTSD symptomatology.

Table 27

Regression of Coping and Attachment Scores onto PTSD Symptomatology (IES-R) Scores

	r	B	Semi-partial r^2	R^2_{change}
Step 1				.141***
Problem-focused coping	-.15**	.02	.00	
Cognition/restraint coping	-.01	-.01	.00	
Avoidant coping	.38***	.38***	.11***	
Step 2				.215***
Problem-focused coping	-.15**	.07	.00	
Cognition/restraint coping	-.01	.08	.00	
Avoidant coping	.38***	.27***	.06***	
Avoidant attachment	-.45***	.33***	.09***	
Anxious attachment	-.44***	.27***	.06***	

* $p < .05$; ** $p < .01$; *** $p < .001$

Mediation of Life Satisfaction (SWLS) Scores

When SWLS scores were regressed first onto coping scores, coping scores predicted a significant amount of variability in life satisfaction, $R^2_{\text{adjusted}} = .137$, $F(3, 216) = 12.61$, $p < .001$. An examination of the regression weights, reported in Table 28, suggests that although all three coping subscales entered into the model had significant zero-order correlations with life satisfaction, only problem-focused coping and avoidant coping predicted unique variability in life satisfaction when all three coping styles were considered together (however, an examination of the semi-partial correlations indicates that these three coping styles were close to equally important in predicting life satisfaction).

In the regression in which EI scores were entered on the second step, prediction of life satisfaction was significantly improved, $R^2_{\text{change}} = .125$, $F_{\text{change}}(2, 214) = 18.39$, $p < .001$. According to the 5% drop in explained variability benchmark, coping mediated the relationship between EI and life satisfaction in that the direct effect of EI ($R^2_{\text{adjusted}} = .259$, $F(3, 217) = 26.59$, $p < .001$) dropped 18.8% when the effect of coping was taken into account. When all predictors were considered together, both mood regulation and experiencing/sharing emotions predicted unique variance in life satisfaction, but none of the coping scores predicted unique variability in life satisfaction. These results indicate that coping partially mediated the effects of EI on life satisfaction.

Table 28

Regression of Coping and Emotional Intelligence Scores onto Life Satisfaction (SWLS) Scores

	r	B	Semi-partial r^2	R^2_{change}
Step 1				.149***
Problem-focused coping	.34***	.17*	.02*	
Cognition/restraint coping	.25**	.15	.01	
Avoidant coping	-.27***	-.19**	.03**	
Step 2				.125***
Problem-focused coping	.34***	.03	.00	
Cognition/restraint coping	.25**	.03	.00	
Avoidant coping	-.27***	-.06	.00	
Mood regulation	.49***	.33***	.05***	
Experiencing/sharing Emotion	.43***	.19*	.02*	

* $p < .05$; ** $p < .01$; *** $p < .001$

In the regression in which attachment scores were entered on the second step (see Table 29), prediction of life satisfaction was significantly improved, $R^2_{\text{change}} = .208$, $F_{\text{change}}(2, 212) = 34.38$, $p < .001$. According to the 5% drop in explained variability benchmark, coping mediated the relationship between attachment and life satisfaction in that the direct effect of attachment ($R^2_{\text{adjusted}} = .313$, $F(2, 216) = 50.71$, $p < .001$) dropped 7.5% when the effect of coping was taken into account. When all predictors were considered together, only the two attachment subscales predicted unique variability in life satisfaction. These results indicate that coping partially mediated the effects of attachment on life satisfaction.

Table 29

Regression of Coping and Attachment Scores onto Life Satisfaction (SWLS) Scores

	r	B	Semi-partial r^2	R^2_{change}
Step 1				.149***
Problem-focused coping	.34***	.17*	.02*	
Cognition/restraint coping	.25**	.15	.01	
Avoidant coping	-.27***	-.19**	.03	
Step 2				.208***
Problem-focused coping	.34***	.12	.01	
Cognition/restraint coping	.25**	.07	.00	
Avoidant coping	-.27***	-.08	.00	
Avoidant attachment	-.50***	-.36***	.11***	
Anxious attachment	-.43***	-.23***	.04***	

* $p < .05$; ** $p < .01$; *** $p < .001$

Summary: Coping in Mediating the Relationship Between EI and/or Attachment and Well-Being

When the three coping styles were considered together, avoidant coping appeared to be most important in predicting unique variability across all three measures of well-being, in that the greater use of avoidant coping, the lower participants' well-being. In addition, problem-focused coping also predicted unique variability in higher levels of life satisfaction.

Coping, particularly avoidant coping, partially mediated the relationships between EI and well-being and between attachment and well-being. However, EI and attachment influenced well-being over and above coping scores. Specifically, experiencing/sharing emotions

predicted unique variability over and above coping scores across all three measures of well-being, and mood regulation predicted unique variability in general symptomatology and life satisfaction when controlling for coping scores. Both avoidant and anxious attachment scores predicted unique variability over and above coping scores across all three measures of well-being. However, avoidant coping also contributed to unique variability in general and PTSD symptomatology, but not life satisfaction, when controlling for EI and attachment.

With respect to the relative importance of coping in mediating the relationships between EI and well-being and the relationships between attachment and well-being, respectively, it seems that the mediational effects of coping were similar when general and PTSD symptomatology were considered, whereas coping played a greater role in mediating the relationship between EI and life satisfaction than the relationship between attachment and life satisfaction (see Table 30).

Table 30

Contribution of EI and Attachment Scores to Well-Being Scores when Controlling for Coping – A Comparison

Well-Being	R^2 adjusted for EI & attachment without controlling for coping	Step2 – R^2 change of EI and attachment when controlling for coping	Difference in explained variability
SCL-90-R			
EI	.293	.128	.165
Attachment	.461	.303	.158
IES			
EI	.115	.059	.056
Attachment	.279	.215	.064
SWLS			
EI	.313	.125	.188
Attachment	.283	.208	.075

Discussion

Development of Emotional Intelligence

Early family socialization is important to the development of emotional abilities (Denham et al., 1997; Eisenberg et al., 1997; Field, 1994), and hence, EI is likely disrupted in those who have experienced childhood maltreatment (Krystal, 1978; Milar & Stermac, 2000; Paivio & Shimp, 1998; van der Kolk, 1996). Consistent with this expectation, those who experienced greater psychological/physical maltreatment in childhood evidenced lowered EI, which accords with previous theorizing and research findings (Cole et al., 1994; Millar & Stermac, 2000; Paivio & Shimp, 1998; Roth et al., 1997; Zlotnick et al., 1996).

With respect to the propositions of the present thesis, finding that EI may be hindered by the experience of childhood maltreatment provides possible insight into the mechanisms by which maltreatment affects adult functioning.

One of the advantages of the current research was the use of a large community sample. To date, most research on EI has been conducted using samples of college or university students (Ciarrochi et al., 2000; Lopes et al., 2002; Petrides & Furnham, 2000; Saklofske et al., 2003; Shutte et al., 1998; Roberts et al., 2001). Further, given that previous research has been critiqued on the basis that “few investigators have examined the long-term outcomes of different types of child abuse in a single population” (Silverman, Reinherz, & Giaconia, 1996, p. 710) it is noteworthy that a range of abusive childhood experiences was assessed in the present study. Nonetheless, one must bear in mind that people have a tendency to under-report their experiences of childhood maltreatment (Barett et al., 1997; Briere, 1992).

However, given the way in which participants were recruited for this study, the sample was comprised of people who knew that the study would entail sharing information about their childhood and other aspects of their personal lives. Although this raises the spectre of sample selection biases, to some extent this problem was reduced through the use of two different recruitment notices, one aimed at people who have experienced childhood maltreatment and one aimed at anyone from the general population. Thus, for this reason there was much variability in participants’ childhood experiences, suggesting that results may be relatively generalizable.

Although there is evidence for the influence of childhood maltreatment on individual emotional abilities considered in isolation, theory outlines the construct of EI as being comprised of a number of interrelated emotional abilities (Mayer & Salovey, 1997). Consistent with past research, the present study indicated that EI was comprised of four moderately interrelated dimensions (Mayer & Salovey, 1997; Mayer et al., 2002). The

examination of how the components of EI considered together may be influenced by abusive parenting was expected to be informative in providing insight into to the idea that EI is comprised of a number of interrelated emotional abilities with similar developmental determinants.

On the whole, experiences of childhood maltreatment had a similar impact across the different EI components. Specifically, the experience of greater psychological/physical maltreatment was associated with lower appraisal of emotion, mood regulation, and experiencing/sharing emotions components of EI. The utilization of emotions dimension was the only component of EI that was not related to childhood psychological/physical maltreatment. Although to date there is scant empirical research regarding the developmental influences of the ability to utilize emotions, theorizing suggests that the ability to use emotions to facilitate thinking would be impaired following the experience of childhood maltreatment (Krsytal, 1978; van der Kolk, 1996; van der Kolk & Fisler, 1994). It is possible that the effects of childhood maltreatment do, in fact, differ somewhat across different EI abilities and that childhood maltreatment may be less detrimental to the utilization of emotions than to other EI abilities. Given the positive interrelations among all four EI components, it is also possible that utilization of emotion may not be directly affected by childhood maltreatment, but rather, may be affected by the quality of the other EI abilities.

Unlike psychological/physical maltreatment, sexual abuse was not found to be related to EI in this study. Although sexual abuse was expected to be associated with lowered EI, previous findings, such as those from the US National Incidence Study of Child Abuse and Neglect, have recognized different outcomes of different types of childhood maltreatment (Svanberg, 1998). For example, (and at the risk of political incorrectness), physical and psychological abuse may be more obviously cruel to the victim of such maltreatment,

whereas sexual abuse may be more ambiguous. Along these lines, in distinguishing between sadistic and the far more common ‘grooming’ or nonsadistic child sexual abusers, Salter (1995) notes that sadistic sexual abusers purposely physically and emotionally abuse their victims because that is what they find most arousing, whereas nonsadistic offenders are “turned off” by their victims’ pain. Instead, nonsadistic sexual abusers engage in a variety of thinking errors in order to hide from themselves the child’s aversiveness to the behaviour and to rationalize their actions. Rather than forcing children into sexual abuse, they often treat the child ‘nicely’ and manipulate the child into sexual abuse through things like bribery and praise. Perhaps it is the difference between the explicit meanness of psychological and physical maltreatment versus the more ambiguous or even ‘kind’ treatment involved in most acts of sexual abuse that led to these differential findings between the effects of psychological/physical maltreatment and sexual abuse. It should be emphasized, however, that other research has consistently shown that sexual abuse has long-term negative consequences on survivors of such experiences (e.g., Briere & Runtz, 1993; Salter, 1995), and indeed, sexual abuse was hypothesized to have detrimental effects in this study as well.

Although we have argued that experiences of childhood maltreatment disrupt the development of EI, it should be noted that one of the greatest limitations of the current study, as with most of the research into EI thus far, is that it was correlational in nature, making it difficult to make any causal conclusions concerning the impacts of childhood abuse on adult emotional abilities. For example, it may be that individuals’ EI influences their susceptibility to childhood maltreatment, in that, children with lower EI may tend to evidence more problematic behaviours, such as greater acting out due to difficulties with mood regulation, which subsequently makes them more vulnerable to parental maltreatment. Furthermore, childhood maltreatment often occurs along with other problems in the family, such as marital discord and violence, parental substance abuse, and parental

psychopathology (Barnett et al., 1997; Browne & Anderson, 1991; Crittenden et al., 1994; Kotch et al., 1999). Thus, it may be these familial factors, rather than the experience of childhood maltreatment per se, that affects individuals' EI. This concern is also true with respect to the influence of childhood maltreatment on attachment and well-being (discussed below). Future studies of the effects of maltreatment on EI would benefit greatly from the implementation of longitudinal designs. However, given that such prospective research is very costly and time consuming, it is reasonable to conduct research using retrospective accounts of childhood experiences, and much can be learned from this type of research (McCarthy & Taylor, 1999).

Correspondence Between Emotional Intelligence and Attachment Security

It was posited in this thesis that there appears to be much overlap between the constructs of EI and attachment, and that they appear phenomenologically similar with respect to individuals' functioning. Indeed, EI abilities and attachment scores were found to be intercorrelated, but not so highly as to indicate that EI and attachment were redundant constructs. Although assigning specific meaning to correlations of different sizes is somewhat arbitrary (Cohen, 1988), Matthews, Zeidner, and Roberts (2002) attempted to establish a consistent standard against which to assess the meaningfulness of the relations between EI and other variables. According to their standard, the relations found in the present study between EI abilities and attachment security can be interpreted as small to moderate (i.e., they ranged from $r = -.11$ to $-.48$). Consistent with previous theory and research, those who reported greater anxious and avoidant attachment consistently reported lower emotional abilities across the four EI components, with the exception of lack of relationship between anxious attachment and utilization of emotions (Bekendam, 1997; Bretherton, 1990; Crittenden, 1990; 1997; Finzi et al., 2001; Haft & Slade, 1989; Kobak & Sceery, 1988; Kobak, Cole, Ferenz-Gillies, & Gamble 1993; Niedenthal, Bauer, Robin, &

Inns-Ker, 2002; Spangler & Zimmerman, 1999; Taylor, 2000; Zeanah & Zeanah, 1989; Zimmerman, 1999; Zimmerman, Maier, Winter, & Grossman, 2001). Attachment was most strongly related to the mood regulation component of EI, which is consistent with previous research (Kobak & Sceery, 1988; Kobak, et al., 1993; Kobak, Ferenz-Gillies, Everhart, & Seabrook, 1994; Zimmerman, 1999). In fact, the goal of attachment behaviour has often been described in terms of emotion regulation (Bowlby, 1969; Zimmerman et al., 2001). For example, Sroufe and Waters (1977) argued that proximity-seeking behaviour is guided by a search for a particular emotional state – felt security.

To further assess the correspondence between EI and attachment, their respective patterns of interrelations with childhood maltreatment were compared. Those who experienced greater psychological/physical maltreatment and greater sexual abuse reported being more anxiously and avoidantly attached. These results are consistent with the findings of previous research indicating that childhood maltreatment has deleterious effects on attachment security (Alexander, 1993; Alexander, Anderson, Brand, Schaffer, Grelling, & Kretz, 1998; Bacon & Richardson, 2001; Bifulco, Moran, Ball, & Lillie, 2002; Riggs & Jacobivitz, 2002; Roche, Runtz, & Hunter, 1999; Styron & Janoff-Bulman, 1997; Waters, Merrick, Trebaux, Crowell, & Albersheim, 2000; Weinfield, Sroufe, & Egeland, 2000; Wiffen, Judd, & Aube, 1999). These results further indicate that EI and attachment are related, but certainly not redundant constructs in that childhood maltreatment demonstrated differential relations with these factors. Whereas only psychological/physical maltreatment, but not sexual abuse, was found to be detrimental to EI, both dimensions of maltreatment were detrimental to both attachment styles. Further research may focus on replicating these findings as well as focus on the processes by which different forms of maltreatment may influence EI and attachment to help clarify the reasons behind these differential effects.

Taken together, these results indicate that EI and attachment are related, but certainly not redundant, constructs. Without a guiding theoretical framework, combined with the correlational nature of this study, questions remain regarding the mechanisms that underlie the associations and commonalities between the components of EI and attachment, as well as their uniqueness. It may be that EI and attachment are distinct constructs that are both directly affected by childhood experiences, which results in them being spuriously related, although this is fairly unlikely. Alternatively, it is possible that experiences with caretakers influence attachment security, which, in turn, affects individuals' abilities to process and regulate emotions. Conversely, experiences with caretakers may directly affect core abilities to process and regulate emotions, which may be partially expressed as insecure attachment when considered in the context of interpersonal relationships. However, perhaps the most likely alternative is that there is a reciprocal relationship between EI and attachment whereby emotional abilities influence individuals' attachment security and vice versa.

Correspondence between EI and attachment was also examined in terms of their patterns of relations with the indicators of well-being. Individuals who reported having higher emotional abilities (albeit, inconsistently with utilization of emotions) and more secure attachment styles evidenced lower psychological and posttraumatic symptomatology and greater life satisfaction. These findings replicate the body of research on the relations between attachment and well-being (Ijzendoorn & Bakermans-Kranenburg, 1996), and contribute to the thus far scant evidence regarding the extent to which EI predicts aspects of well-being (Martinez-Pons, 1997; Trinidad & Johnson, 2002). It is of note that attachment scores showed consistently higher relations with all three measures of well-being than did EI scores. It is possible that attachment is a more fundamental process that is rooted in core aspects of individual functioning (such as fundamental orientations regarding the self and others) which, in turn, have more profound effects on aspects of well-being than EI.

Alternatively, attachment may have been a more important mediator of well-being than EI in this study due to issues surrounding the measurement of EI, which will be discussed in greater detail in a subsequent section. The refinement of EI measures, and indeed of the conceptualization of EI, and which emotional abilities should ultimately comprise this construct, is only in the beginning stages. Perhaps with continued research, some components currently theorized to comprise EI, such as utilization of emotion, will be discarded or considered more carefully, while other elements, such as, say some type of emotional creativity or emotional flexibility, will be added. If what we understand EI to mean changes, so too may the relations between EI and other variables.

As noted earlier, although EI and attachment were related to a number of aspects of well-being, it is not certain when EI or attachment were the causal variables, or whether it is some of these proposed 'outcomes' that actually influenced EI or attachment in the first place (e.g., PTSD may result in difficulties in emotion regulation), or whether a third variable spuriously connected EI or attachment with these aspects of well-being (e.g., low self-esteem may contribute to difficulties in EI/attachment and also to psychological difficulties, such as depression). Prospective intervention studies may be implemented to help clarify this 'chicken-and-egg' issue. For example, training programs aimed at helping individuals develop their EI can be assessed, not only in order to evaluate the efficacy of these programs, but also to examine the causal influences of EI on aspects of well-being.

In addition, as with the concerns expressed about self-reports of childhood maltreatment, EI, attachment, and well-being were also based on participants' self-reports. Thus, certain factors may have compromised their validity, such as social desirability bias or inaccuracy in reporting due to participants' own psychological defences or their lack of awareness of where they may actually stand on these types of variables. Independent corroboration of some of these self-reports would be valuable. For example, information

about formal clinical diagnoses may have been used in place of using self-reported symptomatology. However, some questions, such as those concerning participants' life satisfaction can only be answered through self-report.

Processes Mediating the Relation between Childhood Maltreatment and Adult Well-Being

The experience of childhood maltreatment has been consistently shown to have negative effects on individuals' well-being (Herman et al., 1989; Liem, 1999; Miller & Stermac, 2000; Paivio & Shimp, 1998; Schecter et al., 2000; van der Kolk et al., 1991; Varia et al., 1996; Wilkins & Warner, 2001), and indeed, it was clear in the present study that the degree to which individuals experienced physical/psychological and sexual maltreatment was associated with greater psychological symptoms, PTSD symptoms, and decreased life satisfaction. Though this pattern of relations has been consistently documented in past research, the factors that mediate the effects of child maltreatment on adult well-being are less well-known. It was argued in the present thesis that EI and attachment would similarly mediate the effects of childhood maltreatment on well-being.

Before discussing the mediational effects of EI and attachment, it should be noted that the correlations between sexual abuse and well-being, as well as with attachment, were consistently smaller than the correlations between psychological/physical maltreatment and these factors, and again, sexual abuse was not related to EI. As stated earlier, this may stem from the differential effects of different types of maltreatment. Further, sexual abuse was severely positively skewed, much more so than any of the other variables, and was the only variable that could not be transformed to normality using any of the possible transformations. More than half of the participants ($n = 119$) reported never having experienced any sexual abusive parental behaviour to any degree. Yet, when the relations between sexual abuse and EI, attachment, and well-being were re-examined in the subsample of participants who reported having experienced sexual abuse, the relations between sexual

abuse and the EI components remained nonsignificant and the relationships between sexual abuse and attachment and well-being, respectively, dropped to nonsignificance as well. Thus, it seems that having experienced any sexual abuse, not necessarily the frequency or severity of that abuse, was most important with respect to influencing subsequent attachment and well-being. Thus, the differential findings associated with sexual abuse are not likely a statistical artifact stemming from the skewed distribution.

The results of this investigation indicated that both EI and attachment partially mediated the relationship between childhood maltreatment and well-being. Individuals who experienced a greater degree of psychological and physical maltreatment in childhood tended to have lower EI and less secure attachment, which in turn, had deleterious effects on their well-being. The mediating role of these factors was expected, and replicates the body of research indicating that the effects of childhood abuse on adult well-being are mediated by quality of attachment (McCarthy & Taylor, 1999; Roche, 2000; Roche et al., 1999; Shapiro & Levendosky, 1999; Styron & Janoff-Bulman, 1997).

Although both EI and attachment similarly mediated the relations between maltreatment and well-being, attachment consistently played a greater role than EI in mediating the relationship between childhood maltreatment and well-being. These differences may have stemmed from the nature of the traumatic experiences investigated in this study. Childhood maltreatment is an inherently interpersonal type of trauma, which may have stronger effects on the construct of attachment (which may be more strongly connected to the individuals' interpersonal functioning) than EI (which may be more of an intrapersonal nature). Perhaps if the nature of the trauma were of a noninterpersonal nature, for example, the experience of an automobile accident, perhaps EI would have been more affected than attachment. Survivors of noninterpersonal trauma may demonstrate greater disruptions in their emotional abilities, but their orientation regarding close personal

relationships may not be as affected. The importance of the nature of the early life trauma on the differential development of EI versus attachment styles is a matter for future investigation. Alternatively, as mentioned earlier (and to be discussed in greater detail in a subsequent section) attachment may have been a more important mediator than EI in this study due to issues surrounding the measurement of EI, particularly which emotional abilities should ultimately comprise this construct.

Thus, irrespective of how we approached the comparison of the meaning and implications of the constructs of EI and attachment, they were consistently found not be simply redundant with one another, but rather, appeared to function as unique additive constructs with respect to contributing to well-being. It has been asserted that the construct validity of EI must be demonstrated through its convergent validity with other theoretically related variables, yet show that it predicts aspects of well-being when controlling for these other variables (Matthews et al., 2002; Mayer et al., 2002). Indeed, EI and attachment were found to be interrelated in the present investigation. Importantly, however, this study offers support for the discriminant validity of EI, in that, EI continued to predict aspects of well-being over and above the effects of attachment security. Thus, aspects of EI, such as the ability to regulate emotions, influence well-being regardless of individuals' attachment security. These results build on the findings of two previous investigations, in which scores on the EI Scale were predictive of life satisfaction and depression proneness over and above personality dimensions (Saklofske et al., 2003), and were predictive of amount of reported social support, satisfaction with social support, and mood management behaviour when controlling for self-esteem and trait anxiety (Ciarrochi et al., 2001).

Given that both EI and attachment functioned only as partial mediators, the extent to which individuals experienced childhood physical and psychological maltreatment also had direct effects on well-being. Some of the impact of maltreatment may be mediated by

factors not considered in this investigation. Indeed, Baron and Kenny (1986) have contended that partial mediation effects are more realistic in most social science research because a single mediator cannot be expected to completely explain the relation between an independent and dependent variable. Perhaps other factors, such as personality or the availability of alternative positive caretakers during childhood, may also function to mediate the effects of maltreatment on adult well-being. Surprisingly, one such factor appears not to be coping styles, in that, childhood maltreatment did not appear to be associated with variations in coping in the present study.

The Role of Coping Styles

It was proposed that EI would influence the coping mechanisms people tend to utilize, and indeed, higher scores on all four EI abilities were associated with greater use of problem-focused coping, cognition/restraint coping, and social support/emotional expression, and reduced endorsement of avoidant coping strategies (with the exception of a lack of relationship between mood regulation and social support/emotional expression). Similarly, attachment styles were also consistently related to the coping strategies, in that, lower scores on both avoidant and anxious attachment were associated with using more problem-focused coping, cognition/restraint coping and social support/emotional expression, and less avoidant coping (with the exception of a lack of relationship between anxious attachment and social support/emotional expression). These findings are in line with research indicating that attachment orientation is related to individuals' characteristic patterns of coping (Alexander, 1992; Crittenden, 1990; Muller et al., 2000; Kobak & Sceery, 1998; Shaver et al., 1996).

The tendency to seek social support or use emotional expression was the only coping strategy that showed less consistency in its relations to EI or attachment. Further, this was the only coping strategy that was not related to the three measures of well-being in this

study. This lack of consistency may stem from difficulties in defining and assessing social support seeking as a coping strategy. With respect to definition, social support seeking may involve a number of elements, including seeking tangible instrumental help to solve problems, a means to express or vent emotions, a venue for redefining the stressful situation, or a way to distract oneself from the stressful situation (Compas et al., 2001). Perhaps some elements of this type of coping are facilitated in those with less anxious attachment and better mood regulation, whereas other aspects are curtailed, thereby obscuring any overall pattern. Further, the use of social support or emotional expression as a coping strategy may depend on the quality of support that is available, as well as the appraisal of its quality and availability (Sarason et al., 1988).

Although it was originally posited that childhood maltreatment would directly influence individuals' coping, which, in turn, would affect their well-being, coping was not related to childhood maltreatment in this study, and therefore obviously did not directly mediate the relations between maltreatment and well-being. However, as predicted, coping did partially mediate the effects of EI and attachment on well-being, in that, individuals with lower EI and less secure attachment tended to use less adaptive coping strategies, which, in turn, were detrimental to their well-being. Given that coping functioned only as a partial mediator, the nature of individuals' EI and attachment security also had direct effects on well-being regardless of their coping. In sum, these results suggest that the experience of traumatic events, such as childhood maltreatment, may not, in and of itself affect behaviour, such as coping responses. Rather, such experiences appear to impact on more intrinsic factors, such as EI and attachment, which, in turn, influence coping, and ultimately, well-being. As suggested earlier, EI and attachment styles may serve as psychological resources that enable particular coping strategies under stress (Pearlin & Schooler, 1978; Schwartz & Schwartz, 1996).

Despite the commonalities in the role of coping with respect to EI and attachment, it seems that although the mediation effects of coping were similar when general and PTSD symptoms were the indicators of well-being, coping played a notably greater role in mediating the relationship between EI and life satisfaction than the relationship between attachment and life satisfaction. Perhaps feeling insecurely attached is directly detrimental to feelings of life satisfaction, whereas individuals' coping strategies are important in exacerbating or minimizing the degree to which EI may influence life satisfaction. For example, attachment security may reflect people's perception regarding the quality of their close relationships, which, regardless of the coping strategies they utilize, may affect their life satisfaction. By contrast, feelings of being satisfied with one's life may be preserved if individuals use appropriate coping mechanisms to deal with possible impairments in EI. Further, perhaps other variables not assessed in the current study, such as the availability of social support, are more important in mediating the relationship between attachment and life satisfaction. If attachment is more relevant to interpersonal functioning than is EI, mediators of an interpersonal nature may be more important than the coping strategies considered in this study for understanding how attachment relates to some aspects of well-being.

Avoidant coping was the only coping strategy that uniquely predicted well-being over and above EI or attachment. However, zero-order correlations indicated that greater use of problem-focused coping and cognition/restraint coping, but not social support/emotional expression, were also related to enhanced well-being. Avoidant coping was likely the only strategy to uniquely predict well-being because this type of coping only overlapped moderately with problem-focused coping, whereas the remaining coping mechanisms were all intercorrelated, and thus, were likely redundant predictors of well-being.

It should be emphasized that the success of any coping strategy also depends on contextual factors, such as the nature of the stressor, the stage of that stressful situation, as well as the individual's personal characteristics (Lazarus, 1993; Schwartz & Schwartz, 1996). Perhaps avoidant coping is particularly counterproductive in dealing with the effects of childhood maltreatment. Examining the role of EI in ascertaining and choosing which coping strategies to employ, and when to employ them, in relation to such contextual factors is a matter for future investigation.

Measurement of Emotional Intelligence

Research into EI, including what leads to the development of EI and how EI affects individual functioning, is contingent upon the appropriate measurement of this construct. Currently, one of the major issues in the field of EI relates to its appropriate measurement, and indeed, this issue raised a number of questions for the present thesis. Originally, the MSCEIT, a performance-based measure of EI was decided upon as the measure of EI in this investigation. It has been proposed that performance-based measures are more valid if EI is conceptualized as a type of ability or intelligence (Ciarrochi et al., 2001; Mayer, 2001a). In performance-based tests of EI, as in measures of traditional intelligence, individuals are presented with problems that are thought to have correct (or at least superior) responses (Mayer, 2001a). Hence, performance tests have responses that can be evaluated against objective, predetermined scoring criteria (Ciarrochi et al., 2001). Further, as with measures of traditional intelligence, these scales yield optimal, rather than typical, ability scores (Petrides & Furnham, 2000).

Self-report inventories, by contrast, ask people to report their own level of EI (Mayer, 2001a; Ciarrochi, et al., 2001). It has been argued that when self-report instruments are used to measure EI, even if EI is being conceptualized as a set of cognitive abilities in emotional processing, what may actually be tapped are many aspects of personality and other

noncognitive characteristics. It should be kept in mind, however, that EI conceptualized as an ability is also often measured using self-report instruments (e.g., Mayer & Stevens, 1994; Salovey, Mayer, Goldman, Turvey, & Palfai, 1995; Schutte et al., 1998).

Regardless of these possible advantages of performance-based EI measures, MSCEIT scores were not found to be related to most conceptual variables in this study, thereby precluding the relevance of considering them in the mediated models. It is difficult to compare these results with previous research due to the lack of studies examining the predictive validity of the MSCEIT (Salovey, Mayer, Caruso, & Lopes, 2003). In fact, at least until recently, no published data was available (Roberts et al., 2002). Findings that do exist appear mixed with respect to their convergence with the findings of the present investigation. For example, in reference to maltreatment, scores on the managing emotions branch of the MSCEIT, but not the perceiving emotions, using emotions, or understanding emotions branches, was positively associated with greater perceived parental support (assuming that this may be a proxy for past relationships with parents), but none of the MSCEIT scores were associated with estimates of negative interactions with parents (Lopes et al., 2003). With respect to indices of attachment, again, the managing emotions MSCEIT branch, but not the other three branches were found to be associated with positive relationships with others and with lesser reports of negative interactions with friends (Lopes et al., 2003). However, none of the MSCEIT subscales correlated with perceived support from friends (Lopes et al., 2003). Although additional research exists using the MEIS, the MSCEIT, its successor, has gone through significant modifications (Roberts et al., 2002) and information on the overlap between the MEIS and the MSCEIT has not been collected. Thus, it is very possible that entirely different concepts are being assessed (Roberts et al., 2002). Consequently, it has been suggested that “until such time as carefully conducted

research establishes convergence with the MEIS, one should not make any inferences from that test to the MSCEIT” (Roberts et al., 2002, p. 201).

The results of the present investigation relied on responses to the EI scale, which is a self-report measure. Despite the relations between scores on the EI Scale with childhood maltreatment, attachment, coping, and well-being, due to the lack of correspondence with MSCEIT scores and the lack of consistency between these two EI measures in their relations to the other substantive variables, the reason for the lack of correspondence between these two EI measures, and, relatedly, the meaning of EI scores on this self-report measure, are of central concern. This lack of correspondence between the EI Scale and the MSCEIT is not likely due to the problems specific to the current sample. The factor analysis of the EI scale resulted in a similar factor structure to that generated in previous factor analyses of this measure (Petrides & Furnham, 2000; Saklofske et al., 2003). Furthermore, this factor structure largely accords with Salovey and Mayer’s (1990) original conceptualization of EI, which was comprised of appraisal and expression of emotion, regulation of emotion, and utilization of emotions in solving problems. With respect to the MSCEIT, a positive manifold among the subtests is expected (Mayer et al., 1999; Roberts et al., 2001), and indeed, the four branches of the MSCEIT were all positively intercorrelated ($r_s = .27$ to $.49$). Moreover, consistent with theory and previous research, women had significantly higher EI scores than men on components of both the EI Scale and the MSCEIT (Mayer et al., 2002; Shutte et al., 1998).

Some of the findings of this investigation concur with concerns about using self-report instruments to measure EI (Mayer, 2001a; Ciarriochi et al., 2001). The fact that, on average, self-reported EI scores were fairly high whereas the performance-based scores were moderately low suggests that participants may have been overestimating their emotional abilities. Furthermore, older individuals scored more highly on the MSCEIT, but not on the

EI scale, and level of education, which may be considered a proxy of intelligence, was positively related to MSCEIT scores, but was largely unrelated to scores on the EI scale. It has been argued that if EI is a type of ability then it should be related to other types of abilities and it should develop with age and experience (Mayer, Caruso, & Salovey, 2000b; Mayer et al., 2002). If these propositions are true, these findings support the proposition that performance-based measures may be necessary to assess EI as a cognitive ability.

However, there was also some evidence that runs contrary to the postulation that performance-based measures assess actual ability whereas self-reported measures simply estimate perceived ability, at least if the construct of EI does indeed have convergent validity. Mayer et al. (2000) suggested that it is those individuals who are most compromised in their emotional intelligence that are precisely the ones who believe that they are actually rather gifted in this area. The finding that those with lower self-reported EI scores also reported a greater history of childhood maltreatment, less secure attachment, less adaptive coping, and lower well-being, whereas this pattern was not replicated with performance-based MSCEIT scores, runs contrary to this postulation. Furthermore, Saklofske et al. (2003) found only a small positive correlation between scores on the EI Scale and a measure of social desirability.

Then again, it is also possible that the lack of convergence between the two scales might stem from the fact that many aspects of the MSCEIT, particularly with respect to managing emotions, assess knowledge of appropriate strategies (Lopes, Salovey, & Straus, 2003), whereas the items on the EI scale focus more on the tendency to actually implement those skills. In line with this, it has been posited that the appropriate scoring of performance-based tests may be precarious because, often, the emotionally intelligent response to a real-life problem is unclear and may depend on the exact circumstances (Matthews, Zeidner, & Roberts, 2002). Even within a single specified situation, it is often difficult to identify the

best response because there are often multiple criteria for adaptation that may conflict (Roberts et al., 2001). Further, Lopes et al. (2003) suggest that because the MSCEIT assesses knowledge of emotional abilities rather than actual skill at implementing them, its predictive power is minimized, which may be part of the reason that MSCEIT scores were not related to the other substantive variables in this study. Thus, arguably, the EI scale might be a better indicator of individuals' use of EI skills.

Indeed, consistent with this, it has been argued that self-reported EI does approximate people's emotional abilities and that scores on the MSCEIT, scored using consensus methodology, simply reflect the degree of people's conformity with social norms rather than their emotional ability (Lopes et al., 2001; Roberts et al., 2001). As Roberts et al. (2001) put it, "in the worst case, consensus scoring may simply indicate the extent of agreement with cultural or gender-based prejudices" (p. 203). Further, consensus scoring, "excludes identification of difficult items on which, say, only the 10% most able individuals pick the correct answer, and the consensus answer is incorrect" (Roberts et al., 2002, p. 201). These alternative possibilities regarding the underlying meaning of EI, measured using these different methodologies, is a matter for further investigation.

In sum, this study demonstrates a lack of correspondence between performance-based and self-report measures of EI. What remains unclear is the nature of the underlying constructs assessed by these respective methodologies. Clearly any interpretations made in this discussion regarding EI and its role in individual functioning must be qualified by the recognition that the actual meaning of EI is still uncertain. If self-reported EI does indicate people's tendency to actually implement emotional abilities, then this would support the postulations regarding the detrimental effects of childhood maltreatment on EI, and the role of EI in influencing coping and well-being as suggested in this thesis. Again, it is also possible that self-reported EI simply measures individuals' perceived ability at processing

and regulating emotions. If this is the case, the results of this study should be interpreted as suggesting that individuals' perceptions or confidence regarding their emotional abilities may be influenced by maltreatment. Perceived EI may be related to the quality of individuals' attachment, and may influence individuals' choice of coping, and ultimately, their well-being. Indeed, some have argued that perceived emotional competence may be as predictive of well-being as actual emotional competence (Ciarrochi, Chan, & Bajgar, 2001).

If performance-based measures do assess actual EI, then the results of this investigation are fairly pessimistic with respect to the usefulness of the EI construct. In this case, these results would suggest that the experience of childhood maltreatment is not particularly detrimental to the development of EI and that EI, in and of itself, may not be related to attachment, coping, and some aspects of well-being. Alternatively, perhaps performance-based measures of EI are not yet refined enough (with respect to encompassing the appropriate components or items that are central to this construct) necessary to inform the appropriate examination of relationships with other factors.

Clearly, research informing the construct validity of EI is an area in need of future investigation and is intricately associated with the related issue of how to appropriately measure EI. One type of research from which such evidence may be gleaned is from controlled experimental studies on the relationships between EI and objective behaviour (Matthews et al., 2002). Verification from this type of research may help inform whether a person who claims to be proficient in a certain area of EI is, in reality, competent in that area. One such study has already been conducted, and demonstrated that EI Scale scores were positively related to individuals' ability to maintain positive moods and repair negative moods after a mood induction manipulation (which had equal mood inducing effects on all participants, regardless of their EI) (Ciarrochi et al., 2001). In addition, prospective

longitudinal studies are required to provide a more powerful test of potential mediating variables.

Implications of the Present Findings

If EI is an important determinant of well-being and can mediate the influence of traumatic experiences on adult functioning, then programs aimed at helping individuals develop their EI may be of great use. It has been suggested that EI abilities are potentially changeable (Mayer and Salovey, 1997). If so, directly attempting to improve the abilities that comprise EI may be one mechanism by which to improve the well-being of survivors of childhood maltreatment. In fact, improving the abilities comprising EI is often one of the central goals of psychotherapy already (Salovey, Bedell, et al., 2000). In line with this, it has been suggested that measuring EI may be particularly useful for psychodiagnostic purposes to get an estimate about the clients' emotional resources and potential functioning (Matthews et al., 2002; Mayer et al., 2000). This study also confirms the importance of addressing the quality of individuals' attachment. Attachment is currently seen as an implicit, yet important, target in therapy with survivors of childhood maltreatment, and the therapeutic relationship is often seen as the mechanism by which quality of attachment may be improved (Alexander, 1992; Hodges & Steele, 2000; Dieperink, Leskela, Thuras, & Engdahl, 2001). In addition, the development of coping training programs has been suggested as a preventative measure for use with individuals that may be susceptible to emotional disturbance under stress (Dharitri, 1996), and the results of this study support the potential utility of such programs. Given that EI and attachment may influence individuals' coping with stressful situations, perhaps improvement in these areas may be incorporated into programs aimed at enhancing people's coping strategies. To the extent that these factors are amenable to training and therapeutic interventions, the improvement of childhood maltreatment survivor's ability to recover a sense of well-being becomes increasingly viable.

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Appendix A
Recruiting Notices

Recruiting Notice – General Population**Childhood Experiences Study**

We are looking for individuals from the community to participate in a study examining the effects of childhood experiences and parental behaviour on individuals' coping processes, emotional reactions, and well-being. You will be asked to complete a survey package containing questionnaires about childhood experiences, coping processes, and measures of well-being. Confidentiality assured.

For more information contact:

**Irina Goldenberg
Ph.D. candidate, Carleton University
(613) 727-3951
(Faculty supervisor: Kim Matheson, Ph.D)**

Recruiting Notice – Abuse Survivors**Childhood Experiences Study**

We are looking for individuals who have experienced childhood maltreatment (such as physical maltreatment, sexual maltreatment, psychological maltreatment, and/or physical or psychological neglect) to participate in a study examining the effects of such childhood experiences on individuals' coping processes, emotional reactions, and well-being. You will be asked to complete a survey package containing questionnaires about childhood experiences, coping processes, and measures of well-being. Confidentiality assured.

For more information contact:

**Irina Goldenberg
Ph.D. candidate, Carleton University
(613) 727-3951
(Faculty supervisor: Kim Matheson, Ph.D)**

Appendix B
Research Materials

Dear Participant,

Please read this letter before you begin to answer the survey questions.

Thank you very much for agreeing to participate in this study of childhood experiences. All psychology research begins with asking participants for their informed consent. This is the informed consent form and it is used to ensure that you understand the purpose of the study and the nature of your involvement. The informed consent must provide enough information so that you have the opportunity to determine whether you would like to participate in the study.

This research is being conducted by Irina Goldenberg, Ph.D. student, and Kim Matheson, Ph.D., Faculty Researcher in the Psychology Department of Carleton University.

The purpose of this study is to learn more about how people's childhood experiences, including experiences of childhood maltreatment, might be related to coping and well-being. Your responses are important to us whether or not you have had experiences of childhood maltreatment. Some parts of the questionnaire package may not apply very much to you, but please try to answer all the parts that you can. This survey includes questionnaires about your experiences in childhood with your parents and other caregivers, how you cope with things, how you use your emotions, and your well-being. Some questions will ask you about negative experiences, both as a child (e.g., experiencing abuse) or as an adult (e.g., experiencing assault or serious accidents), and thus may be upsetting to some people.

It is important that you understand that you can skip any questions that make you feel uncomfortable or upset. Your participation in this study is completely voluntary and you are free to stop at any time for any reason.

Please take as much time as you need to fill out this survey, as soon as you can. The survey package contains about 12 questionnaires, most of them stapled together into a big booklet. The MSCEIT is a special questionnaire. Please mark your answers on the MSCEIT Answer Sheet, and do not mark the Item Booklet (that way we can re-use the MSCEIT Item Booklet).

If you decide that you do not want to continue with the survey, please return all the materials (except the two letters that begin "Dear Participant"). Put everything into the stamped return envelope and drop it in the mail. That way we can keep track of how many people have received the survey, and we can re-use the forms that you haven't filled out.

Some of the questions might seem somewhat repetitive. It is not necessary for you to try to make sure you answer consistently. This is not a test, and there are no wrong answers. Please answer each question the best that you can.

The information gathered in this study is anonymous and confidential. Your name will not be attached to this survey in any way. Please do not write your name on any part of the survey.

If you have any questions about the research project, please contact Irina Goldenberg at 727-3951. Should you have any complaints or comments about ethical aspects of this study, you

are welcome to contact Dr. Mary Gick, Chair of the Psychology Ethics Committee at 520-2600 ext. 2664, or Dr. Lise Paquet, Graduate Chair of Psychology, at 520-2600 ext. 2692.

We hope that you find the survey interesting. When you have finished as much of it as you want to do, please take a moment to check that you haven't accidentally skipped some questions. Then, put all the materials except this letter (and the other one that begins "Dear Participant") into the stamped return envelope and mail it back to us at Carleton University.

Thank you in advance for your participation. Sincerely,

Irina Goldenberg, MA

Kim Matheson, Ph.D.

Dear Participant,

Thank you very much for agreeing to participate in this study of childhood experiences. All psychology research begins with asking participants for their informed consent. This is the informed consent form and it is used to ensure that you understand the purpose of the study and the nature of your involvement. The informed consent must provide enough information so that you have the opportunity to determine whether you would like to participate in the study.

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The purpose of this study is to learn more about how people's childhood experiences, including experiences of childhood maltreatment, might be related to coping and well-being. Your responses are important to us whether or not you have had experiences of childhood maltreatment. Some parts of the questionnaire package may not apply very much to you, but please try to answer all the parts that you can. This survey includes questionnaires about your experiences in childhood with your parents and other caregivers, how you cope with things, how you use your emotions, and your well-being. Some questions will ask you about negative experiences, both as a child (e.g., experiencing abuse) or as an adult (e.g., experiencing assault or serious accidents), and thus may be upsetting to some people.

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Some of the questions might seem somewhat repetitive. It is not necessary for you to try to make sure you answer consistently. This is not a test, and there are no wrong answers. Please answer each question the best that you can.

The information gathered in this study is anonymous and confidential. Your name will not be attached to the responses you provide. Please do not write your name on any part of the survey except for this consent form. The consent form will be separated from the survey package so that it will not be possible to match your name up with your actual responses. The consent forms will be held in a secure location and will be destroyed upon completion of the study.

If you have any questions about the research project, please contact Irina Goldenberg at 727-3951. Should you have any complaints or comments about ethical aspects of this study, you are welcome to contact Dr. Mary Gick, Chair of the Psychology Ethics Committee at 520-2600 ext. 2664, or Dr. Lise Paquet, Graduate Chair of Psychology, at 520-2600 ext. 2692.

Thank you in advance for your participation. Sincerely,

Irina Goldenberg, MA

Kim Matheson, Ph.D.

I have acknowledged that I have read the above information and willingly consent to participate in this study, while recognizing that I can stop participating at any time for any reason.

Participant signature: _____

Researcher signature: _____

Date: _____

Dear Participant,

This is the 'Debriefing' letter. Please read this letter after you have finished the survey, or after you have finished as much of it as you want to do.

Thank you very much for participating in this project. Without the kind help of people like yourself it would not be possible to carry out this research.

This debriefing letter is intended to tell you why we asked the questions that we used in this survey. At the end of this letter you will also find names and telephone numbers of people you can contact to find out more information or to talk to if your participation in the study caused you any distress.

The central purpose of this research was to learn about how childhood experiences are related to adult well-being, and how well-being is related to coping and the use of emotions. We wanted to know if emotional abilities (such as emotional perception and expression, emotional understanding, and emotional regulation) are influenced by childhood experiences, as well as whether these emotional abilities, in turn, influence well-being. Similarly, we wanted to know whether certain styles of relating to others and of coping with problems are influenced by childhood experiences, as well as whether these styles of relating and of coping, in turn, influence well-being. We think that factors such as having experienced traumas and people's beliefs about themselves, others, and the world may also be important, and thus these types of questions were included as well. Again, your responses to these questions are important whether or not you've experienced childhood maltreatment.

Sometimes recalling unpleasant or difficult times in our lives can leave us feeling the need for support or consultation. If you are feeling the need for support or counseling, please contact any of the following 24-hour services for immediate crisis intervention: Ottawa Distress Centre: 238-3311; Ottawa Rape Crisis Centre: 562-2333; or the Sexual Assault Support Centre: 234-2266.

If you would like to discuss this study you are welcome to contact Irina Goldenberg at 727-3951. If you have any complaints or comments about the way this study was conducted please contact Dr. Mary Gick, Chair of the Psychology Ethics Committee at 520-2600 ext. 2664, or Dr. Lise Paquet, Graduate Chair of the Department of Psychology at 520-2600 ext. 2692.

Once again, thank you for participation. Your time and effort are greatly appreciated.

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If you would like to discuss this study you are welcome to contact Irina Goldenberg at 727-3951. If you have any complaints or comments about the way this study was conducted please contact Dr. Mary Gick, Chair of the Psychology Ethics Committee at 520-2600 ext. 2664, or Dr. Lise Paquet, Graduate Chair of the Department of Psychology at 520-2600 ext. 2692.

Once again, thank you for participation. Your time and effort are greatly appreciated.

Background Information

1. Sex: Female/Male (please circle one)
2. Age: _____
3. Relationship status:
 - _____ Single, am not seeing anyone
 - _____ Am going out with someone
 - _____ Am living with an intimate partner
 - _____ Married
 - _____ Divorced/separated
 - _____ Widowed
4. Number of children: _____
5. Ethnic Background: _____
6. Highest level of education completed: _____
7. Employment status (circle all that apply):
 - (a) Employed full-time (35 or more hours/week)
 - (b) Employed part-time
 - (c) Unemployed
 - (d) Disability
 - (e) Social Assistance
 - (f) Homemaker
 - (g) Student full-time
 - (h) Student part-time
8. Total Gross Family Income per week (check one):

_____ under \$15,000	_____ \$45,000 - \$54,999
_____ \$15,000 - \$24,999	_____ \$55,000 - \$64,999
_____ \$25,000 - \$34,999	_____ \$65,000 - \$74,999
_____ \$35,000 - \$44,999	_____ \$75,000 or more

Therapy Background

1. Have you ever had any kind of psychotherapy or psychological counseling?
 _____ yes _____ no (if no, proceed to next page)
2. How many years of therapy did you receive in total? _____ years
3. How many therapists have you been to? _____
4. Please use the following scale to indicate the degree to which the following difficulties prompted you to seek therapy.

1	2	3	4	5
not at all		moderately		a great deal

- a) _____ alcohol/drug problems
- b) _____ anxiety
- c) _____ depression
- d) _____ eating problems
- e) _____ felt as if I was going crazy
- f) _____ relationship problems
- g) _____ sexual problems
- h) _____ self-abuse (e.g., cutting, burning)
- i) _____ other(s)
 explain: _____

5. Are you currently in therapy? _____ yes _____ no

Self-Report Emotional Intelligence Test – Shutte et al., 1998

Please rate the degree to which you agree or disagree with each of the items below on a scale of 1 (*strongly disagree*) to 5 (*strongly agree*).

	strongly disagree	1	2	3	4	5	strongly agree
1. I know when to speak about my personal problems to others.	1	2	3	4	5		
2. When I am faced with obstacles, I remember times I faced similar obstacles and overcame them.	1	2	3	4	5		
3. I expect that I will do well on most things I try.	1	2	3	4	5		
4. Other people find it easy to confide in me.	1	2	3	4	5		
5. I find it hard to understand the non-verbal messages of other people. *	1	2	3	4	5		
6. Some of the major events of my life have led me to re-evaluate what is important and not important.	1	2	3	4	5		
7. When my mood changes, I see new possibilities.	1	2	3	4	5		
8. Emotions are one of the things that make my life worth living.	1	2	3	4	5		
9. I am aware of my emotions as I experience them.	1	2	3	4	5		
10. I expect good things to happen.	1	2	3	4	5		
11. I like to share my emotions as I experience them.	1	2	3	4	5		
12. When I experience a positive emotion, I know how to make it last.	1	2	3	4	5		
13. I arrange events others enjoy.	1	2	3	4	5		
14. I seek out activities that make me happy.	1	2	3	4	5		
15. I am aware of the non-verbal messages I send to others.	1	2	3	4	5		
16. I present myself in a way that makes a good impression on others.	1	2	3	4	5		
17. When I am in a positive mood, solving problems is easy for me.	1	2	3	4	5		
18. By looking at their facial expressions, I recognize the emotions people are experiencing.	1	2	3	4	5		
19. I know why my emotions change.	1	2	3	4	5		
20. When I am in a positive mood, I am able to come up with new ideas.	1	2	3	4	5		
21. I have control over my emotions.	1	2	3	4	5		

	strongly disagree	1	2	3	4	5	strongly agree
22. I easily recognize my emotions as I experience them.		1	2	3	4	5	
23. I motivate myself by imagining a good outcome to tasks I take on.		1	2	3	4	5	
24. I compliment others when they have done something well.		1	2	3	4	5	
25. I am aware of the non-verbal messages other people send.		1	2	3	4	5	
26. When another person tells me about an important event in his or her life, I almost feel as though I have experienced the event myself.		1	2	3	4	5	
27. When I feel a change in emotions, I tend to come up with new ideas.		1	2	3	4	5	
28. When I am faced with a challenge, I give up because I believe I will fail. *		1	2	3	4	5	
29. I know what other people are feeling just by looking at them.		1	2	3	4	5	
30. I help other people feel better when they are down.		1	2	3	4	5	
31. I use good moods to help myself keep trying in the face of obstacles.		1	2	3	4	5	
32. I can tell how people are feeling by listening to the tone of their voice.		1	2	3	4	5	
33. It is difficult for me to understand why people feel the way they do. *		1	2	3	4	5	

* = reverse scored items

Relationship Scales Questionnaire (RSQ) – Griffin & Bartholomew, 1994

This questionnaire contains a number of statements that may be more or less descriptive of you in close relationships. For each of the following statements, please indicate how true it is of you by circling the most appropriate number beside each statement, using the following scale:

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

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

R = reversed scoring

Experiences in Close Relationships (ECR) – Brennan, Clark, & Shaver, 1998

This questionnaire contains a number of statements that may be more or less descriptive of how you feel in romantic relationships. We are interested in how you generally experience relationships, not just in what is happening in a current relationship. Please respond to each statement by indicating how much you agree or disagree with it by circling the most appropriate number on the following rating scale:

	1	2	3	4	5	6	7
	Disagree strongly			Neutral/ mixed			Agree strongly
1. I prefer not to show a partner how I feel deep down.	1	2	3	4	5	6	7
2. I worry about being abandoned.	1	2	3	4	5	6	7
3. I am very comfortable about my relationships. (R)	1	2	3	4	5	6	7
4. I worry a lot about my relationships.	1	2	3	4	5	6	7
5. Just when my partner starts to get close to me I find myself pulling away.	1	2	3	4	5	6	7
6. I worry that romantic partners won't care about me as much as I care about them.	1	2	3	4	5	6	7
7. I get uncomfortable when a romantic partner wants to be very close.	1	2	3	4	5	6	7
8. I worry a fair amount about losing my partner.	1	2	3	4	5	6	7
9. I don't feel comfortable opening up to romantic partners.	1	2	3	4	5	6	7
10. I often wish that my partner's feelings for me were as strong as my feelings for him/her.	1	2	3	4	5	6	7
11. I want to get close to my partner, but I keep pulling back.	1	2	3	4	5	6	7
12. I often want to merge completely with romantic partners, and this sometimes scares them away.	1	2	3	4	5	6	7
13. I am nervous when partners get too close to me.	1	2	3	4	5	6	7
14. I worry about being alone.	1	2	3	4	5	6	7
15. I feel comfortable sharing my private thoughts and feelings with my partner. (R)	1	2	3	4	5	6	7
16. My desire to be very close sometimes scares people away.	1	2	3	4	5	6	7

17. I try to avoid getting to close to my partner.	1 2 3 4 5 6 7
18. I need a lot of reassurance that I am loved by my partner.	1 2 3 4 5 6 7
19. I find it relatively easy to get close to my partner. (R)	1 2 3 4 5 6 7
20. Sometimes I feel that I force my partners to show more feeling, more commitment.	1 2 3 4 5 6 7
21. I find it difficult to allow myself to depend on romantic partners.	1 2 3 4 5 6 7
22. I do not often worry about being abandoned. (R)	1 2 3 4 5 6 7
23. I prefer not to be too close to romantic partners.	1 2 3 4 5 6 7
24. If I can't get my partner to show interest in me, I get upset or angry.	1 2 3 4 5 6 7
25. I tell my partner just about everything. (R)	1 2 3 4 5 6 7
26. I find that my partner(s) don't want to get as close as I would like.	1 2 3 4 5 6 7
27. I usually discuss my problems and concerns with my partner. (R)	1 2 3 4 5 6 7
28. When I'm not involved in a relationship, I feel somewhat anxious and insecure.	1 2 3 4 5 6 7
29. I feel comfortable depending on romantic partners. (R)	1 2 3 4 5 6 7
30. I get frustrated when my partner is not around as much as I would like.	1 2 3 4 5 6 7
31. I don't mind asking romantic partners for comfort, advice, or help. (R)	1 2 3 4 5 6 7
32. I get frustrated if romantic partners are not available when I need them.	1 2 3 4 5 6 7
33. It helps to turn to my romantic partner in times of need. (R)	1 2 3 4 5 6 7
34. When romantic partners disapprove of me, I feel really badly about myself.	1 2 3 4 5 6 7
35. I turn to my partner for many things, including comfort and reassurance. (R)	1 2 3 4 5 6 7
36. I resent it when my partner spends time away from me.	1 2 3 4 5 6 7

COPE – Carver, Sheier, & Weintraub, 1989

We are interested in how people respond when they confront difficult or stressful events in their lives. There are lots of ways to try to deal with stress. This questionnaire asks you to indicate what *you* generally do and feel, when *you* experience stressful events. Obviously, different event bring out somewhat different responses, but think about what you usually do when you are under a lot of stress. Please circle the most appropriate answer using the rating scale below:

	1	2	3	4
	I usually don't do this at all	I usually do a little bit	I usually do this a medium amount	I usually do this a lot
1. I take additional action to try to get rid of the problem. (AC)	1	2	3	4
2. I try to come up with a strategy about what to do. (P)	1	2	3	4
3. I put aside other activities in order to concentrate on this. (SCA)	1	2	3	4
4. I force myself to wait for the right time to do something. (RC)	1	2	3	4
5. I ask people who have had similar experiences what they did. (SSI)	1	2	3	4
6. I talk to someone about how I feel. (SSE)	1	2	3	4
7. I look for something good in what is happening. (PRG)	1	2	3	4
8. I learn to live with it. (A)	1	2	3	4
9. I seek God's help. (TR)	1	2	3	4
10. I get upset and let my emotions out. (FVE)	1	2	3	4
11. I refuse to believe that it has happened. (D)	1	2	3	4
12. I give up the attempt to get what I want. (BD)	1	2	3	4
13. I turn to work or other substitute activities to take my mind off things. (MD)	1	2	3	4
14. I make a plan of action. (P)	1	2	3	4
15. I let my feelings out. (FVE)	1	2	3	4
16. I focus on dealing with this problem, even if necessary let other things slide a little. (SCA)	1	2	3	4
17. I try to see it in a different light, to make it seem more positive. (PRG)	1	2	3	4

18. I hold off doing anything about it until the situation permits. (RC)	1	2	3	4
19. I try to get emotional support from friends or relatives. (SSE)	1	2	3	4
20. I concentrate my efforts on doing something about it. (AC)	1	2	3	4
21. I accept that this has happened and that it can't be changed. (A)	1	2	3	4
22. I do what has to be done, one step at a time. (AC)	1	2	3	4
23. I put my trust in God. (TR)	1	2	3	4
24. I just give up trying to reach my goal. (BD)	1	2	3	4
25. I try to get advice from someone about what to do. (SSI)	1	2	3	4
26. I think hard about what steps to take. (P).	1	2	3	4
27. I make sure not to make matters worse by acting too soon. (RC)	1	2	3	4
28. I keep myself from getting distracted by other thoughts or activities. (SCA)	1	2	3	4
29. I talk to someone to find out more about the situation. (SSI)	1	2	3	4
30. I go to movies or watch TV, to think about it less. (MD)	1	2	3	4
31. I act as though it hasn't even happened. (D)	1	2	3	4
32. I learn something from the experience. (PRG)	1	2	3	4
33. I discuss my feelings with someone. (SSE)	1	2	3	4
34. I daydream about things other than this. (MD)	1	2	3	4
35. I get used to the idea that it happened. (A)	1	2	3	4
36. I feel a lot of emotional distress and I find myself expressing those feelings a lot. (FVE)	1	2	3	4
37. I try to find comfort in my religion. (TR)	1	2	3	4
38. I admit to myself that I can't deal with it, and quit trying. (BD)	1	2	3	4
39. I pretend that it hasn't really happened. (D)	1	2	3	4
40. I get sympathy and understanding from someone. (SSE)	1	2	3	4
41. I sleep more than usual. (MD)	1	2	3	4
42. I talk to someone who could do something concrete about the problem. (SSI)	1	2	3	4

43. I reduce the amount of effort I'm putting into solving the problem. (BD)	1	2	3	4
44. I restrain myself from doing anything too quickly. (RC)	1	2	3	4
45. I say to myself "this isn't real." (D)	1	2	3	4
46. I try hard to prevent other things from interfering with my efforts at dealing with this. (SCA)	1	2	3	4
47. I get upset, and am really aware of it. (FVE)	1	2	3	4
48. I think about how I might best handle the problem. (P)	1	2	3	4
49. I pray more than usual. (TR)	1	2	3	4
50. I take direct action to get around the problem. (AC)	1	2	3	4
51. I try to grow as a person as a result of the experience. (PRG)	1	2	3	4
52. I accept the reality of the fact that it happened. (A)	1	2	3	4

AC = active coping

P = planning

SCA = suppression of competing activities

RC = restraint coping

SSI = social support instrumental

SSE = social support emotional

PRG = positive reinterpretation and growth

A = acceptance

TR = Turning to religion

FVE = focus on venting of emotions

D = denial

BD = behavioural disengagement

MD = mental disengagement

Symptom Checklist 90 – Revised (SCL-90-R) – (Derogatis, 1992)

Below is a list of problems and complaints that people sometimes have. Read each one carefully and select one of the numbered descriptors that best describes how much discomfort that problem has caused you during the past 7 days INCLUDING TODAY. Circle the appropriate number using the scale below.

0	1	2	3	4
Not at all	A little bit	moderately	quite a bit	extremely

HOW MUCH WERE YOU DISTRESSED BY:

1. Headaches	0	1	2	3	4
2. Nervousness or shaking inside	0	1	2	3	4
3. Repeated unpleasant thoughts that won't leave your mind	0	1	2	3	4
4. Faintness or dizziness	0	1	2	3	4
5. Loss of sexual interest or pleasure	0	1	2	3	4
6. Feeling critical of others	0	1	2	3	4
7. The idea the someone else can control your thoughts	0	1	2	3	4
8. Feeling others are to blame for most of your troubles	0	1	2	3	4
9. Trouble remembering things	0	1	2	3	4
10. Worried about sloppiness or carelessness	0	1	2	3	4
11. Feeling easily annoyed or irritated	0	1	2	3	4
12. Pains in heart or chest	0	1	2	3	4
13. Feeling afraid in open spaces or on the streets	0	1	2	3	4
14. Feeling low in energy or slowed down	0	1	2	3	4
15. Thoughts of ending your life	0	1	2	3	4
16. Hearing voices that other people do not hear	0	1	2	3	4
17. Trembling	0	1	2	3	4
18. Feeling that most people cannot be trusted	0	1	2	3	4
19. Poor appetite	0	1	2	3	4
20. Crying easily	0	1	2	3	4

0	1	2	3	4
Not at all	A little bit	moderately	quite a bit	extremely

HOW MUCH WERE YOU DISTRESSED BY:

21. Feeling shy or uneasy with the opposite sex	0	1	2	3	4
22. Feelings of being trapped or caught	0	1	2	3	4
23. Suddenly scared for no reason	0	1	2	3	4
24. Temper outbursts that you could not control	0	1	2	3	4
25. Feeling afraid to go out of your house alone	0	1	2	3	4
26. Blaming yourself for things	0	1	2	3	4
27. Pains in lower back	0	1	2	3	4
28. Feeling blocked in getting things done	0	1	2	3	4
29. Feeling lonely	0	1	2	3	4
30. Feeling blue	0	1	2	3	4
31. Worrying too much about things	0	1	2	3	4
32. Feeling no interest in things	0	1	2	3	4
33. Feeling fearful	0	1	2	3	4
34. Your feelings being easily hurt	0	1	2	3	4
35. Other people being aware of your private thoughts	0	1	2	3	4
36. Feeling others do not understand you or are unsympathetic	0	1	2	3	4
37. Feeling that people are unfriendly or dislike you	0	1	2	3	4
38. Having to do things very slowly to insure correctness	0	1	2	3	4
39. Heart pounding or racing	0	1	2	3	4
40. Nausea or upset stomach	0	1	2	3	4
41. Feeling inferior to others	0	1	2	3	4
42. Soreness of your muscles	0	1	2	3	4
43. Feeling that you are watched or talked about by others	0	1	2	3	4

	0	1	2	3	4
	Not at all	A little bit	moderately	quite a bit	extremely
HOW MUCH WERE YOU DISTRESSED BY:					
44. Trouble falling asleep	0	1	2	3	4
45. Having to check and doublecheck what you do	0	1	2	3	4
46. Difficulty making decisions	0	1	2	3	4
47. Feeling afraid to travel on buses, subways, or trains	0	1	2	3	4
48. Trouble getting your breath	0	1	2	3	4
49. Hot or cold spells	0	1	2	3	4
50. Having to avoid certain things, places, or activities because they frighten you	0	1	2	3	4
51. Your mind going blank	0	1	2	3	4
52. Numbness or tingling in parts of your body	0	1	2	3	4
53. A lump in your throat	0	1	2	3	4
54. Feeling hopeless about the future	0	1	2	3	4
55. Trouble concentrating	0	1	2	3	4
56. Feeling weak in parts of your body	0	1	2	3	4
57. Feeling tense or keyed up	0	1	2	3	4
58. Heavy feelings in your arms or legs	0	1	2	3	4
59. Thoughts of death or dying	0	1	2	3	4
60. Overeating	0	1	2	3	4
61. Feeling uneasy when people are watching or talking about you	0	1	2	3	4
62. Having thoughts that are not your own	0	1	2	3	4
63. Having urges to beat, injure, or harm someone	0	1	2	3	4
64. Awakening in the early morning	0	1	2	3	4
65. Having to repeat the same actions such as touching, counting, washing	0	1	2	3	4

	0	1	2	3	4
	Not at all	A little bit	moderately	quite a bit	extremely
HOW MUCH WERE YOU DISTRESSED BY:					
66. Sleep that is restless or disturbed	0	1	2	3	4
67. Having urges to break or smash things	0	1	2	3	4
68. Having ideas or beliefs that others do not share	0	1	2	3	4
69. Feeling very self-conscious with others	0	1	2	3	4
70. Feeling uneasy in crowds, such as shopping or at a movie	0	1	2	3	4
71. Feeling everything is an effort	0	1	2	3	4
72. Spells of terror or panic	0	1	2	3	4
73. Feeling uncomfortable about eating or drinking in public	0	1	2	3	4
74. Getting into frequent arguments	0	1	2	3	4
75. Feeling nervous when you are left alone	0	1	2	3	4
76. Others not giving you proper credit for your achievements	0	1	2	3	4
77. Feeling lonely even when you are with people	0	1	2	3	4
78. Feeling so restless you couldn't sit still	0	1	2	3	4
79. Feelings of worthlessness	0	1	2	3	4
80. The feeling that something bad is going to happen to you	0	1	2	3	4
81. Shouting or throwing things	0	1	2	3	4
82. Feeling afraid you will faint in public	0	1	2	3	4
83. Feeling that people will take advantage of you if you let them	0	1	2	3	4
84. Having thoughts about sex that bother you a lot	0	1	2	3	4
85. The idea that you should be punished for your sins	0	1	2	3	4
86. Thoughts and images of a frightening nature	0	1	2	3	4
87. The idea that something serious is wrong with your body	0	1	2	3	4
88. Never feeling close to another person	0	1	2	3	4
89. Feelings of guilt	0	1	2	3	4
90. The idea that something is wrong with your mind	0	1	2	3	4

IMPACT OF EVENT SCALE – REVISED (Weiss & Marmar, 1997)

The following is a list of difficulties people sometimes have after stressful or traumatic life events. Please read each item and then indicate how distressing each difficulty has been for you **during the past seven days** with respect to trauma you may have experienced. How much do you continue to be distressed or bothered with these difficulties?

What is the nature of the traumatic event(s) or experience(s) that you have in mind?

How long ago did this (these) occur?

During the past seven days:

	Not at all	A little bit	Moderately	Quite a bit	Extremely
1. Any reminder brought back feelings about it.	0	1	2	3	4
2. I had trouble staying asleep.	0	1	2	3	4
3. Other things kept making me think about it.	0	1	2	3	4
4. I felt irritable and angry.	0	1	2	3	4
5. I avoided letting myself get upset when I thought about it or was reminded of it.	0	1	2	3	4
6. I thought about it when I didn't mean to.	0	1	2	3	4
7. I felt as if it hadn't happened or wasn't real.	0	1	2	3	4
8. I stayed away from reminders about it.	0	1	2	3	4
9. Pictures about it popped into my mind.	0	1	2	3	4
10. I was jumpy and easily startled.	0	1	2	3	4
11. I tried not to think about it.	0	1	2	3	4
12. I was aware that I still had a lot of feelings about it but I didn't deal with them.	0	1	2	3	4
13. My feelings about it were kind of numb.	0	1	2	3	4
14. I found myself acting or feeling like I was back at this time.	0	1	2	3	4
15. I had trouble falling asleep.	0	1	2	3	4
16. I had waves of strong feelings about it.	0	1	2	3	4
17. I tried to remove it from my memory.	0	1	2	3	4
18. I had trouble concentrating.	0	1	2	3	4

During the past seven days:

	Not at all	A little bit	Moderately	Quite a bit	Extremely
19. Reminders of it caused me to have physical reactions, such as sweating, trouble breathing, nausea, or a pounding heart.	0	1	2	3	4
20. I had dreams about it.	0	1	2	3	4
21. I felt watchful and on guard.	0	1	2	3	4
22. I tried not to talk about it.	0	1	2	3	4

Satisfaction With Life Scale (SWLS) – Diener, Emmons, Larson, & Griff, 1985

Below are five statements with which you may agree or disagree. Using the scale below, circle the number beside each item which most accurately indicates your agreement or disagreement.

1	2	3	4	5	6	7
strongly disagree						strongly agree

1. In most ways my life is close to my ideal.	1	2	3	4	5	6	7
2. The conditions of my life are excellent.	1	2	3	4	5	6	7
3. I am satisfied with my life.	1	2	3	4	5	6	7
4. So far I have gotten the important things I want in life.	1	2	3	4	5	6	7
5. If I could live my life over, I would change almost nothing.	1	2	3	4	5	6	7

Childhood Maltreatment Questionnaire – Demare, 1995

Children and adolescents growing up can experience a wide range of behaviours on the part of their parents, or other people who serve as parental figures for them. Please think back to your childhood and adolescence and indicate how often you experienced each of these behaviours by *at least* one of your “parental figures” before you were 18 years old.

Note that parental figures can include *parents, step-parents, foster-parents, or other adults* who routinely were in charge of you as a child or adolescent. An older sibling or other relative also may be considered a parental figure when this person routinely supervised or cared for you.

For each behaviour, please circle the appropriate number that corresponds to the following scale:

1	2	3	4	5
<i>Never</i>	<i>Rarely</i>	<i>Sometimes</i>	<i>Often</i>	<i>Very Often</i>

How often before you were 18 did one or more of your parental figures:

1. Try to control or run your life.....	1	2	3	4	5
2. Allow or encourage you to steal or take things that did not belong to you	1	2	3	4	5
3. Call you insulting names	1	2	3	4	5
4. Act emotionally “cold” toward you	1	2	3	4	5
5. Take things that belonged to you without asking you or without replacing them	1	2	3	4	5
6. Discourage you from seeing your friends or relatives	1	2	3	4	5
7. Fail to provide adequate clothing for you even though they had the means to do so	1	2	3	4	5
8. Touch or handle you in a rough way that frightened you	1	2	3	4	5
9. Tell you, or otherwise imply to you, that they would be happier without you	1	2	3	4	5
10. Have unpredictable and changing expectations of you	1	2	3	4	5
11. Scream or yell at you	1	2	3	4	5
12. Push a member of your family around when you were present	1	2	3	4	5
13. Become impatient, angry, or hostile whenever you expressed an opinion or questioned something they said	1	2	3	4	5
14. Permit or encourage you to lie, cheat, or deceive people	1	2	3	4	5
15. Make negative comments to you, such as tell you that you were stupid, ugly, clumsy, lazy, or weak	1	2	3	4	5
16. Appear to be disinterested in you and your life	1	2	3	4	5
17. Make you cater to their desires or whims with little concern for your own comfort or welfare	1	2	3	4	5
18. Refuse to allow you to participate in activities organized by a school or community organization (e.g., field trips, athletic events, plays, clubs, fairs)	1	2	3	4	5
19. Fail to feed you, or to provide adequate food or proper nourishment for you, even though they had the means to do so	1	2	3	4	5
20. Throw some object at you that did not hit you but could have hurt you physically	1	2	3	4	5
21. Do or say something that gave you the impression you were unwanted	1	2	3	4	5

1	2	3	4	5
<i>Never</i>	<i>Rarely</i>	<i>Sometimes</i>	<i>Often</i>	<i>Very Often</i>

How often before you were 18 did one or more of your parental figures:

22. Have many unpredictable moods, or frequently changing moods, that affected their ability to provide reliable care for you	1	2	3	4	5
23. Threaten to give you a beating	1	2	3	4	5
24. Physically harm a member of your family (other than yourself) with a weapon or other dangerous object when you were present	1	2	3	4	5
25. Totally disregard your input into decisions that affected you	1	2	3	4	5
26. Permit or encourage you to vandalize or destroy someone's belongings or property	1	2	3	4	5
27. Criticize, belittle, or shame you in front of other people	1	2	3	4	5
28. Ignore you	1	2	3	4	5
29. Take advantage of you in some way (other than in a sexual way)	1	2	3	4	5
30. Refuse to allow you to participate in social activities (e.g., dances, parties)	1	2	3	4	5
31. Leave you alone or unattended for periods of time when, looking back now, you believe it was unsafe or inappropriate for them to have done so	1	2	3	4	5
32. Break one of your possessions, or take it away from you in order to "hurt" you	1	2	3	4	5
33. Act in a way that implied they did not like you or value you	1	2	3	4	5
34. Act in a way that led you to feel confused about what they expected from you or about how they wanted you to behave	1	2	3	4	5
35. Speak to you in a way that frightened you	1	2	3	4	5
36. Physically hurt or start a fight with someone who was not a member of your family (when you were present)	1	2	3	4	5
37. Lead you to feel that bad things would happen if you tried to make decisions on your own or act independently	1	2	3	4	5
38. Allow you to do, or seem unconcerned if you did something that was illegal or morally wrong	1	2	3	4	5
39. Put you down or treat you in a degrading manner	1	2	3	4	5
40. Fail to praise you when you deserved it	1	2	3	4	5
41. Require you to act as a companion for them or other adults when you did not want to do so	1	2	3	4	5
42. Stop you from seeing your friends without good reason	1	2	3	4	5
43. Fail to care for your injuries when you were physically hurt	1	2	3	4	5
44. Break, hit, kick, or punch some object in your presence with the intention of scaring you	1	2	3	4	5
45. Do or say something that suggested you did not measure up to their expectations of you	1	2	3	4	5
46. Behave in ways that led you to feel that you could not rely upon them ...	1	2	3	4	5
47. Threaten that something very bad would happen to you	1	2	3	4	5
48. Treat cruelly, or kill a pet or other animal when you were present (do not include wild animals killed in hunting)	1	2	3	4	5
49. Interfere in your life	1	2	3	4	5
50. Allow or encourage you to fight with, hurt, or bully other people	1	2	3	4	5

	1	2	3	4	5
	<i>Never</i>	<i>Rarely</i>	<i>Sometimes</i>	<i>Often</i>	<i>Very Often</i>
51. Tell you that you would never amount to anything in life	1	2	3	4	5
52. Fail to listen to you or to comfort you when they knew you were sad and upset	1	2	3	4	5
53. Make you entertain them or other people when you did not want to do so	1	2	3	4	5
54. Make you stay at home when you wanted to participate in some activity that your friends and peers were doing	1	2	3	4	5
55. Fail to take you to the doctor or give you medicine when you were ill and medical attention seemed to have been needed	1	2	3	4	5
56. Chase you with the intent of hurting you or seriously frightening you	1	2	3	4	5
57. Tell you, or otherwise imply that you were a burden to them	1	2	3	4	5
58. Make promises to you that they did not keep	1	2	3	4	5
59. Swear at you or curse you	1	2	3	4	5
60. Hit, slap, kick, or punch a member of your family (other than yourself) when you were present	1	2	3	4	5
61. Try to make you feel that you could not make any decisions or do anything in your life without checking with them first	1	2	3	4	5
62. Teach you how or encourage you to do something that was illegal or morally wrong	1	2	3	4	5
63. Ridicule you	1	2	3	4	5
64. Seem to be emotionally detached or unexpressive with you	1	2	3	4	5
65. Get you to do something for them when they knew it caused you considerable inconvenience or discomfort	1	2	3	4	5
66. Refuse to allow you contact with other people	1	2	3	4	5
67. Leave you with certain people (e.g., strangers, other children, casual acquaintances) for periods of time when, looking back now, you believe it was unsafe or inappropriate for them to have done so	1	2	3	4	5
68. Tease you or scare you with something they knew was frightening to you	1	2	3	4	5
69. Act in a way that led you to feel rejected by them	1	2	3	4	5
70. Fail to do something important for you that they said they would do	1	2	3	4	5
71. Threaten to harm you physically	1	2	3	4	5
72. Hit or beat a member of your family (other than yourself) with an object, such as a belt, cord, kitchen utensil, board, or stick when you were present	1	2	3	4	5

Physical Abuse Questionnaire (PAQ)

For each behaviour, please circle the appropriate number that corresponds to the following scale:

1	2	3	4	5
<i>Never</i>	<i>Rarely</i>	<i>Sometimes</i>	<i>Often</i>	<i>Very Often</i>

How often before you were 18 did one or more of your parental figures:

1. Spank you hard enough to cause bruising, swelling, or bleeding	1	2	3	4	5
2. Twist, yank, or bend your leg, arm, or finger in a painful manner	1	2	3	4	5
3. Push, throw, or knock you down, or into an object, such as a wall or a piece of furniture	1	2	3	4	5
4. Hit or punch you with a closed fist	1	2	3	4	5
5. Burn or scald you on purpose (s)	1	2	3	4	5
6. Harm you physically with a weapon or other dangerous object (s).....	1	2	3	4	5
7. Break you bone(s) or teeth when they were being rough or violent with you (s)	1	2	3	4	5
8. Beat you up	1	2	3	4	5
9. Hit or slap you with an open hand (not including spanking)	1	2	3	4	5
10. Kick you with their foot, or strike you hard with a knee or elbow	1	2	3	4	5
11. Throw some household object at you (e.g., vase, ashtray, lamp) that caused you to be hurt physically	1	2	3	4	5
12. Pull your hair or ear in a painful manner	1	2	3	4	5
13. Choke you (s)	1	2	3	4	5
14. Hit you with an object such as a belt, cord, kitchen utensil, board, or stick	1	2	3	4	5
15. Torture you physically (s)	1	2	3	4	5
16. Try to kill you (s)	1	2	3	4	5

(s) = severe physical abuse items

Sexual Abuse Questionnaire – Parental Version (SAQ-P)

For each behaviour, please circle the appropriate number that corresponds to the following scale:

1	2	3	4	5
<i>Never</i>	<i>Rarely</i>	<i>Sometimes</i>	<i>Often</i>	<i>Very Often</i>

How often before you were 18 did one or more of your parental figures:

1. Look or stare at you (or at a part of your body) in a sexual way	1	2	3	4	5
2. Make sexually suggestive comments to you or about your body	1	2	3	4	5
3. Make sexual comments about you to others	1	2	3	4	5
4. Talk to you in a sexual way	1	2	3	4	5
5. Invite or ask you to do something sexual with them	1	2	3	4	5
6. Suggest that you should do something sexual with them or indicate that they wished to do something sexual with you	1	2	3	4	5
7. Show you a sexual or private part of their body (i.e., genitals, breasts, or buttocks)	1	2	3	4	5
8. Make you show them a sexual or private part of your body (i.e., genitals, breasts, or buttocks)	1	2	3	4	5
9. Perform sexual acts in front of you or make you watch them or other people performing sexual acts	1	2	3	4	5
10. Make you take your clothes off and be naked in front of them or other people	1	2	3	4	5
11. Get you to touch a sexual or private part of your body (i.e., genitals, breasts, buttocks) while they were present	1	2	3	4	5
12. Take sexually explicit pictures, film, or video of you	1	2	3	4	5
13. Rub, touch, or grab your breasts, buttocks, or genitals through your clothing or other covering	1	2	3	4	5
14. Kiss or hug you in a sexual way	1	2	3	4	5
15. Get you to do something sexual with them	1	2	3	4	5
16. Rub or fondle a sexual or private part of your body (i.e., genitals, breasts, or buttocks)	1	2	3	4	5
17. Get you to touch them in a sexual way or fondle a sexual or private part of their body or another person's body (i.e., genitals, breasts, or buttocks)	1	2	3	4	5
18. Insert a finger or an object in your vagina or anus (without valid medical reason)	1	2	3	4	5
19. Touch your genitals, breasts, or anus with their mouth or tongue	1	2	3	4	5
20. Get you to touch their genitals, breasts, or anus with your mouth or tongue	1	2	3	4	5
21. Attempt vaginal or anal intercourse with you, but not follow through with it	1	2	3	4	5
22. Engage in vaginal or anal intercourse with you	1	2	3	4	5

Sexual Abuse Questionnaire – Nonparental Version (SAQ-NP)

INSTRUCTIONS: Below is a list of behaviours you might have experienced by a person *other* than a parental figure during your childhood or adolescence. Please indicate how often *before you were 18 years of age* someone who was not one of your parental figures did the following things. In cases where you clearly did not want the behaviour to occur, answer for a person of any age who was not a parental figure. In cases where you might have wanted the behaviour to occur, answer for a person who was 5 or more years older than you, but who was not a parental figure.

For each behaviour, please circle the appropriate number that corresponds to the following scale:

1	2	3	4	5
<i>Never</i>	<i>Rarely</i>	<i>Sometimes</i>	<i>Often</i>	<i>Very Often</i>

How often before you were 18 did one or more of your parental figures:

1. Look or stare at you (or at a part of your body) in a sexual way	1	2	3	4	5
2. Make sexually suggestive comments to you or about your body	1	2	3	4	5
3. Make sexual comments about you to others	1	2	3	4	5
4. Talk to you in a sexual way	1	2	3	4	5
5. Invite or ask you to do something sexual with them	1	2	3	4	5
6. Suggest that you should do something sexual with them or indicate
that they wished to do something sexual with you	1	2	3	4	5
7. Show you a sexual or private part of their body (i.e., genitals, breasts,
or buttocks)	1	2	3	4	5
8. Make you show them a sexual or private part of your body
(i.e., genitals, breasts, or buttocks)	1	2	3	4	5
9. Perform sexual acts in front of you or make you watch them or
other people performing sexual acts	1	2	3	4	5
10. Make you take your clothes off and be naked in front of them
or other people	1	2	3	4	5
11. Get you to touch a sexual or private part of your body (i.e., genitals,
breasts, buttocks) while they were present	1	2	3	4	5
12. Take sexually explicit pictures, film, or video of you	1	2	3	4	5
13. Rub, touch, or grab your breasts, buttocks, or genitals through
your clothing or other covering	1	2	3	4	5
14. Kiss or hug you in a sexual way	1	2	3	4	5
15. Get you to do something sexual with them	1	2	3	4	5
16. Rub or fondle a sexual or private part of your body (i.e., genitals,
breasts, or buttocks)	1	2	3	4	5
17. Get you to touch them in a sexual way or fondle a sexual or private
part of their body or another person's body (i.e., genitals, breasts, or
buttocks)	1	2	3	4	5
18. Insert a finger or an object in your vagina or anus (without valid
medical reason)	1	2	3	4	5
19. Touch your genitals, breasts, or anus with their mouth or tongue	1	2	3	4	5
20. Get you to touch their genitals, breasts, or anus with your mouth
or tongue	1	2	3	4	5
21. Attempt vaginal or anal intercourse with you, but not follow through
with it	1	2	3	4	5
22. Engage in vaginal or anal intercourse with you	1	2	3	4	5

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SECTION A

1.

Instructions: How much is each feeling below expressed by this face?

(Please select a response for each item.)

1. No happiness	1	2	3	4	5	Extreme happiness
2. No fear	1	2	3	4	5	Extreme fear
3. No surprise	1	2	3	4	5	Extreme surprise
4. No disgust	1	2	3	4	5	Extreme disgust
5. No excitement	1	2	3	4	5	Extreme excitement

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2.

Instructions: How much is each feeling below expressed by this face?

(Please select a response for each item.)

1. No happiness	1	2	3							Extreme happiness
2. No sadness	1	2	3							Extreme sadness
3. No fear	1	2	3							Extreme fear
4. No surprise	1	2	3							Extreme surprise
5. No excitement	1	2	3							Extreme excitement

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3.

Instructions: How much is each feeling below expressed by this face?

(Please select a response for each item.)

1. No happiness	1	2	3						Extreme happiness
2. No sadness	1	2	3						Extreme sadness
3. No fear	1	2	3						Extreme fear
4. No surprise	1	2	3						Extreme surprise
5. No excitement	1	2	3						Extreme excitement

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4.

Instructions: How much is each feeling below expressed by this face?

(Please select a response for each item.)

1. No happiness	1	2	3	4	Extreme happiness
2. No sadness	1	2	3	4	Extreme sadness
3. No fear	1	2	3	4	Extreme fear
4. No anger	1	2	3	4	Extreme anger
5. No disgust	1	2	3	4	Extreme disgust

SECTION B

Instructions: Please select a response for each item.

1. What mood(s) might be helpful to feel when creating new, exciting decorations for a birthday party?

	Not Useful			Useful	
a. annoyance	1	2	3	4	5
b. boredom	1	2	3	4	5
c. joy	1	2	3	4	5

2. What mood(s) might be helpful to feel when composing an inspiring military march?

	Not Useful			Useful	
a. anger	1	2	3	4	5
b. excitement	1	2	3	4	5
c. frustration	1	2	3	4	5

3. What mood(s) might be helpful to feel when following a very complicated, demanding, cooking recipe?

	Not Useful			Useful	
a. tension	1	2	3	4	5
b. sorrow	1	2	3	4	5
c. neutral mood	1	2	3	4	5

4. What mood(s) might be helpful to feel when figuring out what caused a fight among three young children? Each of the three young children is telling a different story about how the fight started. Figuring out what happened requires attending to the details of the stories and weighing many facts.

	Not Useful			Useful	
a. happiness	1	2	3	4	5
b. surprise	1	2	3	4	5
c. sadness	1	2	3	4	5

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5. What mood(s) might be helpful for a doctor to feel when selecting a treatment plan for a patient with a cancerous tumor? The doctor must apply several known, but conflicting, principles in the treatment of the tumor.

	Not Useful			Useful	
a. happiness	1	2	3	4	5
b. neutral mood	1	2	3	4	5
c. anger and defiance	1	2	3	4	5

SECTION C

Instructions: Select the best alternative for each of these questions.

- Marjorie felt more and more ashamed, and began to feel worthless. She then felt _____.
 - overwhelmed
 - depressed
 - ashamed
 - self-conscious
 - jittery
- Kenji felt content as he thought of his life, and the more he thought about the good things he had done and the joy his acts had brought to others, the more he felt _____.
 - surprised
 - depressed
 - acceptance
 - happiness
 - amazement
- Natalie had never been more surprised in her life. But as she recovered a bit from the shock of the loss and realized she could gain some advantage from the situation if she planned carefully, she became _____.
 - amazed
 - confused
 - denying of the situation
 - expectant
 - pensive

4. Nelson was saddened by the news from home, and wanted to express his sincere regret. When he heard that he had not been told right away and that matters were worse than he at first thought, he felt _____.
- a. anger and surprise
 - b. sadness and anticipation
 - c. shock and regret
 - d. fear and loathing
 - e. anger and sorrow
5. Rashad is usually quite happy at work and things also go well for him at home. He thought that he and his coworkers were generally fairly paid and treated well. Today, everyone in his unit received a modest across-the-board pay increase as part of corporate-wide adjustments in salary. Rashad felt _____.
- a. surprised and shocked
 - b. peaceful and quiet
 - c. content and elated
 - d. humbled and guilty
 - e. proud and dominant
6. Glenda loved Jake, who she felt belonged only to her. She began to see him as perfect for her, and close to perfection in general. She _____.
- a. respected him
 - b. admired him
 - c. envied him
 - d. adored him
 - e. resented him
7. Tatiana was annoyed that a coworker took credit for a project, and when he did it again she felt _____.
- a. anger
 - b. annoyance
 - c. frustration
 - d. startled
 - e. depression

8. After Charlie's car was stolen, he installed a car alarm in his new car. When his new car was also stolen, he first felt shock and surprise, and then _____.
- a. amazement and astonishment
 - b. helplessness, despair, and anger
 - c. anger and disgust
 - d. jealousy and envy
 - e. depression and contempt
9. When Steve discovered that several students were cheating on exams, he thought it was morally wrong. When he told the teacher, the teacher said there was nothing he could do about it. Steve planned to pursue the matter with a school administrator because he felt _____ by what had happened.
- a. enlivened
 - b. enraged
 - c. disgusted
 - d. depressed
 - e. saddened
10. Matt had been hurt by one of his closest friends and was feeling angry. Matt told his friend how he felt, and when the friend did it again, Matt became _____.
- a. angry
 - b. fearful
 - c. very annoyed
 - d. worried
 - e. enraged
11. Theresa watched television so as to follow a hurricane's progress up the coast near where her parents lived. As the hurricane moved toward her parents' house, she felt anxiety and helplessness. At the last minute, however, it turned away leaving that area of the coastline unharmed. She felt _____.
- a. relief and gratitude
 - b. surprise and shock
 - c. tense and relieved
 - d. anticipation and anxiety
 - e. anticipation and calmness

- 12. A woman who felt secure and accepted later felt depressed. What happened in between?**
- a. she received a compliment intended for someone else
 - b. she discovered her husband was cheating on her
 - c. a friend became ill
 - d. a package she mailed to a friend was delivered to the wrong person
 - e. she was frustrated by a bad job she did on a project
- 13. A child who was happily anticipating his birthday later felt sad. What most likely happened in between?**
- a. a bully insulted him and he fought back
 - b. two friends who he was hoping would come never made it to the party
 - c. he ate too much cake
 - d. his mother embarrassed him in front of the other children
 - e. his father accused him of something he did not do
- 14. A middle-aged woman was happy and shortly thereafter felt disapproving. What most likely happened in between?**
- a. her son injured himself slightly at work
 - b. she realized she had hurt a close friend's feelings
 - c. her daughter-in-law was late for a family dinner
 - d. her husband criticized her
 - e. she lost a book that was important to her
- 15. A man was feeling rested and then felt admiration. What happened in between?**
- a. while resting, the man solved an important problem at work
 - b. the man heard a story about a sports hero who set a new world record
 - c. his friend called to say he had just purchased a new sports car at a great price
 - d. a package arrived with a gift from his mother
 - e. his doctor called to say his checkup indicated he was healthy
- 16. A woman felt anticipation and then she felt love. What happened in between?**
- a. she gave a donation and thought about the people she would help
 - b. she bought a dress that was very flattering
 - c. she read a fan magazine about a star she found very appealing
 - d. her mother called to tell her she was sending her a birthday gift that would be a surprise
 - e. she went on a date and discovered many things in common with an attractive man

17. An executive in a corporation felt displeased and then resentful. What happened in between?

- a. a subordinate failed to achieve his sales goals for the period
- b. another officer in the company, who he believed to be incompetent, won a pay increase much larger than his own
- c. he read a news item about people in another part of the world living in poverty and how a major charity was facing obstacles in their relief efforts
- d. his wife was helping his children with their homework
- e. no one seemed to like him

18. A woman was angry and then felt guilty. What happened in between?

- a. she lost the phone number of a friend who was very close to her
- b. she didn't finish a job as well as she had hoped to because she didn't have enough time
- c. she expressed anger at her friend, who she then discovered hadn't done anything to hurt her
- d. she lost a close friend
- e. she was angry that someone gossiped about her, and then discovered that others were saying the same thing

19. A man liked his friend and then despised him. What happened in between?

- a. his friend lost an expensive book he loaned him
- b. his friend betrayed his wife
- c. his friend won a raise he didn't deserve
- d. his friend said he was moving away
- e. the man felt he had hurt his friend and it was partly his friend's fault

20. A woman loved someone and then felt secure. What happened in between?

- a. she learned the other person loved her in return
- b. she decided not to express her feelings
- c. her love went away
- d. she told the other person that she loved him
- e. her love itself brought about security

SECTION D

Instructions: Please select an answer for every action.

1. Mara woke up feeling pretty well. She had slept well, felt well rested, and had no particular cares or concerns. How well would each action help her preserve her mood?

Action 1: She got up and enjoyed the rest of the day.

a. Very ineffective b. Somewhat ineffective c. Neutral d. Somewhat effective e. Very effective

Action 2: Mara enjoyed the feeling, and decided to think about and appreciate all the things that were going well for her.

a. Very ineffective b. Somewhat ineffective c. Neutral d. Somewhat effective e. Very effective

Action 3: She decided it was best to ignore the feeling since it wouldn't last anyway.

a. Very ineffective b. Somewhat ineffective c. Neutral d. Somewhat effective e. Very effective

Action 4: She used the positive feeling to call her mother, who had been depressed, and tried to cheer her up.

a. Very ineffective b. Somewhat ineffective c. Neutral d. Somewhat effective e. Very effective

2. Andrew works as hard, if not harder, than one of his colleagues. In fact, his ideas are usually better at getting positive results for the company. His colleague does a mediocre job but engages in office politics so as to get ahead. So, when Andrew's boss announces that the annual merit award is being given to this colleague, Andrew is very angry. How effective would each action be in helping Andrew feel better?

Action 1: Andrew sat down and thought about all of the good things in his life and his work.

a. Very ineffective b. Somewhat ineffective c. Neutral d. Somewhat effective e. Very effective

Action 2: Andrew made a list of the positive and negative traits of his colleague.

a. Very ineffective b. Somewhat ineffective c. Neutral d. Somewhat effective e. Very effective

Action 3: Andrew felt terrible that he felt that way, and he told himself that it wasn't right to be so upset over an event not under his control.

a. Very ineffective b. Somewhat ineffective c. Neutral d. Somewhat effective e. Very effective

Action 4: Andrew decided to tell people just what a poor job his colleague had done, and that he did not deserve the merit award. Andrew gathered memos and notes to prove his point, so it wasn't just his word.

a. Very ineffective b. Somewhat ineffective c. Neutral d. Somewhat effective e. Very effective

3. Jane did not know when her bills were due, how many more bills would be arriving soon, or if she could pay them. Then her car began making strange noises and her mechanic said it would cost so much to fix that it might not be worth it. Jane can't fall asleep easily, she wakes up several times at night, and she finds herself worrying all the time. How effective would each of the following actions be in reducing her worry?

Action 1: Jane tried to work out what she owed, how much was due, and when it was due.

- a. Very ineffective b. Somewhat ineffective c. Neutral d. Somewhat effective e. Very effective

Action 2: Jane learned deep-relaxation techniques to calm herself down.

- a. Very ineffective b. Somewhat ineffective c. Neutral d. Somewhat effective e. Very effective

Action 3: Jane got the name of a financial planner to help her figure out how to manage her finances properly.

- a. Very ineffective b. Somewhat ineffective c. Neutral d. Somewhat effective e. Very effective

Action 4: She decided to look for a job that paid more money.

- a. Very ineffective b. Somewhat ineffective c. Neutral d. Somewhat effective e. Very effective

4. Nothing seems to be going right for Ed. There just isn't much in Ed's life that he enjoys or that brings him much pleasure. Over the next year, how effective would each of the following actions be at making Ed feel better?

Action 1: Ed started to call friends he hadn't spoken to in awhile and made plans to see a few people.

- a. Very ineffective b. Somewhat ineffective c. Neutral d. Somewhat effective e. Very effective

Action 2: He started to eat better, to get to bed earlier, and to exercise more.

- a. Very ineffective b. Somewhat ineffective c. Neutral d. Somewhat effective e. Very effective

Action 3: Ed felt that he was bringing people down and decided to stay by himself more until he could work out what was bothering him. He felt he needed time alone.

- a. Very ineffective b. Somewhat ineffective c. Neutral d. Somewhat effective e. Very effective

Action 4: Ed found that relaxing in front of the TV at night, with a beer or two, really helped him to feel better.

- a. Very ineffective b. Somewhat ineffective c. Neutral d. Somewhat effective e. Very effective

5. As Robert drove home from work, a tractor-trailer truck cut him off. He didn't even have time to honk his horn. Robert quickly swerved to the right to avoid getting hit. He was furious. How effective would each of the following actions be in dealing with his anger?

Action 1: Robert taught the truck driver a lesson by cutting him off a few miles down the highway.

- a. Very ineffective b. Somewhat ineffective c. Neutral d. Somewhat effective e. Very effective

Action 2: Robert just accepted that these things happen and drove home.

- a. Very ineffective b. Somewhat ineffective c. Neutral d. Somewhat effective e. Very effective

Action 3: He yelled as loud as he could, and cursed and swore at the trucker.

- a. Very ineffective b. Somewhat ineffective c. Neutral d. Somewhat effective e. Very effective

Action 4: He vowed never to drive on that highway again.

- a. Very ineffective b. Somewhat ineffective c. Neutral d. Somewhat effective e. Very effective

SECTION E

1.

Instructions: How much is each feeling below expressed by this picture?
(Please select a response for each item.)

	1	2	3	4	5
1. Happiness					
2. Sadness					
3. Fear					
4. Anger					
5. Disgust					

2.

Instructions: How much is each feeling below expressed by this picture?
(Please select a response for each item.)

	1	2	3	4	5
1. Sadness					
2. Anger					
3. Surprise					
4. Disgust					
5. Excitement					

3.

Instructions: How much is each feeling below expressed by this picture?
(Please select a response for each item.)

	1	2	3	4	5
1. Happiness					
2. Fear					
3. Anger					
4. Surprise					
5. Disgust					

4.

Instructions: How much is each feeling below expressed by this picture?

(Please select a response for each item.)

	1	2	3	4	5
1. Sadness					
2. Fear					
3. Anger					
4. Surprise					
5. Disgust					

5.

Instructions: How much is each feeling below expressed by this picture?
(Please select a response for each item.)

	1	2	3	4	5
1. Happiness					
2. Sadness					
3. Fear					
4. Anger					
5. Disgust					

6.

Instructions: How much is each feeling below expressed by this picture?
(Please select a response for each item.)

	1	2	3	4	5
1. Happiness					
2. Sadness					
3. Anger					
4. Surprise					
5. Disgust					

SECTION F

Instructions: For each item below, you are asked to imagine feeling a certain way.
Answer as best as you can, even if you are unable to imagine the feeling.

1. Imagine feeling guilty that you forgot to visit a close friend who has a serious illness. In the middle of the day, you realize you completely forgot to visit your friend at the hospital. How much is the feeling of guilt like each of the following?

	Not Alike			Very Much Alike		
a. cold	1	2	3	4	5	
b. blue	1	2	3	4	5	
c. sweet	1	2	3	4	5	

2. Imagine feeling content on a wonderful day, with terrific news about your job and family. How much is the feeling of contentment like each of the following sensations?

	Not Alike			Very Much Alike		
a. warm	1	2	3	4	5	
b. purple	1	2	3	4	5	
c. salty	1	2	3	4	5	

3. Imagine you are feeling cold, slow, and sharp. How much is that feeling like each of the following?

	Not Alike			Very Much Alike		
a. challenged	1	2	3	4	5	
b. isolated	1	2	3	4	5	
c. surprised	1	2	3	4	5	

4. Imagine you are feeling loud, large, delicate, and bright green. How much is that feeling like each of the following?

	Not Alike			Very Much Alike		
a. excited	1	2	3	4	5	
b. jealous	1	2	3	4	5	
c. afraid	1	2	3	4	5	

5. Imagine you are feeling closed, dark, and numb. How much is that feeling like each of the following?

	Not Alike			Very Much Alike		
a. sad	1	2	3	4	5	
b. content	1	2	3	4	5	
c. calm	1	2	3	4	5	

SECTION G

Instructions: Select the best alternative for each of these questions.

1. A feeling of concern most closely combines the emotions of _____.
 - a. love, anxiety, surprise, anger
 - b. surprise, pride, anger, fear
 - c. acceptance, anxiety, fear, anticipation
 - d. fear, joy, surprise, embarrassment
 - e. anxiety, caring, anticipation

2. Another word for "consistently anticipating pleasure" is _____.
 - a. optimism
 - b. happiness
 - c. contentment
 - d. joy
 - e. surprise

3. Acceptance, joy, and warmth often combine to form _____.
 - a. love
 - b. amazement
 - c. anticipation
 - d. contentment
 - e. acceptance

4. Combining the feelings of disgust and anger results in _____.
 - a. guilt
 - b. rage
 - c. shame
 - d. hatred
 - e. contempt

5. A sad surprise leads to _____.
 - a. disappointment
 - b. amazement
 - c. anger
 - d. fear
 - e. regret

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6. Sadness, guilt, and regret combine to form _____.
a. grief
b. annoyance
c. depression
d. remorse
e. misery
7. Relaxation, security, and serenity are all parts of _____.
a. love
b. fatigue
c. expectancy
d. calmness
e. anticipation
8. Fear, joy, surprise, and embarrassment are all parts of _____.
a. esteem
b. awe
c. puzzlement
d. respect
e. sympathy
9. Shame, surprise, and embarrassment are combined in the feeling of _____.
a. jealousy
b. sadness
c. guilt
d. envy
e. humiliation
10. Admiration, love, and anxiety are all parts of _____.
a. jealousy
b. sadness
c. malice
d. pride
e. worry
11. Joy, excitement, and uncertainty are all parts of the feeling of _____.
a. liveliness
b. anticipation
c. anxiety
d. calmness
e. serenity
12. Sadness and satisfaction are both sometimes part of the feeling of _____.
a. nostalgia
b. anxiety
c. anticipation
d. depression
e. contempt

3. Everything is going well for Liz. While others have been complaining about work, Liz has just gotten a promotion and a decent raise. Her children all are very happy and doing well in school, her marriage is stable and very happy. Liz is starting to feel very self-important and finds herself tempted to brag about her life to her friends. How effective would each of the following responses be for maintaining her relationships.

Response 1: Since everything is so good, it's okay to feel proud of it. But Liz also realized that some people see it as bragging, or may be jealous of her and so she only talked to close friends about her feelings.

- a. Very ineffective b. Somewhat ineffective c. Neutral d. Somewhat effective e. Very effective

Response 2: Liz started to think of all the things that could possibly go wrong in the future so she could gain perspective on her life. She saw that good feelings don't always last.

- a. Very ineffective b. Somewhat ineffective c. Neutral d. Somewhat effective e. Very effective

Response 3: Liz shared her feelings with her husband that night. Then, she decided that the family should spend time together on the weekend and get involved in several family events just to be together.

- a. Very ineffective b. Somewhat ineffective c. Neutral d. Somewhat effective e. Very effective

Thank You for taking the MSCEIT.

Appendix C
Factor Analysis of the EI Scale

Factor Analysis of the EI Scale

The three reverse keyed items of the EI Scale were recoded so that all items were scored in the same direction and a principal components factor analysis was then performed. Examination of the scree test indicated that either one or four factors may be extracted; these explained 24.5% and 44.3% of the variance, respectively. Although the original factor analysis of this scale conducted by Shutte et al. (1998) resulted in a unifactorial scale, this factor structure has subsequently been criticized, and later factor analyses of the scale have yielded four-factor solutions (Petrides & Furnham, 2000; Saklofske, Austin, & Minski, 2003). As a result, and considering the proportion of variance explained, a four-factor solution was decided upon. Only items with rotated loadings of .40 or higher on a given factor were interpreted as contributing to that factor.¹ This rotated solution, after the application of varimax rotation, is presented in Table C1.²

The four factors that emerged were labeled 'appraisal of emotion,' utilization of emotion,' 'mood regulation,' and 'experiencing/sharing of emotion.' These four factors accounted for 11.8%, 11.7%, 11.4%, and 9.4% of the variance, respectively. This factor solution corresponded substantially with the factor solutions generated by Petrides and Furnham (2000) and Saklofske et al. (2003); in both of these studies the four factors that emerged were labeled 'optimism/mood regulation,' 'appraisal of emotion,' utilization of emotion,' and 'social skills.' Thus, three of the four factors in this analysis largely corresponded with the factors yielded in previous analyses. It is of note that Petrides and Furnham (2000) cautioned that "we may have overestimated the number of factors, which means that some of them (especially the fourth) might not emerge in other data sets" (pp. 318-319). Indeed, it was this fourth 'social skills' factor that was least stable in this

¹ Item 3, "I expect I will do well on most things I try," which reflects 'optimism,' did not load highly on any of the factors and was not included on any of the subscales.

² Factor loadings of less than .10 are not shown.

analysis, and was the only factor that comprised items that loaded highly on more than one factor (see Table C1).

Table C1

Rotated Component Matrix for the EI Scale

Item	Factor 1 Appraisal of Emotion	Factor 2 Utilization of Emotion	Factor 3 Mood Regulation	Factor 4 Sharing/Experiencing of Emotion
I am aware of the non-verbal messages other people send	.786	.173		.186
By looking at their facial expressions, I recognize the emotions people are experiencing	.775	.202		.119
I find it hard to understand the non-verbal messages of other people	.760			.163
I know what other people are feeling just by looking at them	.703	.185		
I am aware of the non-verbal messages I send to others	.613	.140	.329	.112
It is difficult for me to understand why people feel the way they do	.492	.117		
I can tell how people are feeling by listening to the tone of their voice	.479	.380	.125	
When I am in a positive mood, solving problems is easy for me		.638		.246

Table C1 Continued

Rotated Component Matrix for the EI Scale

Item	Factor 1 Appraisal of Emotion	Factor 2 Utilization of Emotion	Factor 3 Mood Regulation	Factor 4 Sharing/Experiencing of Emotion
I compliment others when they have done something well		.620	.209	
When I am in a positive mood, I am able to come up with new ideas	.115	.583		.314
Other people find it easy to confide in me	.169	.560		
I help other people feel better when they are down	.244	.552	.206	
When another person tells me about an important event in his or her life, I almost feel as though I have experienced this event myself	.186	.486	.256	
I arrange events others enjoy		.475	.228	.138
Some of the major events of my life have led me to re-evaluate what is important and not important	.109	.457	-.141	.101
When I feel a change in emotions, I tend to come up with new ideas		.435	.128	.382

Table C1 Continued

Rotated Component Matrix for the EI Scale

Item	Factor 1 Appraisal of Emotion	Factor 2 Utilization of Emotion	Factor 3 Mood Regulation	Factor 4 Sharing/Experiencing of Emotion
I have control over my emotions	.205		.672	
When I experience a positive emotion, I know how to make it last		.191	.670	.222
I motivate myself by imagining a good outcome to tasks I take on		.360	.592	.169
I use good moods to help myself keep trying in the face of obstacles		.414	.537	
I present myself in a way that makes a good impression on others	.256	.253	.509	
I know when to speak about my personal problems to others	.195	-.132	.491	.295
I know why my emotions change	.435		.491	.194
I expect good things to happen	-.186	.243	.480	.315

Table C1 Continued

Rotated Component Matrix for the EI Scale

Item	Factor 1 Appraisal of Emotion	Factor 2 Utilization of Emotion	Factor 3 Mood Regulation	Factor 4 Sharing/Experiencing of Emotion
When I am faced with obstacles, I remember times I faced similar obstacles and overcame them	.136	.246	.403	.227
I like to share my emotions with others		.132	.106	.673
Emotions are one of the things that make my life worth living		.138	.137	.665
I am aware of my emotions as I experience them	.248		.201	.631
When my mood change, I see new possibilities		.475	-.172	.482
I seek out activities that make me happy		.209	.417	.466
I easily recognize my emotions as I experience them	.322		.425	.459
When I am faced with a challenge, I give up because I believe I will fail	.114		.343	.432
I expect that I will do well on most things I try		.327	.335	.381

Appendix D
Factor Analyses of Attachment Scales

Factor Analyses of Attachment Scales

Principal components analyses with varimax rotation were conducted on both the 30 item Relationship Styles Questionnaire (RSQ) and on the 36 item Experiences in Close Relationships Scales (ECRS) in order to compare the factor structures and psychometric properties of the resultant factors. Based on these analyses, on each of the attachment measures two clear and interpretable factors emerged, accounting for 40.5% of the total variance and 49.0% of the total variance, for the RSQ and the ECRS, respectively. The varimax rotated factor loadings for the RSQ are presented in [Table D1](#) and the rotated factor loadings for the ECRS are presented in [Table D2](#).³ Only items with loadings of .40 or higher on a given factor were interpreted as contributing to that factor. Examination of the items loading on each of the two factors for both scales indicated that two comparable factors emerged on both of these scales. Both the RSQ and the ECRS appeared to comprise a factor that could be labeled 'avoidance,' and a factor that could be labeled 'anxiety.' These findings accord with the results of previous factor analyses conducted on these two scales (Brennan et al., 1998; Kurdek, 2003; Siegert, Ward, & Hudson, 1996). In addition, the avoidance subscales of these two measures were substantially correlated ($r = .54, p < .01$), as were the anxiety subscales ($r = .81, p < .01$). Given the similarity between the measures, it was decided to select the ECRS as the measure of attachment for all subsequent analyses. This was because (1) the ECRS factors accounted for a greater amount of the total variance than the RSQ factors, and (2) because the resultant subscales of the ECRS (Cronbach's $\alpha = .94$ and Cronbach's $\alpha = .92$, for avoidance and anxiety, respectively) were more internally consistent than the subscales of the RSQ (Cronbach's $\alpha = .48$ and Cronbach's $\alpha = .83$, for avoidance and anxiety, respectively).

³ Factor loadings of less than .10 are not shown.

The avoidance factor of the ECRS accounted for 26.5% of the total variance and the anxiety factor accounted for an additional 22.6% of the total variance. These two subscales were significantly correlated ($r = .37, p < .01$).

Table D1

Rotated Component Matrix for RSQ Items

Item	Factor 1 Anxious	Factor 2 Avoidant
I am nervous when anyone gets too close to me	.766	.202
I find it difficult to trust others completely	.700	.222
I worry about others getting too close to me	.700	.282
I find it difficult to depend on other people	.665	.137
I am uncomfortable being close to others	.649	.174
I find it easy to get emotionally close to others	-.625	
I find it relatively easy to get close to others	-.623	-.107
I worry that I will be hurt if I allow myself to become too close to others.	.616	.349
I am comfortable depending on other people	-.593	.155
I prefer not to depend on others	.591	
People are never there when you need them	.588	.436
I know that others will be there when I need them	-.563	-.299
I want emotionally close relationships	-.539	.452
I am not sure that I can always depend on others to be there when I need them	.528	.273
I am comfortable without close emotional relationships	.448	-.159
It is very important to me to feel independent	.413	-.236
I prefer not to have other people depend on me	.400	.222
Romantic partners often want me to be closer than I feel comfortable being	.390	
I am comfortable having other people depend on me	-.373	
It is very important to me to feel self-sufficient	.338	-.160

Table D1 Continued

Rotated Component Matrix for RSQ Items

Item	Factor 1 Anxious	Factor 2 Avoidant
I worry about being abandoned	.258	.669
I often worry that romantic partners won't want to stay with me	.411	.663
I find that others are reluctant to get as close as I would like	.120	.660
My desire to merge completely sometimes scares people away		.658
I worry that others don't value me as much as I value them	.272	.608
I often worry that romantic partners don't really love me	.339	.607
I worry about being alone	-.116	.599
I worry about having others not accept me	.249	.596
I want to be completely emotionally intimate with others	-.371	.564
I want to merge completely with another person	-.321	.540

Table D2

Rotated Component Matrix for ECRS Items

Item	Factor 1 Avoidant	Factor 2 Anxious
I usually discuss my problems and concerns with my Partner	.824	
I tell my partner just about everything	.791	
Just when my partner starts to get close to me I find myself pulling away	.782	.269
I am nervous when partners get too close to me	.768	.260
I don't feel comfortable opening up to romantic partners	.765	.234
I prefer not to be too close to romantic partners	.745	.139
I get uncomfortable when a romantic partner wants to be very close	.739	.247
I feel comfortable depending on romantic partners	.726	
It helps to turn to my romantic partner in times of need	.722	-.106
I don't mind asking romantic partners for comfort, advice, or help	.722	
I try to avoid getting too close to my partner	.717	.267
I turn to my partner for many things, including comfort and reassurance	.706	-.183
I want to get close to my partner, but I keep pulling back	.669	.385
I find it difficult to allow myself to depend on romantic Partners	.639	.306
I prefer not to show a partner how I feel deep down	.609	.134
I find it relatively easy to get close to my partner	.595	.124
I am very comfortable about my relationships	.545	.359
I feel comfortable sharing my private thoughts and feelings with my partner	.481	

Table D2 Continued

Rotated Component Matrix for ECRS Items

Item	Factor 1 Avoidant	Factor 2 Anxious
I worry that romantic partners won't care about me as much as I care about them	.340	.723
Sometimes I feel that I force my partners to show more feeling, more commitment		.716
I get frustrated when my partner is not around as much as I would like	-.121	.701
I need a lot of reassurance that I am loved by my partner	.215	.678
I get frustrated if romantic partners are not available when I need them		.677
I find that my partner(s) don't want to get as close as I would like	.155	.676
I worry a fair amount about losing my partner	.275	.674
If I can't get my partner to show interest in me, I get upset or angry		.671
I worry about being abandoned	.382	.630
I worry about being alone		.622
I often want to merge completely with romantic partners, and this sometimes scares them away	.113	.622
My desire to be very close sometimes scares people Away		.618
I often wish that my partner's feelings for me were as strong as my feelings for him/her	.127	.616
I resent it when my partner spends time away from me		.611
When romantic partners disapprove of me, I feel really badly about myself		.602

Table D2 Continued

Rotated Component Matrix for ECRS Items

Item	Factor 1 Avoidant	Factor 2 Anxious
I do not often worry about being abandoned		.559
When I'm not involved in a relationship, I feel somewhat anxious and insecure		.515
I worry a lot about my relationships	.389	.501

Appendix E
Factor Analysis of the COPE

Factor Analysis of the COPE

Principal components analysis with varimax rotation was conducted on the 13 subscales of the COPE in order to reduce the number of coping variables and facilitate more parsimonious analyses involving the coping variable. Based on this analysis, three interpretable factors emerged, accounting for 57.5% of the total variance. Only items with loadings of .40 or higher on a given factor were interpreted as contributing to that factor (rotated factor loadings are presented in Table E1)⁴. The first factor, accounting for 20.3% of the total variance, was comprised of 5 subscales and was labeled 'problem-focused coping.' The second factor, accounting for 18.7% of the total variance, was comprised of 3 subscales and was labeled 'social support/emotional expression.' The third factor, accounting for 18.5% of the total variance, was made up of 4 subscales and was labeled 'cognition/restraint.' The turning to religion subscale of the COPE did not load strongly on any of the factors and was omitted from further analyses.

Reliability analyses were conducted to assess the internal consistencies of the resultant factors. While the internal consistency for the social support/emotional expression factor was good (Cronbach's $\alpha = .79$), and the internal consistency for the cognition/restraint factor was acceptable given the small number of subscales contributing to the total score (Cronbach's $\alpha = .60$), the internal consistency for the problem-focused coping factor was rather low (Cronbach's $\alpha = .46$). This poor reliability for the problem-focused coping factor may have stemmed from the fact that two of the subscales loading on this factor, planning and active coping, also loaded highly on the cognition and restraint factor, and were thus complex items. Consequently, it was decided to divide this original problem-focused factor into two distinct factors, one comprised of the behavioural disengagement, denial, and mental disengagement subscales and labeled 'avoidant

⁴ Factor loadings of less than .10 are not shown.

coping,' and the other one comprised of the planning and active coping subscales, and labeled 'problem-focused coping.' The internal consistencies of these resultant factors were much better (Cronbach's $\alpha = .72$ and Pearson's $r = .74$, for avoidant coping and problem-focused coping, respectively).

Table E1

Rotated Component Matrix for COPE Items

Item	Factor 1	Factor 2	Factor 3
behavioural disengagement	.815		
denial	.760		
mental disengagement	.709	.210	
planning	-.590	.273	.551
active coping	-.553	.273	.541
emotional social support		.873	
focus on venting emotions		.825	
instrumental social support		.743	.253
restraint coping	.227		.699
acceptance	.131	-.103	.687
positive reinterpretation and growth	-.280	.230	.633
suppression of competing activities	-.277	.325	.517
turning to religion		.243	.294

Appendix F
Relations Between Sample Demographic Characteristics
and Conceptual Variables

Relations Between Sample Demographic Characteristics and Conceptual Variables

Correlations between participants' age, highest completed level of education, and annual family income are presented in Table F1. Several conceptual variables were correlated with age, but all of these correlations were low (r s ranging from .13 to .19). In addition, the pattern of correlations indicates that those with higher levels of education and higher incomes appeared to evidence fewer problems. These relationships between lower SES factors and poorer well-being were not surprising, given that they have been noted in previous research (Mead, Witkowski, Gault, & Hartmann, 2001; Pinquart & Sorensen, 2000; Scarinci, Beech, Naumann, Kovach, Pugh, & Fapohunda, 2002). Nonetheless, there is no theoretical reason to expect that these differences would alter the nature of the relations in the model proposed in this thesis.

T-tests were conducted to assess differences between those who responded to the 'Childhood Maltreatment Study' recruitment notice and those who responded to the 'Childhood Experiences Study' recruitment notice (see Table F2). Not surprisingly, those who responded to the former recruitment notice reported having experienced a greater degree of childhood maltreatment and appeared to evidence more problems and lower well-being than those who responded to the latter recruitment notice. Again, given the intrinsic differences in the populations these notices targeted, this was to be expected.

Finally, t-tests were conducted to assess differences between participants who had ever undergone psychotherapy and those who had never received therapy (see Table F3). Those who had received therapy reported having experienced a greater degree of childhood maltreatment and appeared to evidence more problems and lower well-being than those who had not received therapy. It is likely that the experience of childhood

maltreatment and other psychological difficulties led them to seek therapy in the first place, and these differences continued to be evident.

Table F1

Correlations Between Demographic Characteristics and Conceptual Variables

Conceptual Variable	Demographic Characteristics		
	Age	Education	Income
Maltreatment			
Psychological/physical maltreatment	.18**	-.25***	-.24***
Sexual abuse	.14*	-.07	-.21**
Emotional Intelligence			
Appraisal of emotion	.01	.11	.11
Utilization of emotion	.10	-.01	.11
Mood regulation	.10	.03	.16*
Experiencing/sharing emotion	-.01	.19**	.17*
Attachment			
Avoidance	.13	-.12	-.25***
Anxiety	-.02	-.17*	-.26***
Coping			
Problem-focused coping	.19**	.12	.21**
Cognition/restraint coping	.13*	-.09	.001
Avoidant coping	-.08	-.19**	-.25***
Social support/ Emotional expression	-.03	.13	.04

Table F1 Continued

Correlations Between Demographic Characteristics and Conceptual Variables

Conceptual Variable	Demographic Characteristics		
	Age	Education	Income
Well-Being			
Psychological symptoms	-.04	-.27***	-.33***
PTSD symptoms	.05	-.25***	-.30***
Life satisfaction	-.15*	.12	.33***

*p < .05; **p < .01; ***p < .001

Table F2

Differences Between 'Childhood Maltreatment' and 'Childhood Experiences' Subsamples

	Childhood Maltreatment		Childhood Experiences		t-value
Scale	M	SD	M	SD	
Maltreatment					
Psychological/physical maltreatment	2.70	.86	1.63	.58	10.90***
Parental sexual abuse	1.80	1.06	1.11	.43	6.24***
Emotional Intelligence					
Appraisal of emotion	3.54	.80	3.51	.81	.28
Utilization of emotion	3.95	.60	3.83	.55	1.55
Mood regulation	3.33	.69	3.59	.70	-2.83**
Experiencing/sharing emotions	3.53	.77	3.75	.64	-2.36*
Attachment					
Avoidance	3.89	1.34	3.02	1.24	5.03***
Anxiety	4.21	1.24	3.36	1.18	5.21***
Coping					
Problem-focused	3.00	.67	2.95	.65	.50
Avoidant	1.97	.60	1.89	.53	1.08
Cognition/restraint	2.58	.48	2.58	.46	.13
Social support/emotional expression	2.68	.78	2.70	.70	-.18
Well-being					
Symptom Checklist	1.30	.76	.84	.68	4.74***
Impact of Event Scale	1.64	.93	1.16	.92	3.69***
Satisfaction With Life Scale	3.43	1.60	4.39	1.45	-4.67***

*p < .05; ** p < .01; ***p < .001

Table F3

Differences Between Participants Who Had and Who Had Not Received Therapy

	Received Therapy		Not Received Therapy		t-value
Scale	M	SD	M	SD	
Maltreatment					
Psychological/physical maltreatment	2.41	.90	1.58	.61	7.96***
Parental sexual abuse	1.57	.91	1.12	.52	4.52***
Emotional Intelligence					
Appraisal of emotion	3.52	.85	3.55	.70	-.23
Utilization of emotion	3.90	.60	3.85	.52	.65
Mood regulation	3.36	.72	3.70	.60	-3.38**
Experiencing/sharing emotions	3.60	.76	3.79	.56	-2.23*
Attachment					
Avoidance	3.70	1.40	2.83	1.03	5.15***
Anxiety	4.05	1.22	3.14	1.21	5.11***
Coping					
Problem-focused	2.94	.70	3.04	.55	1.17
Avoidant	1.9	.60	1.89	.50	.82
Cognition/restraint	2.54	.48	2.68	.44	-2.03*
Social support/emotional expression	2.71	.73	2.64	.75	.67
Well-being					
Symptom Checklist	1.22	.79	.71	.51	5.67***
Impact of Event Scale	1.53	.97	1.14	.87	2.63**
Satisfaction With Life Scale	3.56	1.58	4.71	1.36	-5.25***

*p < .05; ** p < .01; ***p < .001

Appendix G
Results of MSCEIT Analyses

Descriptive Statistics and Intercorrelations Between the MSCEIT Subscales

As shown in Table G1, the MSCEIT and its four branches all had moderate to good internal consistency. MSCEIT scores are reported as normed standard scores with a mean of 100 and a standard deviation of 15, much like traditional IQ scores. In general, scores 15 points or more above the mean indicate enhanced EI, whereas scores 15 points or more below the mean indicate poor EI. On average, participants' scores on EI were somewhat low, but within the normal range.

Table G1

Scale Homogeneity and Descriptive Statistics for the MSCEIT

Subscale	Number of items	α	Range	M	SD
Total EI	141	.91	53 - 125	93.35	13.26
Perceiving emotions	50	.88	59 - 133	102.48	15.14
Using emotions	30	.70	56 - 128	97.63	14.27
Understanding emotions	32	.77	52 - 118	91.45	12.06
Managing emotions	29	.82	50 - 113	91.39	11.67

Relations Between MSCEIT Scores and the Other Conceptual Variables

Exploratory correlational analyses were conducted in order to assess the relationships between MSCEIT scores and scores on the measures of maltreatment, attachment, coping, and well-being (see Table G2). None of the four MSCEIT subscale scores were related to childhood maltreatment scores, with the exception of small positive correlations between using emotions and parental sexual abuse and between managing emotions and psychological maltreatment. MSCEIT subscale scores were not related to

either anxious nor avoidant attachment. Most of the relationships between the four MSCEIT subscales and the four coping subscales were not significant, with the exceptions of perceiving emotions and avoidant coping, understanding emotions and cognition/restraint coping, and managing emotions and both problem-focused and avoidant coping. Most of the relationships between MSCEIT scores and the three measures of well-being were not significant, with the exceptions of the relationships between perceiving emotions and both SCL-90-R scores and IES scores, and the relationship between understanding emotions and IES scores. Thus, for the most part, MSCEIT scores were not related to the conceptual variables in this study, precluding the relevance of considering these scores as mediators between maltreatment and well-being.

Table G2

Correlations between MSCEIT Scores and the Other Conceptual Variables

Variable	MSCEIT Subscale			
	Perceiving emotions	Using emotions	Understanding emotions	Managing emotions
Psychological maltreatment	.01	.08	.07	.14*
Physical maltreatment	.03	.06	-.05	-.02
Parental sexual abuse	.01	.14*	.03	.12
Nonparental sexual abuse	.00	.14	.03	.12
Avoidant attachment	-.11	-.08	-.03	-.10
Anxious attachment	-.10	.03	.09	-.02
Problem-focused Coping	.05	.01	-.06	.14*
Cognition/restraint Coping	-.01	-.05	-.20**	.04
Avoidant coping	-.21**	-.10	-.10	-.21**
Social support/emotional expression	-.05	.10	-.01	.10
SCL-90-R	-.19**	-.01	-.10	-.07
IES	-.14*	-.02	-.19**	-.12
SWLS	.08	-.04	-.05	.04

* $p < .05$; ** $p < .01$; *** $p < .001$

Relations Between MSCEIT Scores and Sex, Age, and Education

Given the lack of association between the MSCEIT and the other conceptual variables in this study, the construct validity of EI, as measured by the MSCEIT, appeared questionable. To further explore this issue, exploratory analyses were conducted to assess whether the relationships between the MSCEIT and the variables of sex, age, and education accorded with previous theory and research.

Sex. Women scored higher on the total MSCEIT, $t(213) = -2.03, p < .05$, as well as the MSCEIT managing emotions branch, $t(213) = -3.02, p < .01$. See Table G3 for means and standard deviations. Consistent with theory and previous research, women had significantly higher MSCEIT scores than men (Mayer et al., 2002; Shutte et al., 1998).

Table G3

Means and Standard Deviations for the MSCEIT for Men and Women

Subscale	Men		Women	
	M	SD	M	SD
MSCEIT Total Score	90.61	14.84	94.56	12.36
Perceiving emotions	100.35	16.09	103.42	14.66
Using emotions	96.17	15.67	98.28	13.62
Understanding emotions	91.67	13.29	91.36	11.53
Managing emotions	87.48	13.45	93.12	10.37

Age. Age was positively correlated with participants' total MSCEIT scores ($r = .14, p < .05$), as well as their scores on the understanding emotions ($r = .17, p < .05$) and managing emotions ($r = .25, p < .01$) branches of the MSCEIT. Age was not related to

participants' scores on the perceiving emotions ($r = -.03$, *ns*) or using emotions ($r = .05$, *ns*) branches of the MSCEIT. These findings accord with the postulation that EI abilities should develop with age and experience (Mayer, Caruso, & Salovey, 2000b).

Education. . Level of education, which may be considered a proxy of intelligence, was positively correlated with participants' total MSCEIT scores ($r = .19$, $p < .01$), as well as their scores on the understanding emotions ($r = .26$, $p < .001$) and managing emotions ($r = .15$, $p < .05$) branches of the MSCEIT. Level of education was not related to participants' scores on the perceiving emotions ($r = .04$, *ns*) or using emotions ($r = .11$, *ns*) branches of the MSCEIT. On the whole, these findings are consistent with the assumption that if EI is a type of intelligence it should be related to other types of intelligences, including IQ (Mayer et al., 2000b; Mayer et al., 2002).

Convergence Between the EI Scale and the MSCEIT

Because MSCEIT scores were not found to be related to most conceptual variables in this study, precluding the relevance of testing its mediational role, it was decided to use EI Scale scores as the measure of EI for this thesis. Given that EI Scale scores were correlated to most of the conceptual variables in this study, it appeared that these measures were assessing two different constructs. Indeed, participants' scores on the EI scale were not related to their MSCEIT scores. Specifically, total scores on both measures were not related ($r = .04$, *ns*), nor were the relationships between the appraisal of emotion subscale of the EI Scale and the MSCEIT perceiving emotions branch ($r = -.03$, *ns*), the utilization of emotion subscale of the EI Scale and the MSCEIT using emotions branch ($r = -.02$), and the mood regulation subscale of the EI Scale and the MSCEIT managing emotions branch ($r = .04$, *ns*).

Thus, there was lack of convergence between the MSCEIT, a performance-based test of EI, which entails presenting individuals with problems that are thought to have

correct (or at least superior) responses, and the EI Scale, a self-report measure that asks people to report their own level of EI. These measures appear to be assessing two different constructs.

Appendix H

Tests of Normality

The normality of the distributions for all the conceptual variables was checked by examining the histograms and the normal probability plots. In addition, the skewness of the distributions for each variable was assessed by dividing the skewness statistic of each variable by the standard error of skewness and treating these values as z-scores. Thus, values of greater than an absolute value of three indicate violations to the assumption of normality. Based on these analyses, it was found that scores on the variables psychological/physical abuse, sexual abuse, avoidant coping, and SCL-90-R psychological symptomatology were all positively skewed, and that scores on problem-focused coping were negatively skewed (see Table H1 for skewness values).

Transformations were attempted in the following order: Variables with positively skewed distributions were transformed using either a square root transformation, a logarithmic transformation, or by taking the reciprocal value of each score, depending on the extent of the skewness. Scores on variables with negatively skewed distributions were first reflected by adding a value of one to the greatest score and then subtracting each value from that score and then applying the above transformations. Consequently, square root transformations were applied to psychological/physical maltreatment scores, problem-focused coping scores, and SCL-90-R scores and the logarithmic transformation was applied to avoidance coping scores. Sexual abuse scores could not be normalized with any of the transformation attempts.

The hierarchical regression analyses were then conducted using both transformed and nontransformed scores, and the differences between these analyses were compared. Given there were only a few minor differences in the results between analyses using transformed and nontransformed scores, results using nontransformed scores were reported to facilitate interpretation. Any differences in results between the regressions using transformed and nontransformed scores are described in footnotes.

Table H1

Skewness of the Conceptual Variables

Variable	Skewness	Standard Error	z-score
Psychological/physical maltreatment	.812	.163	4.982
Sexual abuse	2.320	.164	14.146
Appraisal of emotions	-.318	.163	-1.951
Utilization of emotions	-.409	.163	-2.509
Mood regulation	-.251	.163	-1.540
Experiencing/sharing emotions	-.469	.163	-2.877
Avoidant attachment	.280	.164	1.707
Anxious attachment	-.107	.164	-.652
Problem-focused coping	-.545	.164	-3.323
Cognition/restraint coping	.035	.164	.213
Avoidant coping	.829	.164	5.055
Social support/emotional expression	-.219	.164	-1.335
SCL-90-R	.870	.164	5.305
IES	.230	.173	1.329
SWLS	-.132	.163	-.810