The relationships among childhood maltreatment, alexithymia, social avoidance, and social support.

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THE RELATIONSHIPS AMONG CHILDHOOD MALTREATMENT, ALEXITHYMIA, SOCIAL AVOIDANCE, AND SOCIAL SUPPORT

by

Andrea M. Turner

A Thesis
Submitted to the Faculty of Graduate Studies and Research through the Department of Psychology in Partial Fulfillment of the Requirements for the Degree of Master of Arts at the University of Windsor

Windsor, Ontario, Canada
2001

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Abstract

This study evaluated a causal model of the relationships among childhood maltreatment, alexithymia, social avoidance, limited social support, and dissatisfaction with social support. The model was evaluated separately for physical and emotional abuse, sexual abuse, physical neglect, and emotional neglect. Undergraduate students (n = 204) completed the Childhood Trauma Questionnaire, Toronto Alexithymia Scale-20, Inventory of Interpersonal Problems, and Social Support Questionnaire. Variables in the model were intercorrelated, and analyses suggested mechanisms through which they were related. More severely maltreated individuals tended to be more socially avoidant and less satisfied with their social support partly because of difficulties identifying and describing their emotions. Comparisons between models suggested that different types of maltreatment have different effects on interpersonal functioning.
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Introduction

The effects of childhood maltreatment can resonate well into adulthood. Researchers have linked childhood maltreatment to various aspects of adjustment, personality, and interpersonal style, as well as to overall psychological functioning. Knowledge of these variables, and the interrelationships among them, may assist in identifying factors that contribute to poor interpersonal functioning and poor social well-being in the face of childhood maltreatment.

Previous research (e.g. Browne & Finkelhor, 1986; Cook, 1995; Martin & Elmer, 1992) has found that childhood maltreatment is associated with interpersonal problems. Childhood maltreatment also has been related to alexithymia, that is, difficulties identifying and expressing feelings (Berenbaum, 1996; Clayton, 1997). As well, alexithymia has been linked to various interpersonal problems, such as social avoidance, and limited social support (Bermond, Vorst, & Vingerhoets, 1999; Lumley, Ovies, Stettner, Wehmer, & Lakey, 1996). These findings suggest that alexithymia could mediate the relationship between childhood maltreatment and interpersonal problems; however, this hypothesis has not been empirically evaluated. Similarly, it also has been suggested that interpersonal problems mediate the relationship between alexithymia and limited social support, yet this hypothesis has also not been tested. The purpose of the present study was to evaluate the variables that influence or contribute to the relationship between childhood maltreatment and subsequent poor interpersonal functioning and poor social well-being.

The following illustrates the associations between abuse, alexithymia, and poor interpersonal functioning: a 9-year old girl who was sexually abused by her brother for
several years stated, "Sometimes now I find myself not feeling things. I don't feel sad or mad when I should be...I act silly and crazy a lot. The people at my school think I'm funny because of it" (Terr, 1991, p. 16).

**Proposed Path Model**

The relationships among childhood maltreatment, alexithymia, social avoidance, limited social support, and dissatisfaction with social support were examined by assessing the causal model depicted in Figure 1. This model is based on past theoretical and empirical literature. It proposes that individuals who were maltreated during childhood experience intense negative affect and distress. In abusive and neglectful environments, there is no support to help manage the distress. Thus, in response to the maltreatment (and in proportion to its severity), individuals often protect themselves by avoiding the negative emotions associated with the maltreatment. Subsequently, these individuals may avoid the introspective analysis of their affective experience, as well as discussions of their feelings, thus becoming alexithymic. Those who are unable to deal with and express their feelings tend to have limited abilities to engage with others at an emotional level and in turn, may become socially avoidant. Next, limited capacities for the emotional intimacy necessary to build strong interpersonal bonds result in limited emotional social support networks. Moreover, alexithymic and socially avoidant individuals tend to want to connect with others and develop supportive networks, but because they have difficulty doing so, are not satisfied with the social support they receive.

While many studies have examined the effects of general childhood maltreatment, fewer have compared the effects of different types of childhood maltreatment on
interpersonal functioning and social well-being, partly because it is common for a maltreated individual to have experienced several types of maltreatment (Crittenden, Claussen, & Sugarman, 1994). Determining whether different types of maltreatment are associated with specific psychological states and social experiences may aid in identifying those at risk for developing poor social well-being and then providing them with appropriate interventions. Therefore, this study tested the model with respect to the extent of general childhood maltreatment, as well as various types of maltreatment.

Figure 1. Path diagram of proposed model: Relationships among childhood maltreatment, alexithymia, social avoidance, extent of social support, and satisfaction with social support.
The Constructs in the Model

Childhood Maltreatment

The fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV; American Psychiatric Association [APA], 1994) defines trauma as experiencing, witnessing, or learning about an event that involves actual or possible death, serious injury, or threat to the physical integrity of self or others. In addition, the trauma must engender feelings of fear, horror, or helplessness (APA, 1994). This study focused on childhood maltreatment, which includes traumatic experiences such as physical, sexual, and emotional abuse, as well as neglect. The extent (severity and frequency) of childhood maltreatment was assessed.

An individual who experienced childhood maltreatment may be influenced, not only by the extent of the maltreatment, but also by the type of the maltreatment. For example, Bolger, Patterson, and Kupersmidt (1998) collected peer, teacher, and self-reports for 107 maltreated children (8–10 years of age) and found that emotional abuse, but neither sexual nor physical abuse, was associated with difficulties in peer relationships. Similarly, Manly, Cicchetti, and Barnett (1994) analyzed Child Protective Services records and camp counselor ratings of 235 campers (5–11 years of age) and found that those who had been sexually abused demonstrated more social competence than those who had experienced other forms of maltreatment. In addition, Beitchman et al.'s (1992) extensive literature review indicated that individuals who experienced childhood sexual abuse tended to show evidence of sexual disturbance and dysfunction later in life. Wekerle and Wolfe's (1996) review of the child maltreatment literature supported all of the above findings. These authors also noted that sexually abused
children tended to demonstrate internalizing problems, such as anxiety and depression, whereas physically abused children tended to demonstrate externalizing problems, such as aggression. Moreover, children who were neglected differed from those who were either physically or sexually abused in that they were noticeably withdrawn and dependent.

The type of maltreatment also appears to influence social support. For instance, Ono et al. (1997) studied a sample of 264 undergraduate women and found that those who had experienced childhood physical or physical and sexual abuse reported having less social support than women who were only sexually abused or not abused during childhood. As a result of these findings, the present study tested the proposed model in terms of general childhood maltreatment, and specifically with respect to physical and emotional abuse, sexual abuse, physical neglect, and emotional neglect.

Alexithymia

Alexithymia literally means ‘no words for feelings’ and is one example of emotional dysregulation. The alexithymia construct consists of a variety of components including difficulties identifying feelings, difficulties distinguishing between feelings and bodily sensations resulting from emotional arousal, difficulties describing feelings to another individual, limited imaginal processes (such as fantasies), and externally-oriented thinking (Taylor, 1994). Different components have been inconsistently associated with various aspects of psychological functioning (e.g. Kirmayer & Robbins, 1993; Suslow, 1998). Because of its preliminary nature, the present study utilized a global measure of alexithymia using the Toronto Alexithymia Scale-20 (TAS-20; Bagby, Parker, & Taylor, 1994). This measure included three principle components of alexithymia: difficulties
identifying feelings, difficulties expressing feelings, and externally-oriented thinking.

**Social Avoidance**

Individuals with socially avoidant interpersonal styles tend to refrain from engaging in social interactions. According to the DSM-IV (APA, 1994), they are similar to people with symptoms of social phobia or avoidant personality disorder, in that they may fear being criticized, ridiculed, or embarrassed in social situations.

Alden, Wiggins, and Pincus (1990) developed a circumplex model of interpersonal problems, which organizes interpersonal behaviour according to the dimensions of affiliation (cold-nurturant) and control (dominant-submissive). These dimensions represent the horizontal and vertical axes, respectively, on the circumplex. The circumplex is further divided into quadrants and octants, each representing a specific type of interpersonal problems. The resulting eight types of interpersonal problems are depicted in Figure 2. As shown in Figure 2, social avoidance falls in the overly cold/submissive quadrant of the circumplex model of interpersonal problems. The present study assessed the interpersonal problems related to social avoidance using an average of the subscales in the cold/submissive quadrant of the Inventory of Interpersonal Problems (Horowitz, Rosenberg, Baer, Ureno, & Villasenor, 1988): overly cold, socially avoidant, and submissive.

**Social Support**

Social support is often defined as the availability of people who inform individuals that they are loved and valued and upon whom they can rely (e.g. Sarason, Levine, Basham, & Sarason, 1983). In keeping with this view, the present study
Figure 2. The circumplex model of interpersonal problems.

examined emotional social support, as opposed to simply calculating the number of individuals with whom a person interacts. A review of studies involving individuals who had experienced traumatic events (Cohen & Willis, 1985) and a recent study of undergraduate women (sample size not specified) who were survivors of sexual abuse (Shriner, 1999) indicated that limited social support was associated with poor psychological health. Furthermore, both the extent of social support and satisfaction with support are clinically relevant. It seems likely that individuals who are dissatisfied with their social support would exhibit poorer psychological well-being than those who are satisfied with their support. It is also important to note that satisfaction with social support may be independent of the extent of support (Sarason et al.). For example, Ono et al. (1997) found that, compared to non-abused women, women who had been abused reported the same amount of social support, but perceived their friends as less supportive. Thus, the present study assessed both extent of (emotional) social support, and
satisfaction with social support.

**Childhood Maltreatment and Social Well-Being**

Childhood maltreatment has been associated with poor social well-being. Specifically, it has been associated with various interpersonal problems: disruptive behaviours such as aggression (Browne & Finkelhor, 1986; Manly et al., 1994; van der Kolk & Fisler, 1994); negative emotions such as anger and hostility (Browne & Finkelhor; Zlotnick et al., 1996); and negative beliefs or feelings about others such as difficulties trusting others (Saunders & Edelson, 1999), feeling suspicious (Martin & Eimer, 1992; Tsun-yin, 1998), and feeling insecure in current relationships (Cook, 1995). Additionally, childhood sexual abuse, in particular, has been related to limited social adjustment across various roles (Zlotnick et al., 1996).

Furthermore, research has linked childhood maltreatment with social avoidance. For example, in a study of 585 children followed from kindergarten until grade four, childhood physical abuse was related to feeling disliked and socially withdrawn (Dodge, Petit, & Bates, 1994). Other studies have focused on specific aspects of social avoidance. In a study of 96 undergraduates, social anxiety was related to feelings of shame (Darvill, Johnson, & Danko, 1992). Ishiyama (1999) studied 407 university students in an effort to validate the Situational Avoidance Scale. The results indicated that social avoidance was associated with poor self-esteem. A review of reports by women who had been maltreated during childhood and who were in long-term group therapy (sample size unspecified) indicated that these women felt shame, as well as self-loathing (Saunders & Edelson, 1999). Bolger et al. (1998) reported that physical and sexual abuse (but not emotional maltreatment) was also negatively correlated with self-esteem. Browne and
Finkelhor's (1986) literature review also supported the relationship between childhood sexual abuse and poor self-esteem. It appears that shame and poor self-esteem are related to social avoidance in that they result in fears of being criticized or embarrassed, which in turn, contribute to the tendency to avoid social interactions.

**Possible Mediators of the Relationship between Childhood Maltreatment and Poor Social Well-Being**

Psychologists from various theoretical orientations have proposed several factors that may mediate the relationship between childhood maltreatment and poor social well-being. Attachment theorists, such as Bowlby (1960), have proposed that children instinctively attempt to remain close to their caregivers. However, when caregivers are unavailable or harmful, children tend to develop insecure attachments to them (Bowlby; Manassis & Bradley, 1994). In addition, attachment and object-relations theorists have suggested that feelings of weakness, insecurity, and breaches of trust are encoded in negative representations of self and others (Bowlby, 1988). These representations and an insecure attachment style influence other relationships. Thus, an insecure attachment style and negative representations of self and others may mediate the relationship between childhood maltreatment and poor social well-being.

Other theorists have proposed that maltreated children develop poor interpersonal functioning because they lack the appropriate social skills. Social learning theorists (e.g. Bandura, 1977) have posited that children model the neglectful, hurtful, coercive, and aggressive behaviours demonstrated by their caregivers and then adopt these techniques in their interactions with others. As a result, such children may exhibit social skill deficits and poor social adjustment.
A third possible mediator of the relationship between childhood maltreatment and poor social well-being is alexithymia. Due to a lack of social support to help manage the intense negative affect associated with the maltreatment, maltreated children often disconnect from their inner experiences in order to manage the negative affect. This disconnection results in disorientation and impedes the ability to emotionally connect to others (Gross, 1999; Paivio & Laurent, 2001). Izard (1977) also noted that early emotional experiences have physiological consequences (e.g. neural development) and social consequences (e.g. the development of appropriate social responsiveness) that impact social development and the development of interpersonal relationships. The relationship between alexithymia and poor social well-being depicted in Figure 1 will be discussed in the following section.

Shields, Cicchetti, and Ryan (1994) found that in comparison with non-maltreated children (n = 48), maltreated children (n = 81) were more likely to have impaired affect regulation and impaired social competence. While they reported that limited affect regulation could mediate the relationship between maltreatment and social competence, affect regulation appeared to be suppressed by other variables, such as internalizing and externalizing behaviours. Thus, the relationship required further investigation. The Shields et al. study differed from the present study in several ways: the participants were children (8-12 year olds), as opposed to young adults; the researchers measured affect regulation and social competence, rather than alexithymia and social avoidance; and naturalistic observation and Q-sort techniques, as opposed to questionnaires, were used to measure affective regulation and social competence. Nevertheless, the Shields et al. study highlighted the importance of examining whether affect regulation problems such
as alexithymia mediate the relationship between childhood maltreatment and social well-being. The present study tested this postulate.

Alexithymia

The Importance of Verbal Affective Expression to Psychological Well-Being

Scholars from various perspectives have emphasized the importance of verbally expressing the affect associated with negative or traumatic experiences. For example, Pennebaker’s inhibition theory (1997) proposed that a traumatic experience that is never discussed may result in long-term health problems due to the accumulated stress of inhibiting the associated thoughts and feelings. Pennebaker, Kiecolt-Glaser, and Glaser (1988) asked 50 undergraduates to write about either a traumatic experience or a superficial subject. These researchers found that writing about a trauma was associated with physical benefits, as indicated by improved cellular immune system functioning fewer and health centre visits. Furthermore, King and Emmons (1990) studied 48 healthy adults over 21 days and reported that ambivalence about emotional expression was positively correlated with physical symptomatology. Conversely, the disclosure and discussion of trauma can result in healthy physiological changes such as decreases in muscle tension and blood pressure (Pennebaker, 1989). However, only individuals who focus on their emotions (as opposed to strictly factual information) while disclosing, achieve these long-term health benefits (Pennebaker, 1989).

Gross (1999) also proposed that emotion regulation and expression affect psychological well-being. In particular, he suggested that rumination could result in a variety of negative consequences such as anxiety and depression; repression could result in defensiveness and physiological arousal.
Furthermore, the treatment literature highlights the value of regulating and expressing affective experience. The theory of catharsis, for instance, states that suppressed emotions are toxic and that the expression of these emotions results in a release of tension that cleanses an individual. Accordingly, early psychoanalysts believed that clients had to recall and discuss their emotionally-charged childhood experiences (Breuer and Freud, as cited in Prince, 1987). Proponents of accelerated-dynamic psychotherapy have asserted that clients must fully experience their deep emotions in order to deal with painful emotional experiences and attain psychological well-being (Fosha, 2001). From an experiential perspective, Paivio and Greenberg (2000) stated that only after accessing one’s emotions can one begin to address and overcome emotional problems, such as those associated with maltreatment. Paivio and Nieuwenhuis (2001) reported that emotion-focused therapy, which emphasizes accessing and processing the emotions associated with traumatic experiences, was effective in treating adult survivors of child abuse (n = 32). From a cognitive-behavioural perspective, Foa and Kozak (1986) contended that imaginatively exposing an individual to an anxiety-provoking situation (such as one associated with a traumatic event) allows the individual to emotionally process and then modify the affective memory associated with the situation. Foa, Rothbaum, Riggs, and Murdock (1991) reported that exposure therapy for rape victims effectively reduced posttraumatic stress disorder (PTSD) symptoms (n = 45). Thus, the ability to attend to one’s affect is viewed as a necessary requirement for positive outcomes in several approaches to trauma therapy.

Other researchers have reported associations between failing to identify and describe one’s feelings and specific psychological symptoms. Haviland (1998) studied
155 undergraduates in an effort to validate the California Q-set Alexithymia Prototype. The results indicated that alexithymia was positively correlated with depression, anxiety, neuroticism, and introversion. Berenbaum (1996) studied 60 adult outpatients and found that alexithymia was associated with the presence of a personality disorder (the most common of which was Borderline Personality Disorder). Finally, Berenbaum and James (1994) reported that in a sample of 180 undergraduates, alexithymia was associated with dissociative experiences.

In short, the verbal expression of affect appears to have important implications for various aspects of life including physical and psychological symptoms, regulating emotions, mobilizing coping strategies, and the therapeutic outcome. The present study focused specifically on the relationships between childhood maltreatment and alexithymia, and between alexithymia and social well-being.

Although the expression of affect is valued in Western cultures, distress tends to be expressed non-verbally in some non-Western cultures (Kirmayer, 1987; Prince, 1987). Therefore, the construct of alexithymia might not be relevant to social well-being in individuals from non-Western cultures. As a result, the present study examined the effects of culture on the variables in the model.

**Childhood Maltreatment and Alexithymia**

Primary alexithymia is thought to have a neurobiological cause, such as a deficit in interhemispheric communication or right cerebral hemisphere damage (Parker & Taylor, 1997). In contrast, secondary alexithymia has been explained in terms of sociocultural factors, a psychodynamic dependence on denial and repression, a socially learned avoidance of expressing feelings, or traumatic experiences (Kirmayer & Robbins,
In the latter case, alexithymia can be understood as an attempt to cope by avoiding the awareness and expression of intense negative feelings that result from an experience such as trauma or maltreatment (Sifnos, 1991). In so doing, individuals may begin avoiding the introspective analysis of affective experience and expression of feelings, thus developing alexithymia. Moreover, some researchers (e.g. Berenbaum, 1996) have suggested that the association between early maltreatment and later psychological and physical conditions may be mediated by difficulties identifying feelings. Specifically, an individual with a limited ability to recognize emotions as signals for initiating appropriate behaviours will have an impaired ability to respond to stressful situations. This, in turn, may translate into physical symptoms or psychological symptoms, such as anxiety and depression (Bagby & Taylor, 1997a).

Van der Kolk and Fisler (1994) asserted that individuals who experienced childhood maltreatment must use language to connect with their past experiences in order to begin regulating their associated intense, negative affect. Accordingly, verbally expressing affective experiences allows individuals to connect feelings such as helplessness with previous experiences and differentiate these from current feelings. This distinction increases feelings of competence in the ability to handle stressful situations.

From a psychodynamic perspective, Krystal (1988) stated that alexithymia may develop in response to a traumatic experience. Accordingly, the individual’s ego is overwhelmed by traumatic events, which results in a regression of affective functioning to a preconceptual level that involves somatization and an inability to differentiate emotions. Similarly, Cohen and Kingston (1984) suggested that, in response to a traumatic event, people experience primal repression such that the experience is not
mentally represented before it is repressed. This repression is associated with a regression in affective functioning. Janet (as cited in van der Kolk & Fisler, 1994) contended that the intense negative affect associated with an experience makes the experience traumatic. In response to these emotions, affective memories of traumatic experience may be repressed and thus, no longer in consciousness. In fact, according to the DSM-IV (APA, 1994), PTSD involves an avoidance of feelings, thoughts, or conversations associated with the trauma and a numbed responsiveness that may manifest as a restricted range of affect.

However, not all people disconnect from the intense affect associated with a traumatic event; rather, specific aspects of the event and individual reactions to the event influence the likelihood of disconnection (Cloitre, Scarvalone, & Difede, 1997; van der Kolk & Fisler, 1994). For instance, there is debate concerning whether maltreated children develop alexithymia only if they also exhibit symptoms of PTSD (Yehuda et al., 1997; Zeitlin, McNally, & Cassidy, 1993). As well, factors such as the developmental stage during which the maltreatment took place and the number of traumatizing events influence the risk of developing alexithymia. For example, in a sample of 56 women, those who were sexually assaulted both during childhood and adulthood were more likely to develop alexithymia than those who were assaulted only during adulthood (Cloitre et al.). Similarly, in a sample of 35 women and 2 men, Zeitlin et al. found that those who had been raped once demonstrated greater alexithymia than those who had never been raped, and only those who had been raped more than once reached the cutoff for alexithymia on the Toronto Alexithymia Scale (TAS; Taylor, Ryan, & Bagby, 1985). Thus, although it is informative to compare individuals who have and have not been
victims of trauma, it appears to be more useful to examine the extent of trauma that has been experienced. Thus, the present study assessed the association between the extent of childhood maltreatment and alexithymia.

Previous research findings support an association between various forms of childhood maltreatment and adult alexithymia. For instance, Clayton (1997) studied 105 non-psychiatric women and reported that the severity of physical and sexual abuse was positively correlated with alexithymia. Similarly, Zlotnick et al. (1996) studied 108 female psychiatric inpatients and found that those who were sexually abused during childhood were more alexithymic than those who had not been abused. Furthermore, Hofmann and Beatrice (1995) studied 42 women and found that those who were victims of incest were more alexithymic than those who were not incest victims.

Although most research has explored the relationship between childhood maltreatment and alexithymia in women, some studies have investigated these constructs in both men and women. For example, Berenbaum (1996) studied 16 male and 44 female adult outpatients. The results indicated that, in comparison with individuals who were not abused, those who were physically or sexually abused during childhood had greater difficulty identifying, but not expressing, their feelings, as measured by sub-scales of the TAS (Taylor et al., 1985). Berenbaum and James (1994) also found that, among 183 undergraduates (47.5% female), alexithymia was positively correlated with retrospective self-reports of feeling less emotionally safe as a child. Thus, alexithymia has been associated with not only childhood trauma, but also other negative childhood experiences. Accordingly, this study investigated the relationship between the extent of childhood maltreatment, which includes various forms of trauma and neglect, and current
alexithymia. This relationship is presented in the model depicted in Figure 1.

**Alexithymia and Social Avoidance**

The model depicted in Figure 1 proposes a direct relationship between alexithymia and social avoidance. There is considerable support for this association. For example, Berenbaum and Irvin (1996) conducted a study in which 98 college students were exposed to events intended to provoke anger. Their results indicated that those who were more alexithymic displayed more interpersonal avoidance and non-verbal anger than those who were less alexithymic. Additionally, Suslow (1998) tested 32 college students and hospital staff using a word-word priming paradigm and found that individuals who had difficulty describing their feelings, as assessed by the TAS-20 (Bagby et al., 1994), were particularly sensitive, or responsive, to negative words. The researcher suggested that these difficulties may be associated with social anxiety or shame. That is, people who are particularly sensitive to negative words might also be sensitive to negative comments or expressions in social situations, resulting in feelings of embarrassment and social anxiety.

Taylor, Parker, Bagby, and Bourke (1996) studied the relationship between alexithymia and psychological characteristics among 48 women with anorexia nervosa and 30 matched controls, as well as 118 female and 116 male university students. Their results indicated that alexithymia was positively correlated with interpersonal distrust in each of the subsamples. Sheppard (1997) studied undergraduate students (sample size unspecified) and found that alexithymia was associated with a cold and submissive interpersonal style, as well as being closed to new experiences. Haviland (1998) also noted that alexithymia was associated with being closed to new experiences, as well as
with introversion and anxiety. It appears likely that people who have difficulties accessing and expressing their emotions feel frustrated in social situations that require emotional engagement with others; these feelings could then result in inappropriate affect, irritability, and perceived coldness.

Overall, research findings indicate that alexithymic individuals tend to have interpersonal problems in the overly cold/submissive quadrant of the circumplex model (see Figure 2), particularly problems associated with social avoidance. Although many studies have demonstrated a relationship between alexithymia and social avoidance, none have done so in the context of childhood maltreatment. Furthermore, considerable research indicates that childhood maltreatment is associated with social avoidance, yet no studies have examined the role of alexithymia in the relationship. The present study assessed whether alexithymia mediated the relationship between childhood maltreatment and interpersonal problems associated with social avoidance.

Social Support

The model depicted in Figure 1 proposes direct relationships between social avoidance and both limited social support and dissatisfaction with social support. Theory and research support these relationships. First, social avoidance is often defined as having limited social interactions, and thus, limited social support networks. Second, Kirmayer (1987) suggested that interpersonal problems often result in difficulties enlisting others as supportive resources and maintaining relationships. Individuals who feel angry and mistrustful of others, for instance, or who have difficulty feeling emotionally close to others, are unlikely to reach out to others in search of comfort and support. Therefore, these individuals likely have few people in their social support
networks. Furthermore, social avoidance has been linked to dissatisfaction with support. Saunders and Edelson (1999) reported that women who were victims of childhood maltreatment tended to be socially avoidant and have difficulties establishing intimate relationships. Nonetheless, they wanted to have intimate relationships and were dissatisfied with the extent of their social support.

Research on loneliness is also relevant in that those who are lonely are dissatisfied with their social support. Seigrin and Kinney (1995) observed 64 undergraduate students when they were given the opportunity to converse with another individual before they began an experiment. Their results indicated that in comparison with non-socially anxious individuals, those who were socially anxious negatively misperceived their own social skills and reported more feelings of loneliness. Neto (1992) also found that the best predictors of loneliness among 217 young adults (14-27 years old) were social anxiety, social acceptance, self-consciousness in public, and happiness. Therefore, unlike more autonomous or intrusive individuals (see Figure 2), who could be comfortable with less social support, socially avoidant individuals feel lonely, yearn for more emotional contact, and likely feel less satisfied with their social support networks. The present study tested the assumption that social avoidance is related to limited social support and dissatisfaction with social support.

The model in Figure 1 proposes a direct relationship between social avoidance and both dimensions of social support. As well, social avoidance mediates the relationships between alexithymia and social support. Theory and research support a relationship between the expression of affect and the availability of social support. For example, theorists from a variety of perspectives, such as developmental and humanistic,
(e.g. Gross, 1999; Rice & Greenberg, 1992; Shields et al., 1994) have suggested that the abilities to understand and regulate emotions are the foundations of both effective interactions with others and understanding of others. In fact, because emotions are responses to the environment and they provide information that guides adaptive behaviour, emotions represent an interpersonal communication system. A restricted ability to experience and modulate one’s emotions would impair this communication system. This impairment, in turn, could limit interpersonal relationships.

Pennebaker’s inhibition theory (1989) proposed a relationship between alexithymia and limited social support within the context of stress or trauma. Accordingly, individuals who experienced extreme stress, such as maltreatment, could develop inhibitory coping styles. This inhibitory style could result in a limited access to one’s emotions, an inhibited interpersonal style, and limited efforts to attain support. Kirmayer (1987) proposed a similar notion. However, he suggested that alexithymia is related to limited social support in that a diminished ability to process emotion could impair overall interpersonal relations. Accordingly, alexithymic individuals are less able to evaluate, deal with, and respond to their own, as well as others’, emotions, which results in limited abilities to enlist others as sources of support. Similarly, Bagby and Taylor (1997b) suggested that individuals who are unable to verbally express their emotional distress fail to attract others who can provide support and comfort.

Langs (as cited in Babgy & Taylor, 1997b) indicated that alexithymic individuals erect impenetrable barriers to protect their inner mental lives from being exposed and prevent the formation of emotional connections with others. Additionally, Sifenos (1991) suggested that alexithymic individuals tend to have concrete or operational ways of
thinking, have difficulty communicating with people, and “give the impression of being different, alien beings, having come from an entirely different world” (p. 119). Consequently, they are unlikely to be able to connect with others in order to attain support.

Also, research supports a relationship between alexithymia and limited social support in healthy individuals. For instance, Lumley et al. (1996) found that, among 225 college students, various aspects of alexithymia were negatively correlated with specific aspects of the extent of social support: being a member of a club, having a romantic partner, having a best friend, having close friends, and having recently gone on dates. However, these correlations were not as strong as the association the researchers found between alexithymia and the extent of perceived support (n = 662), which assessed whether the person felt emotionally supported, as opposed to the size of the person’s network. Therefore, the extent of social support should be assessed using a measure that allows individuals to voice whether they feel emotionally supported by asking questions such as ‘whom do you feel really appreciates you as a person?’ The Social Support Questionnaire (SSQ; Sarason et al., 1983) includes this and other similar questions. Thus, the present study utilized the SSQ to assess the extent of social support.

In another study of 179 healthy non-clinical adults (33-64 years of age), Fukunishi and Rahe (1995) found that those who were more alexithymic reported having less social support, including extent, utilization, and perceived willingness of others to lend support. Similarly, Fukunishi, Kaji, Hosaka, Berger, and Rahe (1997) found that among 189 adults (30-65 years of age) receiving routine physical examinations, alexithymia was negatively correlated with the same dimensions of social support.
Although these researchers did not assess social variables, they suggested that social avoidance and interpersonal problems may mediate the relationship between alexithymia and social support.

Results of research examining the link between alexithymia and social support within the context of physical illness is less consistent. For example, Fukunishi, Maeda, Kubota, and Tomino (1997) studied 63 patients with end-stage renal failure and found that alexithymia was negatively related to the utilization and perception of social support. However, in a three-year follow-up of 18 patients with end-stage renal failure, only one aspect of alexithymia—a limited ability to communicate feelings—was negatively correlated with social support (Fukunishi, Maeda, Kubota, Tomino, & Rahe, 1995). Fuller (1997) studied 83 individuals with coronary heart disease and reported that alexithymia was not significantly related to emotional support. Thus, the relationship between alexithymia and limited social support is less clear in populations with more serious physical conditions. People suffering from physical illnesses have particular emotional and physical needs. Consequently, they may receive social support in response to their needs, regardless of whether or not they are alexithymic.

Overall, there is limited research on the relationship between alexithymia and social support in healthy populations and conflicting findings in physically ill populations. This relationship, and the factors that may play a role in the relationship, therefore requires further investigation. To date, only one study (Lumley et al., 1996) has investigated specific mediators of this relationship. These researchers found that among 225 college students, alexithymia was negatively related to social support and that that poor social skills accounted for this relationship. However, the study employed a global
measure of social competence and did not specify the aspect of social competence that accounted for the relationship. Moreover, the study did not distinguish between the existence of and satisfaction with social support. The present study examined whether social avoidance mediates the relationships between alexithymia and both the extent of and satisfaction with social support. Moreover, it examined the effects of medical illness on the variables in the model.

Regarding satisfaction with social support, previous researchers (e.g. Schaffer, as cited in Bagby & Taylor, 1997b; Sifenos, 1967) have suggested that alexithymic individuals suffer from feelings of depression and emptiness, and that they are likely to have insecure attachment styles characterized by compulsive care-seeking. Bagby and Taylor (1997b) pointed out that such feelings and styles may be the result of faulty representations of self and others. The limited amount of literature available provides support for a link between alexithymia and dissatisfaction with social support, as proposed in the model presented in Figure 1. The present study tested the relationships between alexithymia and both extent of and satisfaction with social support, as well as whether social avoidance mediated these relationships.

The model depicted in Figure 1 also proposes that childhood maltreatment is associated with both dimensions of social support, and that alexithymia and social avoidance mediate these relationships. There is some empirical support for this contention. For example, Cook (1995) studied 264 undergraduate women and found that childhood maltreatment was associated with low perceived social support. Additionally, as noted earlier, Saunders and Edelson's (1999) found that women who had been maltreated in childhood reported desiring more intimate relationships. However, other
research does not support this relationship. For example, Martin and Elmer (1992) studied 19 individuals (25-36 years old) who had been physically abused during childhood and found that most of them were satisfied with their social support. However, this study utilized a small sample, did not have a control group, and assessed social support primarily in terms of the relationship with a significant other. Therefore, the results of the Cook and Saunders and Edelson studies, which supported the association between maltreatment and poor social support, should be given strong consideration.

The studies that examined this association tested the direct relationship between maltreatment and support without considering any mediating factors. Yet, it is likely that maltreated children who have difficulty connecting with their feelings and trusting others will not seek out and rely upon others as sources of comfort and support even though they may long for such emotional connections. Therefore, alexithymia and social avoidance could mediate the relationship between childhood maltreatment and the extent of later social support. The present study examined the relationships between childhood maltreatment and both dimensions of current social support, and tested the hypothesis that alexithymia and social avoidance mediate these relationships.

Summary

The model in Figure 1 proposes a causal path from childhood maltreatment to alexithymia, social avoidance, and finally limited social support and dissatisfaction with social support. Each of the variables in the proposed model has been linked theoretically and empirically to the other variables in the model and to various aspects of psychological well-being. In particular, childhood maltreatment has been associated with various psychological disorders (Berenbaum, 1996); alexithymia has been associated
with depression, anxiety, and personality disorders (Berenbaum, 1996; Haviland, 1998); and social avoidance has been associated with interpersonal distress (Sheffield, Carey, Patenaude, & Lambert, 1995). In addition, limited social support has been associated with poor general well-being and high levels of psychological symptomatology (Cohen & Wills, 1985; Sarason et al., 1983; Shriner, 1999), and dissatisfaction with social support has been related to anxiety (Sarason et al., 1983).

Specific Hypotheses

The present study proposed that more severe childhood maltreatment is related to greater alexithymia, more social avoidance, less social support, and less satisfaction with the support. In addition, alexithymia mediates the relationship between more severe childhood maltreatment and more social avoidance. Lastly, alexithymia and social avoidance mediate the relationships between more severe childhood maltreatment and both less social support and less satisfaction with social support.

The effects of specific types of abuse are unclear. Therefore, the present study aimed to explore the differences between specific types of abuse.
Method

Participants

Students’ telephone numbers were obtained from the University of Windsor Psychology Department participant pool. Students were called, the purpose of the study was explained, and they were asked whether they would be interested in participating in the study in return for class credit. Additional undergraduate social work and law students were recruited through specific classes. All students who could read and understand English were eligible for participation. Participants signed a consent form before completing the preliminary demographic questionnaire (see Appendices A and B) and then completing the main questionnaires. The Childhood Trauma Questionnaire was completed first in order to differentiate past experiences from current experiences, as examined by the other questionnaires. Next, the Inventory of Interpersonal Problems was completed. The Toronto Alexithymia Questionnaire-20 followed. Therefore, questions concerning difficulties understanding one’s feelings (alexithymia) were addressed after questions concerning these feelings. The Social Support Questionnaire was completed last so that feelings of satisfaction or dissatisfaction did not influence responses on other questionnaires. The testing session took approximately forty-five minutes. Five to ten students were tested at a time in a large room to ensure each student’s privacy when completing the questionnaires. Given that some participants may have experienced discomfort or distress after answering questions about possible childhood maltreatment experiences, they were all given pamphlets detailing services available at the University of Windsor that offer support for students experiencing distress (see Appendices C and D).
Of the 204 students who participated in the study, most were recruited through the psychology department participant pool (n = 179). The others were recruited through social work (n = 18) and law (n = 7) classes. One-way analyses of variance indicated that participants from different recruitment classes did not differ significantly on any of the variables in the model (maltreatment, alexithymia, social avoidance, extent of social support, and satisfaction with social support). Most participants were female (82%), were single (92%), had no children (95%), and worked part time (60%). The mean age was 22.17 years (SD = 5.52), ranging from 17 to 66 years of age. The average annual family income was $83,751. With respect to culture and ethnicity, most participants (58%) categorized themselves as Canadian or North American. The remainder were Western European (19%), Afro-Caribbean (6%), Asian (5%), East Indian (4%), Middle Eastern (3%), and Eastern European (3%).

Measures

The Childhood Trauma Questionnaire (CTQ; Bernstein et al., 1994) is a 70-item self-report questionnaire that measures the extent (severity and frequency) of different types of childhood abuse and neglect (see Appendix E). Using a 5-point scale (1 = never true, 5 = very often true), participants rated the frequency of specific events that occurred when they “were growing up.” The CTQ provides a measure of overall childhood maltreatment, as well as subscale scores of physical and emotional abuse, sexual abuse, physical neglect, and emotional neglect. The subscales are based on empirically derived factor scales. Bernstein et al. reported internal consistencies in a sample of 286 drug- or alcohol-dependent patients ranging from .79 to .94 for the subscales and test-retest reliabilities in 40 of the original participants ranging from .80 to .88 after 2-6 months.
In order to determine whether the physical and emotional abuse factor could be divided into two unique factors, the items in the combined factor were divided into behaviourally defined physical abuse and emotional abuse clusters. Pearson's correlations indicated that neither cluster was correlated with the other variables in the model. Thus, it was not possible to conduct separate path analyses for physical abuse and emotional abuse.

The *Inventory of Interpersonal Problems* (IIP; Horowitz et al., 1988) is a 127-item self-report instrument that assesses the type and severity of interpersonal problems (see Appendix F). For each item, participants rated on a 5-point scale (1 = not at all, 5 = extremely) how distressed they were by 78 interpersonal behaviours that are “hard to do” and 48 interpersonal behaviours that are “done too much.” Horowitz et al. sampled 103 outpatients and reported internal consistencies on subscales between .89 and .94 and test-retest reliabilities on subscales ranging from .89 to .98 after 10 weeks. As noted earlier, Alden et al.’s (1990) circumplex model organizes interpersonal interactions into eight subscales (types of interpersonal problems) according to the dimensions of affiliation and control. In the present study, the average of the IIP subscales of coldness, social avoidance, and submissiveness was used as a measure of interpersonal problems related to social avoidance.

The *Twenty-Item Toronto Alexithymia Scale* (TAS-20; Bagby et al., 1994) is a self-report measure consisting of 20 items that assesses the severity of alexithymia (see Appendix G). Participants used a 5-point scale (1 = strongly disagree, 5 = strongly agree) to indicate the degree to which each statement applies to them. The TAS-20 also provides empirically derived subscales that measure difficulties identifying feelings,
difficulties expressing feelings, and externally-oriented thinking. Bagby et al. reported internal consistency in a sample of 965 undergraduate students of .81, and test-retest reliability in a subsample of 72 students of .77 over a 3-week interval.

The **Social Support Questionnaire** (SSQ; Sarason, et al., 1983) is a 27-item self-report questionnaire that measures the extent of social support and satisfaction with social support (see Appendix H). Participants listed the initials of people who support them in a variety of situations and used a 6-point scale (1 = very dissatisfied, 6 = very satisfied) to rate their satisfaction with their support in each of the situations. Sarason et al. reported internal consistency in a group of 602 undergraduates of .97 and .94 for the extent of social support and satisfaction with social support, respectively, and test-retest reliability in a subsample of 105 students of .90 and .83 for the extent of social support and satisfaction with social support, respectively, over a 4-week interval.

**Statistical Analyses**

The initial model (see Figure 1) was developed based on theory and past literature, as described above. The model was tested separately for each type of maltreatment using path analyses via EQS (Bentler, 1995). EQS provides the researcher with the ability to evaluate the model using the Wald Test and the Largange Multiplier. The Wald Test was used to determine which parameters should be fixed, rather than free, (i.e. removing paths between variables). The Largange Multiplier was used to determine which parameters should be free, rather than fixed (i.e. adding paths). Each model was independently modified by removing non-significant paths and adding significant paths that had not been predicted. Thus, the best fitting model was developed for each type of maltreatment.
Next, goodness-of-fit indices were computed to evaluate the extent to which each model accurately reflected the data. The chi-squared value to degrees of freedom ratio, non-normed fit index (NNFI; Bentler & Bonett, 1980), comparative fit index (CFI; Bentler, 1990), root-mean square error of approximation (RMSEA; Bentler, 1995), and standardized root-mean-square residual (SRMR; Bentler, 1995) fit indices were used to evaluate the models. Hu and Bentler’s (1998) recommend the use of these specific indices. The first three indices reflect the extent to which the model fits the data, while the last two are measures of misfit. The chi-squared value represents the discrepancy between the sample and proposed model covariance matrices. Good fit is indicated if the ratio of chi-squared to degrees of freedom does not exceed 3.0 (Cole, 1987). The NNFI and CFI represent the proportion of variance accounted for by the model; values above .90 and .95, respectively, indicate good fit (Bentler & Bonett; Cole; Hu & Bentler). The RMSEA is most sensitive to models with misspecified factor loadings, particularly with complex models, such as those presented in the present study. The SRMR is most sensitive to models with misspecified factor covariances, particularly with simple models (Hu & Bentler). Models with good fit should not have RMSEA values above .06 or SRMR values above .08 (Hu & Bentler).
Results

Characteristics of the Population

The mean scores and standard deviations, as well as possible ranges of scores, for each scale and subscale are presented in Table 1. The CTQ subscales were those identified by Bernstein et al. (1994). In contrast, prevalence rates were calculated based on Bernstein, Ahluvalia, Pogge, and Handelsman’s (1997) suggestions for physical and sexual abuse factors and cutoffs. Items chosen for these factors were behaviourally defined and logically associated with physical and sexual abuse. For example, “people in my family hit me so hard that it left me with bruises or marks” was chosen for the physical abuse factor and “someone tried to touch me in a sexual way, or tried to make me touch them” was chosen for the sexual abuse factor. In the present sample, 15.6% of the females and 10.8% of the males were sexually abused, and 18.0% of the females and 18.9% of the males were physically abused. These prevalence rates are similar to many of the prevalence rates presented in previous studies using samples from Canada and the United States.

For example, the 1990 Ontario Health Supplement (OHS) survey of late adolescents and adults used 11 interview questions and determined that 12.8% of females and 4.3% of males reported childhood sexual abuse perpetrated by adults, and that 21.1% of females and 31.2% of males reported childhood physical abuse (MacMillan, et al., 1997). One review of 16 studies that used North American samples found that 16.8% of women and 7.9% of men reported having been sexually abused during childhood (Gorey & Leslie, 1996). Finally, Finkelhor, Hotaling, Lewis, and Smith (1990) surveyed over 3,000 American young adults (18 years and older) using four screening questions and
found that 27% of females and 16% of males reported histories of childhood sexual abuse.

Table 1

Possible Ranges, Means, Standard Deviations, and Cronbach's Alphas for Scales and Subscales

<table>
<thead>
<tr>
<th>Scale</th>
<th>Possible Range of Scores</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTQ</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total (weighted)</td>
<td>4 - 20</td>
<td>6.15</td>
<td>2.09</td>
<td>.93</td>
</tr>
<tr>
<td>Physical and Emotional Abuse</td>
<td>23 - 115</td>
<td>40.25</td>
<td>14.89</td>
<td>.94</td>
</tr>
<tr>
<td>Sexual Abuse</td>
<td>5 - 25</td>
<td>6.55</td>
<td>4.20</td>
<td>.94</td>
</tr>
<tr>
<td>Physical Neglect</td>
<td>11 - 55</td>
<td>13.69</td>
<td>4.07</td>
<td>.77</td>
</tr>
<tr>
<td>Emotional Neglect</td>
<td>21 - 105</td>
<td>38.81</td>
<td>13.69</td>
<td>.93</td>
</tr>
<tr>
<td>TAS-20</td>
<td>20 - 100</td>
<td>45.44</td>
<td>11.36</td>
<td>.82</td>
</tr>
<tr>
<td>IIP</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Avoidance</td>
<td>0 - 4</td>
<td>1.12</td>
<td>0.70</td>
<td>.93</td>
</tr>
<tr>
<td>SSQ</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extent of Social Support</td>
<td>0 - 9</td>
<td>4.19</td>
<td>2.68</td>
<td>.96</td>
</tr>
<tr>
<td>Satisfaction with Social Support</td>
<td>1 - 6</td>
<td>5.21</td>
<td>0.72</td>
<td>.87</td>
</tr>
</tbody>
</table>

*Note.* CTQ = Childhood Trauma Questionnaire; TAS-20 = Toronto Alexithymia Scale-20; IIP = Inventory of Interpersonal Problems; SSQ = Social Support Questionnaire.
With respect to additional characteristics of the sample, 27.5% reported that they had received personal counselling or psychotherapy from a professional for personal problems or distress. Also, 3.9% reported having a serious medical condition or illness (e.g. diabetes, cancer, muscular dystrophy, and deteriorating kidneys). The influence of these variables will be discussed in the covariates section.

**Data Transformations**

Cronbach’s alpha coefficients were computed to assess the reliability of the measures and subscales before further analyzing the data. The coefficients, presented in Table 1, ranged from .77 to .94. Thus, all measures and scales achieved acceptable inter-item reliability.

Given that multivariate statistics such as those utilized in this study presume that variables are normally distributed (Tabachnick & Fidell, 1996), the distributions of each of the variables in the model were visually inspected. Aside from emotional neglect, all childhood maltreatment variables were positively skewed. Consequently, total maltreatment values and physical and emotional abuse values were adjusted using square root transformations, and sexual abuse and physical neglect values were adjusted using log transformations. The transformed distributions were less skewed according to visual examination, as well as skewness and kurtosis values. Satisfaction with social support was negatively skewed and adjusted using a reflected square root transformation, which was then re-reflected so that high scores represented high levels of satisfaction.

Interpretations of subsequent findings were discussed with respect to the non-transformed versions of the variables. Emotional neglect, alexithymia, social avoidance, and the extent of social support were all normally distributed.
Multivariate scatterplots were examined to search for values that significantly influenced the correlations. As there appeared to be no significant outliers, all cases were included in the data analyses.

Correlations

Pearson’s correlations among the variables in the model are presented in Table 2. As expected, maltreatment, alexithymia, social avoidance, extent of social support and satisfaction with social support were all significantly correlated with each other, with the exception of the link between sexual abuse and limited social support. There is little research considering the relationship between sexual abuse and social support, and the studies that have been conducted present conflicting results. The significance of this finding will be considered in the discussion section.

All of the correlations were in the expected direction in that more severe maltreatment was associated with greater alexithymia, greater social avoidance, less social support, and less satisfaction with social support. As well, greater alexithymia was associated with greater social avoidance, and both were associated with less social support and less satisfaction with social support. Finally, less social support was correlated with lower satisfaction with social support. These significant correlations suggest that the relationships between these variables warrant investigation using path models. In addition, the different types of maltreatment were all highly positively correlated.

A second set of correlational analyses was conducted to determine whether interpersonal problems other than those associated with social avoidance were related to the variables in the model. For each of the remaining three quadrants of the circumplex
Table 2

Pearson's Correlations between Maltreatment, Alexithymia, Interpersonal Problems, Social Support, and Therapy

<table>
<thead>
<tr>
<th></th>
<th>CTQ</th>
<th>TAS-20</th>
<th>IIP</th>
<th>SSQ</th>
<th>Therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>P&amp;EA</td>
<td>SA</td>
<td>PN</td>
<td>EN</td>
</tr>
<tr>
<td>CTQ</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>--</td>
<td>.91**</td>
<td>.70**</td>
<td>.83**</td>
<td>.88**</td>
</tr>
<tr>
<td>P&amp;EA</td>
<td>--</td>
<td>.46**</td>
<td>.77**</td>
<td>.82**</td>
<td>.27**</td>
</tr>
<tr>
<td>SA</td>
<td>--</td>
<td>.44**</td>
<td>.37**</td>
<td>.23**</td>
<td>.22**</td>
</tr>
<tr>
<td>PN</td>
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<td>.23**</td>
<td>.36**</td>
<td>-.14</td>
</tr>
<tr>
<td>EN</td>
<td>--</td>
<td>.25**</td>
<td>.43**</td>
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<td>-.12</td>
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<tr>
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<td>.54**</td>
<td>-.03</td>
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<td></td>
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<td>.44**</td>
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<td>.65**</td>
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<td>.11</td>
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<td></td>
<td>Expl</td>
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<td>.07</td>
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<tr>
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<td>ExtSS</td>
<td>--</td>
<td>.41**</td>
<td>-.05</td>
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<tr>
<td></td>
<td>SatSS</td>
<td>--</td>
<td>-.21**</td>
<td></td>
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</table>

**Note.** CTQ = Childhood Trauma Questionnaire; Total = total maltreatment; P&EA = physical and emotional abuse; SA = sexual abuse; PN = physical neglect; EN = emotional neglect; TAS-20 = Toronto Alexithymia Scale-20; IIP = Inventory of Interpersonal Problems; SocAv = social avoidance; Comp = overly-competitive; Contr = overly-controlling; Expl = overly-exploitable; SSQ = Social Support Questionnaire; ExtSS = extent of social support; SatSS = satisfaction with social support; Therapy = receipt of therapy. *p < .05. **p < .01.
of interpersonal problems (overly-competitive, overly-controlling, and overly-exploitable), the average of the scores on the three corresponding subscales was computed. Pearson's correlations are presented in Table 2. The results indicated that interpersonal problems related to being overly-competitive, overly-controlling, or overly-exploitable were not associated with physical neglect, emotional neglect, alexithymia, limited social support, or satisfaction with social support. However, people who were more severely maltreated (total maltreatment) were likely to be more competitive, controlling, and exploitable. Moreover, those who were more severely physically and emotionally abused were likely to be more competitive and exploitable, and those who were more severely sexually abused were likely to be more competitive and controlling. In summary, total maltreatment was related to all types of interpersonal problems, and specific types of abuse were related to specific types of interpersonal problems. These findings indicate that while maltreatment was related to a variety of interpersonal problems, alexithymia, limited social support, and dissatisfaction with social support were related specifically to social avoidance, and not to general interpersonal problems. Thus, the present study examined social avoidance in the models but did not further examine the other types of interpersonal problems.

Covariates

T-tests indicated that males and females did not differ significantly on any of the model variables (i.e. maltreatment, alexithymia, social avoidance, extent of social support, and satisfaction with social support). T-tests also indicated that individuals who experienced a serious illness and those who reported no illnesses did not differ on the
model variables. As well, a one-way analysis of variance yielded no significant
differences on the model variables between participants from different cultural groups.

T-tests also indicated that, in comparison with participants who had not received
counselling or therapy, those who had received professional support reported more severe
total maltreatment, $t(202) = -6.14, p < .01$, physical and emotional abuse, $t(202) = -6.26, p < .01$, sexual abuse, $t(64.29) = -3.49, p < .01$, physical neglect, $t(202) = -4.68, p < .01$, and emotional neglect, $t(202) = -4.50, p < .01$. These results are consistent with the
finding that maltreated individuals are at risk for psychological disturbances (Wekerle &
Wolfe, 1996), which, in turn, lead them to seek therapy. As a result of the present
findings, therapy was entered as a variable in the model.

Pearson's correlations indicated that older participants tended to report more
severe total maltreatment, $r(203) = .326, p < .01$, physical and emotional abuse, $r(203) = .280, p < .01$, sexual abuse, $r(203) = .288, p < .01$, physical neglect, $r(203) = .252, p < .01$, and emotional neglect, $r(203) = .293, p < .01$. These associations may occur
because as people age, they may feel more comfortable reporting previous abuse and neglect, or be more likely to recognize that certain childhood experiences were abusive.

As a result of these correlations, the effects of age on maltreatment were statistically
controlled for by regressing the maltreatment variables onto age. The resulting residuals
(i.e. maltreatment, having suppressed the effects of age) were then used as the
maltreatment variables.

In addition, family income was positively associated with the extent of social
support, $r(153) = .283, p < .01$. This is consistent with Pelletier, Godin, Lepage, and
Dussault's (1994) finding that parents of chronically ill children with middle to low
incomes are likely to have less social support. These results suggest that family income functions as a source of support. Thus, the extent of social support was regressed onto family income in order to statistically control for the effects of family income. The resulting residuals were used as the extent of social support. Therapy was entered as a variable in the model because it was viewed as contributing to the understanding of the relationship between childhood maltreatment and poor social well-being. However, age and family income were co-varied out of the model, because they were viewed as contributing little to the understanding of the relationship between childhood maltreatment and poor social well-being.

**Model Testing**

Table 3 presents the goodness-of-fit values for the total maltreatment, physical and emotional abuse, sexual abuse, physical neglect, and emotional neglect models. The physical and emotional abuse model met criteria on each of the indices, indicating that the model fits the data extremely well. The other four models fell short of the SRMR criteria, but met criteria on all the other fit indices, suggesting that these models fit the data relatively well.¹

In terms of total maltreatment, the path coefficients and error variances for this model are presented in Figure 3. According to the model, individuals who were more severely maltreated during childhood were more likely to have greater difficulties dealing with their feelings, greater social avoidance, less social support, less satisfaction with their social support, and to have received therapy. Moreover, (a) individuals who had

¹ In comparison, the goodness-of-fit values for the proposed total maltreatment model prior to modification for improved fit were as follows: \( \chi^2/df = 9.88 \), NNFI = .633, CFI = .963, RMSEA = .209, and SRMR = .190.
greater difficulties with feelings were likely to be more socially avoidant and less satisfied with their social support, (b) more socially avoidant individuals were likely to be less satisfied with their social support, and (c) those with less social support were also likely to be less satisfied with the support.

Table 3

Values and Cutoffs of Fit Indices for Path Models

<table>
<thead>
<tr>
<th>Model</th>
<th>$\chi^2$</th>
<th>df</th>
<th>(&lt;3.0)</th>
<th>(.90)</th>
<th>(.95)</th>
<th>(.06)</th>
<th>(.08)</th>
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<tr>
<td>Total Maltreatment</td>
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<td>6</td>
<td>1.37</td>
<td>.979</td>
<td>.992</td>
<td>.043</td>
<td>.099</td>
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<tr>
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<td>5.50</td>
<td>5</td>
<td>1.10</td>
<td>.994</td>
<td>.998</td>
<td>.023</td>
<td>.064</td>
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<tr>
<td>Sexual Abuse</td>
<td>6.29</td>
<td>7</td>
<td>.99</td>
<td>1.008</td>
<td>1.000</td>
<td>.000</td>
<td>.105</td>
</tr>
<tr>
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<td>1.47</td>
<td>.969</td>
<td>.990</td>
<td>.049</td>
<td>.165</td>
</tr>
<tr>
<td>Emotional Neglect</td>
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<td>1.51</td>
<td>.972</td>
<td>.989</td>
<td>.050</td>
<td>.127</td>
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</tbody>
</table>

Note. $\chi^2$ = chi-squared value; df = degrees of freedom; NNFI = non-normed fit index; CFI = comparative fit index; RMSEA = root-mean square error of approximation; SRMR = standardized root-mean-square residual.

As well, indirect path coefficients (i.e. paths from one variable to another through a third variable) for mediated relationships were calculated by multiplying the contributing path coefficients. The results suggested that more severely maltreated individuals were likely to be more socially avoidant, which was partly attributable to their
difficulties with feelings, that is, alexithymia ($\beta = .160$, $z = 4.374$, $p < .01$), and less satisfied with their social support, which was partly attributable to their difficulties with feelings, avoidance of others, and limited social support ($\beta = -.197$, $z = -5.02$, $p < .01$). Those who had greater difficulties with their feelings tended to be less

![Diagram](image)

**Figure 3.** Model path coefficients for total childhood maltreatment. Error terms appear in parentheses. Shaded box indicates exogenous variable.

**p < .01.**
satisfied with their social support, which was partly attributable to their avoidance of others ($\beta = -0.093, z = -2.89, p < .01$). Additionally, given that the solution was standardized, path coefficients can be compared to determine which of several preceding variables best predicts a later variable (i.e. which path coefficient is larger). The path coefficient between dissatisfaction with social support and childhood maltreatment was stronger than that between dissatisfaction with social support and either alexithymia, social avoidance, or the extent of social support. Thus, comparisons indicated that the severity of childhood maltreatment was a better predictor of dissatisfaction with social support than were difficulties with feelings, social avoidance, or the extent of social support.

In sum, results supported the hypothesis that childhood maltreatment is linked to difficulties identifying and describing feelings, social anxiety and avoidance, limited social support, and dissatisfaction with social support. The results also supported all of the hypothesized mechanisms through which the variables in the model were related to each other (i.e. the mediators of the relationships). One exception was that, while more severely maltreated people tended to have less social support, their difficulties with feelings and avoidance of others did not account for the relationship. In this model, greater difficulties identifying and expressing emotions and social anxiety did not predict less social support. Common across all models was that there was no association between alexithymia and limited social support, but those who had less social support tended to be less satisfied with the support.

In terms of childhood physical and emotional abuse, the path loadings and error variances for this model are presented in Figure 4. Individuals who were more severely
physically and emotionally abused during childhood were more likely to have greater difficulties with feelings, greater social avoidance, less social support, less satisfaction with their social support, and to have received therapy. Furthermore, (a) individuals who had more difficulties with feelings were likely to be more socially avoidant and less satisfied with their social support, (b) more socially avoidant individuals were likely to

\[ \text{ALEXITHYMIA} \leftrightarrow \begin{cases} \text{SOCIAL AVOIDANCE} \\ \text{SATISFACTION WITH SOCIAL SUPPORT} \end{cases} \]

**Figure 4.** Model path coefficients for childhood physical and emotional abuse. Error terms appear in parentheses. Shaded box indicates exogenous variable.

*\( p < .05. \quad **p < .01. \)
have less social support and be less satisfied with their social support, and (c) people with
less social support were also likely to be less satisfied with the support.

With respect to indirect relationships, people who were more severely physically
and emotionally abused tended to be more socially avoidant, which was partly
attributable to their difficulties with feelings ($\beta = .144, z = 3.91, p < .01$), have less social
support, which was partly attributable to their difficulties with feelings and avoidance of
others ($\beta = -.066, z = -2.14, p < .05$), and be less satisfied with their social support, which
was partly attributable to their difficulties with feelings, avoidance of others, and limited
social support ($\beta = -.183, z = -4.78, p < .01$). Those who had greater difficulties with
feelings tended to have less social support only if they avoided others ($\beta = -.079, z = -
2.21, p < .05$); they also tended to be less satisfied with their social support, which was
partly attributable to their avoidance of others and limited social support ($\beta = -.117, z = -
3.34, p < .01$). In addition, comparisons indicated that severity of physical and emotional
abuse was a better predictor of dissatisfaction with social support than were alexithymia,
social avoidance, or the extent of social support. This was similar to the predictions in
the total maltreatment model.

In sum, results supported the hypothesis that physical and emotional abuse is
linked to difficulties identifying and communicating feelings, social anxiety and
avoidance, limited social support, and dissatisfaction with social support. Moreover, the
results supported most of the hypothesized mechanisms through which the variables were
related. Although not predicted, limited social support partly accounted for the
relationship between more severe physical and emotional abuse and less satisfaction with
social support.
In terms of childhood sexual abuse, Figure 5 presents the path loadings and error variances for this model. The results indicated that individuals who were more severely sexually abused were more likely to have greater difficulties identifying and communicating feelings and to have received therapy. Additionally, (a) individuals who had more difficulties with feelings were likely to be more socially avoidant and less satisfied with their social support, (b) more socially avoidant individuals were likely to have less social support and be less satisfied with their social support, (c) people with less social support were also likely to be less satisfied with the support, and (d) those who were less satisfied with their social support were more likely to have received therapy.

With respect to indirect relationships, people who were more severely sexually abused tended to be more socially avoidant only if they had difficulties with feelings ($\beta = .144$, $z = 3.58$, $p < .01$), have less social support only if they had difficulty with feelings and avoided others ($\beta = -.032$, $z = -2.52$, $p < .05$), and be less satisfied with social support only if they had difficulties with feelings, avoided others, and had limited social support ($\beta = -.113$, $z = -3.43$, $p < .01$). In addition, individuals who were more severely sexually abused were more likely to have received therapy, which was partly attributable to their difficulties with feelings, avoidance of others, limited social support, and dissatisfaction with social support ($\beta = .018$, $z = 2.05$, $p < .05$). Those who had more difficulties with feelings tended to have less social support only if they avoided others ($\beta = -.122$, $z = -3.10$, $p < .01$) and to have received therapy only if they avoided others, had limited social support, and were dissatisfied with the support ($\beta = .069$, $z = 2.28$, $p < .05$); they also tended to be less satisfied with their social support, which was partly attributable to their avoidance of others and limited social support ($\beta = -.199$, $z = -4.54$, $p < .01$). Those who
Figure 5. Model path coefficients for childhood sexual abuse. Error terms appear in parentheses. Shaded box indicates exogenous variable.

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

were more socially avoidant tended to be less satisfied with their social support, which was partly attributable to their limited social support (β = -.055, z = -2.57, p < .05). More socially avoidant people were also more likely to have received therapy only if they had little support and were dissatisfied with the support (β = .059, z = 2.19, p < .05). Lastly, those who had less social support tended to have received therapy only if they were dissatisfied with the support (β = -.039, z = -2.08, p < .05). With respect to predictors, the extent of social avoidance was a better predictor of dissatisfaction with social support.
than were sexual abuse, alexithymia, or the extent of social support. In addition, severity of sexual abuse predicted therapy better than did dissatisfaction with social support.

In summary, the results supported the hypothesis that sexual abuse is linked to difficulties identifying and communicating emotions. Contrary to hypotheses, sexual abuse did not directly predict social avoidance, limited social support, or dissatisfaction with social support. However, the results supported all of the hypothesized mechanisms through which the variables were related. Additionally, although not predicted, the tendency for more severely sexually abused individuals to have received therapy was partly accounted for by their dissatisfaction with social support.

In terms of physical neglect, the path loadings and error variances for this model are presented in Figure 6. This model included the same paths as the physical and emotional abuse model. However, the mediated relationships differed slightly. People who were more severely physically neglected tended to be more socially avoidant, which was partly attributable to their difficulties with feelings ($\beta = .124, z = 3.40, p < .01$), and less satisfied with their social support, which was partly attributable to their difficulties with feelings, avoidance of others, and limited social support ($\beta = -.190, z = -4.81, p < .01$). Those who had more difficulties with their feelings tended to have less social support only if they avoided others ($\beta = -.070, z = -1.97, p < .05$); they also tended to be less satisfied with their social support, which was partly attributable to their avoidance of others and limited social support ($\beta = -.129, z = -3.50, p < .01$). In the physical and emotional abuse model, but not the physical neglect model, the tendency for more severely maltreated individuals to have less social support was partly attributable to their avoidance of others. These findings suggest that social avoidance may help explain the
Figure 6. Model path coefficients for childhood physical neglect. Error terms appear in parentheses. Shaded box indicates exogenous variable.

*p < .05. **p < .01.

consequences of physical and emotional abuse better than the consequences of physical neglect. Furthermore, additional variables must be considered and entered into the model in order to better understand the effects of physical neglect. Additionally, severity of physical neglect was a better predictor of satisfaction with social support than were alexithymia, social avoidance, and the extent of social support. This was similar to the
predictions in the physical and emotional abuse model.

In sum, the results supported the hypothesis that physical neglect is linked to difficulties identifying and expressing feelings, social anxiety and avoidance, limited social support, and dissatisfaction with support. The results also supported most of the hypothesized mechanisms through which the variables were related. However, the variables in the model were unable to account for the association between more severe physical neglect and less social support.

In terms of emotional neglect, the path loadings and error variances for this model are presented in Figure 7. This model included the same paths as the total childhood maltreatment model. Furthermore, the same mediated relationships were significant. Comparable to the predictions in the total maltreatment model, severity of emotional neglect was a better predictor of satisfaction with social support than were alexithymia, social avoidance, and the extent of social support. In summary, the results supported the hypotheses that emotional neglect is associated with difficulties identifying and communicating emotions, social anxiety and avoidance, limited social support, and dissatisfaction with support. Additionally, the results supported all the hypothesized mechanisms through which the variables were related. One exception was that, while people who were more severely emotionally neglected tended to have less social support, their difficulties with feelings and avoidance of others did not account for this relationship.
Figure 7. Model path coefficients for childhood emotional neglect. Error terms appear in parentheses. Shaded box indicates exogenous variable.

*p < .05. **p < .01.
Discussion

Overview

This study examined the relationships among childhood maltreatment, alexithymia, interpersonal problems in the realm of social avoidance, and social support in a sample of undergraduate students. The results of the present study supported the intercorrelations among the variables in the model. Path models depicting possible consequences of different types of maltreatment were evaluated and modified. The model for physical and emotional abuse fit the data extremely well, while the models for total maltreatment, sexual abuse, physical neglect, and emotional neglect fit the data relatively well.

Strengths of the Study

Strengths of this study include the use of a continuous measure of maltreatment. Such continuous measures provide information about a variety of maltreatment experiences that vary in frequency and severity. In contrast, measures that employ dichotomous categorizations (e.g. abused vs. not abused) are dependent upon researcher definitions of maltreatment and are often limited to DSM-IV symptoms or diagnoses. As well, this study used a random sample of undergraduate students, as opposed to a purely clinical sample. Thus, the present findings can be better generalized to the general population than studies that rely on clinically-referred individuals. Moreover, the study statistically accounted for the effects of age and family income. Although culture and illness were not correlated with the variables in the model, the study considered these possible covariates. Furthermore, the study utilized a culturally diverse set of participants from a variety of age ranges and academic backgrounds.
Results of the present study can shed light onto past research and make recommendations for future research. For instance, Kendall-Tackett, Williams, and Finkelhor (1993) reviewed a variety of childhood sexual abuse research. Most of the reviewed studies compared abused to non-abused children and young adults with respect to symptoms such as posttraumatic stress disorder and other anxieties, depression, self-esteem, internalizing and externalizing behaviours, self-destructive behaviours, aggression, neuroses, hyperactivity, learning problems, and sexualized behaviour. They found that one third of sexually abused children were symptom free. However, the reviewed studies did not examine alexithymia, social avoidance, the extent of social support, or satisfaction with social support. Thus, while the children may have been free of the symptoms considered in the reviewed research, the present findings suggested that those who were severely sexually abused are likely to have more difficulties identifying and expressing their feelings, which, in turn, increases their likelihood of becoming more socially anxious and avoidant, and less satisfied with their social support. In other words, many maltreated children are not problem free.

Another strength of the present study is highlighted by Kendall-Tackett et al.'s (1993) suggestion that research investigate not only possible consequences or correlates of maltreatment, but also the mechanisms through which they arise. Furthermore, Manly et al. (1994) advocated the study of complex models and examination of direct and indirect relationships associated with maltreatment. The present study considered a complex model and investigated direct and indirect relationships in order to theorize about possible mechanisms through which childhood maltreatment may result in poor interpersonal functioning and social well-being. Findings of this study suggest that
severely maltreated people’s problems with interpersonal functioning and social support can be attributed to their difficulties with emotions, that is, limited capacities for emotional identification and communication (alexithymia).

**Maltreatment Models and Clinical Implications**

In terms of the mediated relationships, the majority of the specific hypothesized relationships were supported in each of the models. Generally, people who were more severely maltreated during childhood tended to have greater fear and avoidance of others; difficulties identifying and expressing feelings partly accounted for this association. Moreover, for these individuals, being more socially avoidant was associated with an increased likelihood of being dissatisfied with social support. In addition, several relationships were unique to particular types of maltreatment. For example, people who were more severely sexually or physically and emotionally abused were likely to have more difficulties with emotions and be more socially avoidant, both of which partly accounted for an increased likelihood of having limited social support. As well, people who were more severely sexually abused, physically and emotionally abused, or physically neglected were more likely to have problems with emotions which was, in turn, associated with social avoidance. For these individuals, social avoidance was associated with an increased likelihood of having limited social support. The hypothesized mediated relationships concerning total maltreatment and emotional neglect were unsupported because social avoidance failed to predict the extent of social support.

The present study suggested that, in the context of total childhood maltreatment and emotional neglect, people’s social anxiety and avoidance did not affect the extent of their social support networks. One possible explanation is that while socially avoidant
individuals fear embarrassment and feel lonely in social situations (Darvill et al., 1992; Neto, 1992), they may not avoid social contact when they are in dire need of support. In other words, when they are feeling sufficiently distressed, they may be able to put their fears and discomfort aside and accept support from others. Moreover, socially avoidant individuals may feel particularly uncomfortable in groups of people, but more comfortable when talking with one individual, as might occur when receiving social support. However, it is important to note that the significance of the relationship between social avoidance and the extent of social support varied across models. A larger sample with greater power may be required to clarify the association between these variables and why it was significant in the context of some, but not all, types of maltreatment.

There are several clinical implications of the overall findings of the present study. First, clinicians dealing with clients who experienced childhood maltreatment should be aware that, according to the severity of the maltreatment, the clients may be likely to have difficulties identifying and communicating feelings and problems with interpersonal functioning. Clinicians must consider the mechanisms through which these problems likely arose in order to determine the best way to help the clients resolve them. For example, in helping severely maltreated individuals who are socially anxious, the clinician should consider the clients' emotional awareness and capacities, and if impaired, help them better identify and express their feelings.

There are a number of modes of therapy and interventions that have been recommended for use with clients who have limited emotional awareness. For example, Paivio and Laurent (2000) presented emotion focused therapy (EFT) as an effective treatment for people who have experienced interpersonal traumas. Dialectical behaviour
therapy has been used to treat affect dysregulation in individuals with borderline personality disorder (Linehan, 1993). This model of therapy helps clients discern and accept emotional experiences, recognize how their problematic emotional responses tend to arise, and how to cope with their intense negative emotions. Similarly, Fosha (2001) advocated for the use of accelerated experiential-dynamic psychotherapy, which emphasizes emotional communication and fully experiencing deep emotions in order to help clients deal with painful affective experiences and regulate their affect. The number of therapies currently heralded as treatments for emotional awareness and regulation problems attests not only to the prevalence of such problems, but also to the importance of these problems in achieving and maintaining good mental health.

Clinicians should also be sensitive to the fact that maltreated clients are likely dissatisfied with their social support, and that it may be useful to address this issue in therapy. For these individuals, clinicians should consider the extent of their social support networks. If the networks are large, the clinicians should evaluate the clients’ capacities to connect with others and to identify and express feelings. Emotional awareness and emotional communication play crucial roles in interpersonal connections and intimacy; thus, they influence clients’ abilities to appreciate and benefit from any available social support.

Findings that Contrasted with Hypotheses

Findings that did not support the hypotheses also warrant discussion. For instance, alexithymia did not directly predict the extent of social support in any of the models. While alexithymia has been associated with limited social support in other studies (e.g. Fukunishi, et al., 1997; Fukunishi & Rahe, 1995; Lumley et al., 1996), this
relationship did not exist in the context of childhood maltreatment. Because of the shared variance between maltreatment and alexithymia, the remaining variance in alexithymia was not related to the extent of social support. Thus, research concerning the link between alexithymia and the extent of social support should not ignore the potential influence of childhood maltreatment.

The relationship between alexithymia and the extent of social support may have been unsupported because of the way that the Social Support Questionnaire (SSQ) defined the construct of social support. Scales such as the SSQ focus on awareness of receiving support. Other scales focus on actively engaging with others and making personal contributions to the supportive interactions. It may be that difficulties identifying and communicating feelings do not interfere with the extent of support received, but do interfere with the ability to actively participate in supportive interactions. For example, Lumley et al. (1996) used a measure of social support that emphasized both giving and receiving attention, as well as speaking to others about personal feelings. They found that alexithymia predicted less social support. These types of interactions would likely be difficult for individuals who have trouble understanding and expressing their feelings. Similarly, Fukunishi and Rahe (1995) and Fukunishi et al. (1997) found that alexithymia was related to limited social support. These researchers used a scale of social support that emphasized not only the existence of, but also the utilization of social support. This utilization implied receiving support and taking part in the support. In contrast, most of the SSQ items used in the present study relate to the individual being able to count on others to provide support and feeling that others appreciate the individual. This would likely be less affected by the individual’s emotional awareness.
and capacities.

Although alexithymia did not predict the extent of social support in the present study, it did predict dissatisfaction with social support. Thus, although some individuals with poor emotional communication may have had adequate social support networks, they were nevertheless dissatisfied with them. Explanations for this finding may relate to the providers or receivers of support. First, highly alexithymic people may be drawn towards and socially supported by other highly alexithymic individuals, who interact on a less affective and more externally-oriented level. Thus, while there are people who can be counted on to ‘be there’ and try to provide support, the support providers may be unable to operate at an affective level and satisfy the individual’s need for emotional intimacy. Second, the support providers may, indeed, have the capacities for emotional intimacy, but the alexithymic individuals in need of support may be unable to emotionally connect with their own feelings and with those of others. Therefore, they would be less satisfied with the available support. Overall, people were more likely to be dissatisfied with their social support if they had been severely physically or emotionally maltreated, were highly alexithymic, were highly socially avoidant, and had less social support. The results of the present study suggest that dissatisfaction with social support relates more to the individual’s experiences of severe maltreatment and limited capacity for emotional understanding and intimacy than to size of the social support network.

Overall, the findings are consistent with the notion that the extent of the support and satisfaction with the support are distinct variables because they are differentially related to the variables in the model. Alexithymia was associated with satisfaction with social support, but not the extent of the support network. Social avoidance was related to
satisfaction with social support across models, and related to the extent of social support in only some models. Furthermore, in the context of sexual abuse, satisfaction with social support, but not the extent of the support network, was associated with receiving therapy. Nevertheless, these two aspects of social support were significantly correlated. People who had less social support were less likely to be satisfied with their support. Researchers interested in social support must consider both aspects of social support, as well as the relationship between them.

**Comparisons between the Different Types of Maltreatment**

Overall, the models for the different types of maltreatment are quite similar. This suggests that different types of maltreatment may have similar negative consequences for social well-being and that the same mechanisms operate across different types of maltreatment. The similarities may arise because children often experience several different types of maltreatment in the same family. The correlations between the different types of maltreatment in the present study (see Table 2) support this hypothesis. Crittenden et al.'s (1994) investigation into the effects of maltreatment also suggested that all types of maltreatment result in disturbed socioemotional development. Thus, different types of maltreatment were associated with similar affect regulation problems, which were associated with similar interpersonal and social difficulties. Clinicians and child protection workers must recognize that even though physically, sexually, and emotionally maltreated children may differ in their physical appearance and scars, they are all at great risk for developing inner struggles and poor social well-being.

Although the models are similar, there are also some significant differences between them, particularly between sexual abuse and physical and emotional abuse.
First, although severity of physical and emotional abuse directly predicted limited social support and dissatisfaction with this support, severity of sexual abuse did not directly predict either social support variable. However, people who were more severely sexually abused were likely to have less social support if they were alexithymic and socially avoidant, and likely to be less satisfied with their social support if they were alexithymic, socially avoidant, and had less social support.

Second, people who were more severely sexually abused were more likely to have received therapy and this was partly accounted for by difficulties identifying and expressing feelings, avoidance of others, smaller social support networks, and less satisfaction with social support. In contrast, in the context of physical and emotional abuse, only the severity of the abuse influenced the likelihood of receiving therapy. Statistically, this difference may have occurred because more variance was accounted for in the sexual abuse model than in the physical and emotion abuse model. Thus, paths with smaller magnitude could achieve significance in the sexual abuse model. Conceptually, this difference may reflect that, in the context of sexual abuse, variables in the model contributed to an individual’s desire and decision to seek therapy, while in the context of physical and emotional abuse, variables not assessed in the present study contributed to seeking therapy. One such variable might be depression. For example, Zucker (2000) found that, among students at a university counseling centre, reports of childhood emotional abuse were associated with reports of current depression.

A third difference between the models related to the mediation of relationships. In the context of sexual abuse, people who were highly socially avoidant tended to be less satisfied with their social support, which was partly accounted for by limited social
support. In contrast, in the context of physical and emotional abuse, the mechanism of limited social support did not account for the relationship between social avoidance and dissatisfaction with social support.

Finally, in the corresponding model, physical and emotional abuse was the best predictor of dissatisfaction with support whereas, in the context of sexual abuse, social avoidance best predicted satisfaction with social support. These findings suggest that the tendency for more severely sexually abused individuals to be less satisfied with their social support is attributable to several intermediary factors, particularly their social anxiety and avoidance. In contrast, the tendency for severely physically and emotionally abused people to be less satisfied with their social support is partly attributable to the actual abuse, as well as factors not assessed in the present study.

**Limitations of the Study**

Limitations of the study must be acknowledged. For instance, retrospective self-reports of childhood maltreatment may underestimate the extent of maltreatment given that maltreated individuals may not feel comfortable disclosing the abuse or may be unable to recall the maltreatment or the extent of the maltreatment. However, such reports may also overestimate the extent of maltreatment if people intentionally or unintentionally inflate the estimated frequency of abusive situations. However, Brewin, Andrews, and Gotlib (1993) noted that claims of retrospective reports having low reliability are exaggerations and that there is little reason to assume that psychiatric status is associated with less reliable or valid memories of early experiences. Similarly, Paivio (2001) found that reports of maltreatment on the Childhood Trauma Questionnaire were stable from pre- to post-therapy, adding support to the position that such retrospective
Self-reports are stable and accurate.

Additional limitations with respect to measures concern the present study’s reliance on single measures of each construct. Errors in measurement are more likely to inflate or attenuate findings that rely on manifest, and not latent, constructs (Griffen & Bartholomew, 1994). Furthermore, despite the use of structural equation modeling, as with any cross-sectional study, causation cannot be inferred. In addition, because each model was modified according to several statistical tests, there is a danger of overfitting. The good fit between the models and data may be specific to the present sample. Therefore, replication is required to strengthen support for the models presented.

As well, the three components of alexithymia have been differentially associated with aspects of childhood abuse and later psychological difficulties. For example, Berenbaum (1996) found that the ability to identify one’s emotions, but not to communicate emotions, was strongly associated with a history of childhood abuse and with current features of a personality disorder. According to Suslow (1998), difficulties communicating emotions, but not externally oriented thinking, may be associated with social anxiety. Because of its preliminary nature, the present study employed only the global construct of alexithymia. Furthermore, there is little information from which to make specific predictions about the different dimensions of alexithymia. Future research should explore the differential effects of the alexithymia dimensions.

It is also important to note that variables not examined in the present study may help clinicians and researchers learn more about the relationship between childhood maltreatment and poor interpersonal functioning and social well-being. Adding variables to the models in the present study, especially those that fit the data less well, (total
maltreatment, sexual abuse, physical neglect, and emotional neglect) may provide a better fit to the data. Several researchers (e.g. van der Kolk, Perry, & Herman, 1991; van der Kolk & Fisler, 1994) proposed that secure attachments provide an environment in which children can learn how to regulate affect and respond to stressful experiences. One study found that a single secure attachment could protect a child or adult from developing psychopathology in response to childhood sexual abuse (Finkelhor & Browne, 1985). Therefore, childhood social support at the time of childhood maltreatment may moderate the relationships between childhood maltreatment and both alexithymia and social avoidance. As another example, depression has been associated with childhood maltreatment, alexithymia, and social avoidance (Alden & Phillips, 1990; Beitchman et al., 1992; Loas, Dhee-Perot, Gayant, & Fremaux, 1996), and thus, the presence of depression could moderate one or several of the relationships in these models. Future research on childhood maltreatment that considers the role of depression could also compare dissatisfaction with social support to reports of depression. Without such comparisons, one cannot conclude that dissatisfaction with social support does not reflect general dissatisfaction or unhappiness. Additionally, because symptoms of anxiety, including PTSD symptoms, have been correlated with both childhood sexual abuse and alexithymia (Beitchman et al., 1992; Fletcher, 1996), anxiety may play a role in the relationship between childhood maltreatment and alexithymia. Finally, previous research has found that difficult temperament predicted childhood maltreatment (Bagley, & Mallick, 2000), and that temperamental traits, combined with specific early childhood experiences, may predispose individuals to subsequent anxiety symptoms (Rosenbaum et al., 1988). Therefore, early temperament should also be taken into consideration when
when studying the relationship between childhood maltreatment and social well-being.

The present study is also unable to conclude that alexithymia, social avoidance and problems with social support are associated with childhood maltreatment, per se, and not a related aspect of childhood or disturbed family environment. Berenbaum (1996), Berenbaum and James (1994), and Lumley et al. (1996), for instance, suggested that problematic social experiences, poor family communication, and a generally disturbed family environment could result in alexithymia and disturbed personality features.

However, Lipovsky, Sanders, and Murphy (1989) found that non-abused siblings raised in the same dysfunctional families as abused children demonstrated fewer symptoms than their abused siblings. Overall, these studies argued that while general aspects of the family environment are associated with alexithymia, there are specific traumatic processes involved in maltreatment that are not associated with general disturbed family environments.

**Directions for Future Research**

Future research should address the effects of gender in order to determine whether the same models of childhood maltreatment are equally applicable to males and females. This was not possible given the small proportion of males in the study. Although literature that has reported differential effects of maltreatment in males and females is scarce (Kendall-Tackett et al., 1993), sex of the victim, as well as of the perpetrator of the maltreatment, should be explored in future studies.

More research is also needed to understand the finding that sexual abuse was associated with being overly competitive and controlling, whereas physical and emotional abuse was associated with being overly competitive and exploitable.
Moreover, it is interesting to note that neither physical nor emotional neglect were associated with these types of interpersonal problems. Although the present study focused on social avoidance, research concerning the relationships between different types of maltreatment and different types of interpersonal problems may contribute to the understanding of the unique effects of different types of maltreatment.

The next step in this research is to further clarify the mechanisms through which the variables in the model are related. This involves additional statistical analyses to determine whether one, two, or three of the potential mediators of various relationships in the models are required. For example, further research could help determine whether the relationship between sexual abuse and dissatisfaction with social support is mediated by alexithymia alone, both alexithymia and social avoidance, or all three—alexithymia, social avoidance, and limited social support. Research must also consider other mediators of the relationship between maltreatment and poor social well-being.

**Summary and Conclusions**

The present study suggested some of the ways that childhood maltreatment is related to poor interpersonal functioning and social well-being. People who were more severely maltreated during childhood appear to be at increased risk for developing social anxiety, limited social support, and dissatisfaction with the support they receive. This risk seems to be partly attributable to affect regulation difficulties, that is, difficulties identifying and expressing emotions. Maltreatment appears to result in intense negative affect. These feelings are difficult to manage. As a result, maltreated individuals disconnect from their emotions, from emotional communication, and from other people. Armed with this knowledge, mental health professionals should treat recently maltreated
children by helping them address and process their emotional experiences in an attempt to interrupt the tendency to avoid affective experiences. These professionals can help older individuals who have histories of abuse by exploring and improving their affective awareness and regulation, as well as their interpersonal style. Finally, future researchers can incorporate additional variables into the models assessed in the present study in order to build on the models and gain a better understanding of the consequences of childhood maltreatment.
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Appendix A

Consent Form for Psychology Students

Researcher: Andrea Turner, BSc.
Department of Psychology, University of Windsor

Supervisor: Sandra Paivio, PhD.
Department of Psychology, University of Windsor

The purpose of this study is to examine the relationship between particular childhood experiences and current processes.

If you choose to participate, you will be asked to complete a series of questionnaires, which will take approximately forty-five minutes to complete. For your participation, you will receive one bonus credit, which will count towards your grade in your psychology class.

If you choose to participate, your name will not appear on any of the questionnaires. Your confidentiality will be ensured in that your consent form will be kept separate from your questionnaires. The results of the study will be analyzed and reported as group statistics. They may be published at some point in the future.

You are free to discontinue participating in the study at any point without negative consequences. Feel free to ask questions at any point throughout the study.

If you wish to obtain more information about the study or a summary of the results, you can leave a note in my mailbox in the Department of Psychology and I will contact you once the study has been completed.

The Department of Psychology Ethics Committee has approved this study. If you have any concerns regarding the ethics of this study, you may contact the Chairperson of the Ethics Committee, Dr. Stewart Page (253-3000, extension 2243).

I have read and understand this agreement, and therefore consent and agree to participate in this study.

_____________________________  ___________________________  ____________
Print Name                      Signature                      Date
Consent Form for Non-Psychology Students

Researcher: Andrea Turner, BSc.
Department of Psychology, University of Windsor

Supervisor: Sandra Paivio, PhD.
Department of Psychology, University of Windsor

The purpose of this study is to examine the relationship between particular childhood experiences and current processes.

If you choose to participate, you will be asked to complete a series of questionnaires, which will take approximately forty-five minutes to complete.

If you choose to participate, your name will not appear on any of the questionnaires. Your confidentiality will be ensured in that your consent form will be kept separate from your questionnaires. The results of the study will be analyzed and reported as group statistics. They may be published at some point in the future.

You are free to discontinue participating in the study at any point without negative consequences. Feel free to ask questions at any point throughout the study.

If you wish to obtain more information about the study or a summary of the results, you can leave a note in my mailbox in the Department of Psychology and I will contact you once the study has been completed.

The Department of Psychology Ethics Committee has approved this study. If you have any concerns regarding the ethics of this study, you may contact the Chairperson of the Ethics Committee, Dr. Stewart Page (253-3000, extension 2243).

I have read and understand this agreement, and therefore consent and agree to participate in this study.

__________________________  ______________________  ______________
Print Name                   Signature                  Date
Appendix B
Demographic Questionnaire

Age: 

Gender:  □ Male  □ Female
Marital Status:  □ Single  □ Engaged  □ Married  □ Separated  □ Divorced  □ Widowed
Number of Children: 

What ethnic group do you most identify with?
□ European - please specify: 
□ Afro-Caribbean - please specify: 
□ Asian - please specify: 
□ North-American
□ East Indian
□ Aboriginal
□ Hispanic
□ Other (please specify) 

Have you ever received personal counselling or psychotherapy from a professional for personal problems or distress?  □ No  □ Yes

Do you currently have any serious medical conditions or illnesses (e.g. diabetes, heart disease, kidney disease, cancer, etc.)?  □ No  □ Yes - please specify: 

Education:  Year in university: 
Student status:  □ part-time student  □ full-time student
Other post-secondary education (please specify): 

Employment Status:  □ not currently employed
□ employed
Please specify:  □ part-time  □ full time
position: 

Estimated Family Income:  $

Mother's Education (highest grade or degree): 
Mother's Occupation: 

Father's Education (highest grade or degree): 
Father's Occupation: 
PSYCHOLOGICAL SERVICES CENTRE

The Psychological Services Centre is a training facility for the University's Doctoral Programme in Clinical Psychology. We offer assistance to University of Windsor students/staff, and facilitate in immediate distress and to those whose difficulties are of longer standing. We also seek to promote individual growth and personal enrichment.

Although each Centre client seeks help for his or her own personal reasons, some of the most frequent problems in living which lead people to seek out our services include:

- depression
- suicidal feelings
- anxiety
- stress reactions
- personal trauma
- eating disorders
- addictions
- bereavement
- relationship problems
- interpersonal problems
- family problems
- sexual difficulties
- gay/lesbian issues
- separation/divorce
- physical/sexual abuse
- loneliness/isolation
- cultural issues
- anger management

APPLICATION

To apply for assistance, please drop by our office at 326 Sunset. You will be asked to complete an information form and a brief assessment on the computer. These measures assist us in evaluating your difficulties and the type of assistance you need, and are usually completed prior to your initial consultation session.

INITIAL CONSULTATION

You will be scheduled for your first appointment as soon as staff availability permits. Some clients do not have problems that require psychotherapy, but do have immediate stress or the need to make an immediate decision. For such clients, this initial appointment might be helpful by itself. Others can use this initial visit to decide, together with their therapist, what further service would be most helpful.

We offer time-limited (8-12 sessions) and ongoing individual, group, couple, and family therapy. During some months of the year, formal psychological assessments are offered as well. Clients wanting other forms of assistance (e.g., crisis intervention, academic or legal counselling, study skills training, or medical assistance) are referred to appropriate services on campus or in the Windsor community.

CONFIDENTIALITY

In all cases, the identities of clients and their self-disclosures are handled in a strictly confidential manner according to the professional standards adopted by the College of Psychologists of Ontario.

PSYCHOTHERAPY

We all struggle with personal difficulties from time to time. Most of us try to resolve these problems in living by ourselves, or with the help of friends and family. When these approaches are not successful, professional help may be needed. Whether or not you seek psychotherapy will probably depend on what you want out of life. You can most likely live your life without professional help and make the best of your difficulties and limitations. It may be, however, that psychotherapy can help you feel better and cope more effectively.

Psychotherapy is a process in which, through open and honest communication with a professional, you can come to better understand your thoughts, feelings, and behaviours, and explore alternative ways of coping with your difficulties. This increasing awareness of, and appreciation for, yourself and for the choices available to you can help you live in a more effective and fulfilling manner.

We seek to offer psychotherapy most appropriate to each client's needs. For some clients time-limited work may be sufficient. For others, ongoing therapy may be more helpful. Individual psychotherapy is the most effective format for many people. Couple therapy, group therapy, or family therapy is the treatment of choice for others. Furthermore, the most appropriate approach may be experiential, cognitive-behavioural, or psychodynamic. Your therapist can discuss these options with you during your initial consultation session. Together, you can select the therapy most suited to your needs and preferences.

FEES

All services of the Centre are provided free of charge to students. Staff and faculty seen by a psychologist are charged modest fees. All clients, however, will be charged a $10.00 rebooking fee for failing to give 24-hours notice of cancelled appointments.

STAFF

Dr. Barry R. Taib, C.Psych.
Dr. Jim Porter, C.Psych.
Dr. Jane Brindley
Ann Dafoe
Sean Kidd, M.A.
Michael Oosterhoff, M.A.
Jennifer Ou, M.A.
Norm Thoma, M.A.

Director, Psychologist
Training Co-ordinator, Psychologist
Intake Co-ordinator
Office Administrator
Half-Time Psychology Intern
Half-Time Psychology Intern
Half-Time Psychology Intern
Half-Time Psychology Intern

Services are also provided by practicum students from the Graduate Clinical Psychology Programme under the supervision of psychologists.
Appendix D

A New Student Support Service
The Student Counselling Centre provides short-term and crisis counselling, topic-focused group discussions, and workshops on topics such as stress management and relaxation training, all geared to student needs. Some common concerns that students have are: adjusting to university academic and social life, relationship problems, depression, anxiety, family difficulties, and cultural concerns. If any personal issue is affecting your life and you would like some help, please consider visiting us at the Student Counselling Centre.

What Is Counselling?
Counselling is a helping relationship between you and a professional counsellor. It involves exploring your thoughts, feelings, behaviours and relationships when these become difficult for you to manage. Discussion of whatever is important to you can lead to personal growth, mature choices, and responsible action.

Confidentiality
All inquiries and discussions are private and confidential, within the applicable legal and professional guidelines of the College of Psychologists of Ontario. No information about you will be given to anyone without your written consent. Rare exceptions to this rule will be discussed when you make your first appointment.

Meeting With A Counsellor
Come to the second floor of the CAW Student Centre, Room 293 between 8:30 to 4:30 any weekday. You will be asked to complete a brief information sheet and we will try to give you a prompt appointment that fits into your schedule, often the same day. In your first meeting, you will have a chance to describe your concerns to your counsellor and clarify the goals that you would like counselling to achieve. Often, this session, with one or two follow-up meetings, will be all that is needed to assist you with a specific problem. If necessary, longer term counselling options may also be suggested and a referral made for you.

The Staff
Dr. Mary Anne Johnston (C. Psych.), Clinical Director
Ms. Elizabeth Hall, M.A., Counsellor
Ms. Pat Jolie, Office Manager
Appendix E

Childhood Trauma Questionnaire

Instructions
These questions ask about some of your experiences growing up as a child and a teenager. For each question, bubble in the number on the scantron sheet that best describes how you feel.

1 = never true  2 = rarely true  3 = sometimes true  4 = often true  5 = very often true

Although some of these questions are of a personal nature, please try to answer as honestly as you can. Your answers will be kept confidential.

1. When I was growing up, there was someone in my family whom I could talk to about my problems.

2. When I was growing up, people in my family criticized me.

3. When I was growing up, I didn’t have enough to eat.

4. When I was growing up, people in my family showed confidence in me, and encouraged me to achieve.

5. When I was growing up, someone in my family hit me or beat me.

6. When I was growing up, I felt that I better take care of myself, because no one else would.

7. When I was growing up, people in my family argued or fought with each other.

8. When I was growing up, I lived in a group home or in a foster home.

9. When I was growing up, I knew that there was someone to take care of me and protect me.

10. When I was growing up, there was someone outside of my family (like a teacher or a neighbour) who was like a parent to me.

11. When I was growing up, someone in my family yelled and screamed at me.

12. When I was growing up, I saw my mother or one of my brothers or sisters get hit or beaten.

13. When I was growing up, someone in my family made sure I went to school unless I was sick.
1 = never true   2 = rarely true   3 = sometimes true   4 = often true   5 = very often true

14. When I was growing up, people in my family called me things like “stupid” or “lazy” or “ugly”.

15. When I was growing up, I was living on the streets by the time I was a teenager or even younger.

16. When I was growing up, there was someone in my family whom I admired and wanted to be like.

17. When I was growing up, my parents were too drunk or high to take care of the family.

18. When I was growing up, I rarely got the love or attention that I needed.

19. When I was growing up, people in my family got into trouble with the police.

20. When I was growing up, there was someone in my family who helped me feel I was important or special.

21. When I was growing up, I had to protect myself from someone in my family by fighting, hiding, or running away.

22. When I was growing up, I felt like there was someone in my family who wanted me to be a success.

23. When I was growing up, I had to wear dirty clothes.

24. When I was growing up, I lived with different people at different times (like different relatives, or foster families).

25. When I was growing up, I believed that one of my brothers or sisters might have been molested.

26. When I was growing up, I felt that I was loved.

27. When I was growing up, the other kids that I hung out with seemed like my “real family”.

28. When I was growing up, I rarely had a father (or step-father) around the house.

29. When I was growing up, my parents tried to treat all of us children the same.

30. When I was growing up, I thought that my parents wished I had never been born.
1 = never true   2 = rarely true   3 = sometimes true   4 = often true   5 = very often true

31. When I was growing up, I got hit so hard by someone in my family that I had to see a doctor or go to the hospital.

32. When I was growing up, there was someone in my family who made sure that I stayed out of trouble.

33. When I was growing up, people in my family hit me so hard that it left me with bruises or marks.

34. When I was growing up, I belonged to a gang.

35. When I was growing up, the punishments I received seemed fair.

36. When I was growing up, I had sex with an adult or with someone who was a lot older than me (someone at least 5 years older than me).

37. When I was growing up, there was someone older than myself (like a teacher or a parent) who was a positive role model for me.

38. When I was growing up, I was punished with a belt, a board, or a cord (or some other hard object).

39. When I was growing up, there was nothing I wanted to change about my family.

40. When I was growing up, people in my family got high or drunk.

41. When I was growing up, people in my family looked out for each other.

42. When I was growing up, my parents were divorced or separated.

43. When I was growing up, people in my family said hurtful or insulting things to me.

44. When I was growing up, I believe that I was physically abused.

45. When I was growing up, people in my family tried to keep me away from bad influences.

46. When I was growing up, there was an adult or another responsible person around the house when I was home.

47. When I was growing up, I got hit or beaten so badly that it was noticed by someone like a teacher, neighbour, or doctor.
1 = never true   2 = rarely true   3 = sometimes true   4 = often true   5 = very often true

48. When I was growing up, people in my family seemed out of control.

49. When I was growing up, people in my family encouraged me to stay in school and get an education.

50. When I was growing up, I spent time out of the house and no one knew where I was.

51. When I was growing up, the punishments I received seemed cruel.

52. When I was growing up, I felt that someone in my family hated me.

53. When I was growing up, people in my family felt close to each other.

54. When I was growing up, someone tried to touch me in a sexual way, or tried to make me touch them.

55. When I was growing up, people in my family pushed me or shoved me.

56. When I was growing up, there was enough food in the house for everyone.

57. When I was growing up, everyone in my family had certain chores that they were supposed to do.

58. When I was growing up, someone threatened to hurt me to tell lies about me unless I did something sexual with them.

59. When I was growing up, I had the perfect childhood.

60. When I was growing up, I was frightened of being hurt by someone in my family.

61. When I was growing up, someone tried to make me do sexual things or watch sexual things.

62. When I was growing up, someone in my family believed in me.

63. When I was growing up, someone molested me.

64. When I was growing up, I believed that I was emotionally abused.

65. When I was growing up, people in my family didn’t seem to know or care what I was doing.

66. When I was growing up, there was someone to take me to the doctor if I needed it.
1 = never true   2 = rarely true   3 = sometimes true   4 = often true   5 = very often true

67. When I was growing up, I had the best family in the world.

68. When I was growing up, people in my family had secrets that I wasn't supposed to share with anyone.

69. When I was growing up, I believe that I was sexually abused.

70. When I was growing up, my family was a source of strength and support.
Appendix F

Inventory of Interpersonal Problems

Instructions
Here is a list of problems that people report in relating to other people. Please read the list below, and for each item, bubble in the number on the scantron sheet that describes how distressing that problem has been for you.

1 = not at all  2 = a little  3 = moderately  4 = quite a bit  5 = extremely

PART 1. The following are things you find hard to do with other people.

It is hard for me to:

1. trust other people
2. say "no" to other people
3. join in on groups
4. keep things private from other people
5. let other people know what I want
6. tell a person to stop bothering me
7. introduce myself to new people
8. confront people with problems that come up
9. be assertive with another person
10. make friends
11. express my admiration for another person
12. have someone dependent on me
13. disagree with other people
14. let other people know when I am angry
15. make a long-term commitment to another person
16. stick to my own point of view and not be swayed by other people
1 = not at all    2 = a little    3 = moderately    4 = quite a bit    5 = extremely

17. be another person’s boss
18. do what another person wants me to do
19. get along with people who have authority over me
20. be aggressive toward other people when the situation calls for it
21. compete against other people
22. make reasonable demands of other people
23. socialize with other people
24. get out of a relationship that I don’t want to be in
25. take charge of my own affairs without help from other people
26. show affection to other people
27. feel comfortable around other people
28. get along with other people
29. understand another person’s point of view
30. tell personal things to other people
31. believe that I am loveable to other people
32. express my feelings to other people directly
33. be firm when I need to be
34. experience a feeling of love for another person
35. be competitive when the situation calls for it
36. set limits on other people
37. be honest with other people
38. be supportive of another person’s goals in life
1 = not at all   2 = a little   3 = moderately   4 = quite a bit   5 = extremely

39. feel close to other people

40. really care about other people’s problems

41. argue with another person

42. relax and enjoy myself when I go out with other people

43. feel superior to another person

44. become sexually aroused toward the person I really care about

45. feel that I deserve another person’s affection

46. keep up my side of a friendship

47. spend time alone

48. give a gift to another person

49. have loving and angry feelings towards the same person

50. maintain a working relationship with someone I don’t like

51. set goals for myself without other people’s advice

52. accept another person’s authority over me

53. feel good about winning

54. ignore criticism from other people

55. feel like a separate person when I am in a relationship

56. allow myself to be more successful than other people

57. feel or act competent in my role as parent

58. let myself feel angry at somebody I like

59. respond sexually to another person

60. accept praise from another person
1 = not at all    2 = a little    3 = moderately    4 = quite a bit    5 = extremely

61. put somebody else's needs before my own
62. give credit to another person for doing something well
63. stay out of other people's business
64. take instructions from people who have authority over me
65. feel good about another person's happiness
66. get over the feelings of loss after a relationship has ended
67. ask other people to get together socially with me
68. feel angry at other people
69. give constructive criticism to another person
70. experience sexual satisfaction
71. open up and tell my feelings to another person
72. forgive another person after I've been angry
73. attend to my own welfare when somebody else is needy
74. be assertive without worrying about hurting the other person's feelings
75. be involved with another person without feeling trapped
76. do work for my own sake instead of for someone else's approval
77. be close to somebody without feeling that I'm betraying somebody else
78. be self-confident when I am with other people

PART 2. The following are things that you do too much.

79. I fight with other people too much.
80. I am too sensitive to criticism.
1 = not at all   2 = a little   3 = moderately   4 = quite a bit   5 = extremely

81. I feel too responsible for solving other people's problems.
82. I get irritated or annoyed too easily.
83. I am too easily persuaded by other people.
84. I want people to admire me too much.
85. I act like a child too much.
86. I am too dependent on other people.
87. I am too sensitive to rejection.
88. I open up to people too much.
89. I am too independent.
90. I am too aggressive toward other people.
91. I try to please other people too much.
92. I feel attacked by other people too much.
93. I feel guilty for what I have done.
94. I clown around too much.
95. I want to be noticed too much.
96. I criticize other people too much.
97. I trust other people too much.
98. I try to control other people too much.
99. I avoid other people too much.
100. I am affected by another person's moods too much.
101. I put other people's needs before my own too much.
102. I try to change other people too much.
1 = not at all   2 = a little   3 = moderately   4 = quite a bit   5 = extremely

103. I am too gullible.

104. I am overly generous to other people.

105. I am too afraid of other people.

106. I worry too much about other people's reactions to me.

107. I am too suspicious of other people's reactions to me.

108. I am influenced too much by another person's thoughts and feelings.

109. I compliment other people too much.

110. I worry too much about disappointing other people.

111. I manipulate other people too much to get what I want.

112. I lose my temper too easily.

113. I tell personal things to other people too much.

114. I blame myself too much for causing other people's problems.

115. I am too easily bothered by other people's demands of me.

116. I argue with other people too much.

117. I am too envious and jealous of other people.

118. I keep other people at a distance too much.

119. I worry too much about my family's reactions to me.

120. I let other people take advantage of me too much.

121. I too easily lose a sense of myself when I am around a strong-minded person.

122. I feel too guilty for what I have failed to do.

123. I feel competitive even when the situation does not call for it.

124. I feel embarrassed in front of other people too much.
1 = not at all  2 = a little  3 = moderately  4 = quite a bit  5 = extremely

125. I feel too anxious when I am involved with another person.

126. I am affected by another person’s misery too much.

127. I want to get revenge against people too much.
Appendix G

Toronto Alexithymia Scale-20

Instructions
Bubble in the number on the scantron that indicates how much you agree or disagree with each of the following statements.

- Bubble in 1 if you STRONGLY DISAGREE
- Bubble in 2 if you MODERATELY DISAGREE
- Bubble in 3 if you NEITHER DISAGREE NOR AGREE
- Bubble in 4 if you MODERATELY AGREE
- Bubble in 5 if you STRONGLY AGREE

1. I am often confused about what emotion I am feeling.
2. It is difficult for me to find the right words for my feelings.
3. I have physical sensations that even doctors don’t understand.
4. I am able to describe my feelings easily.
5. I prefer to analyze problems rather than just describe them.
6. When I am upset, I don’t know if I am sad, frightened, or angry.
7. I am often puzzled by sensations in my body.
8. I prefer to just let things happen rather than to understand why they turned out that way.
9. I have feelings that I can’t quite identify.
10. Being in touch with emotions is essential.
11. I find it hard to describe how I feel about people.
12. People tell me to describe my feelings more.
13. I don’t know what’s going on inside me.
14. I often don’t know why I am angry.
15. I prefer talking to people about their daily activities rather than their feelings.
16. I prefer to watch “light” entertainment shows rather than psychological dramas.
Bubble in 1 if you STRONGLY DISAGREE
Bubble in 2 if you MODERATELY DISAGREE
Bubble in 3 if you NEITHER DISAGREE NOR AGREE
Bubble in 4 if you MODERATELY AGREE
Bubble in 5 if you STRONGLY AGREE

17. It is difficult for me to reveal my innermost feelings, even to close friends.

18. I can feel close to someone, even in moments of silence.

19. I find examination of my feelings useful in solving personal problems.

20. Looking for hidden meanings in movies or plays distracts from their enjoyment.
Appendix H

Social Support Questionnaire

Instructions
The following questions ask about people in your environment who provide you with help or support. Each question has two parts. For the first part, list all the people you know, excluding yourself, whom you can count on for help or support in the manner described. Give the person's initials and their relationship to you (see example). Do not list more than one person next to each of the numbers beneath the question.

For the second part, circle how satisfied you are with the overall support you have.

If you have no support for a question, circle the words “No one,” but still rate your level of satisfaction. Do not list more than nine persons per question.

Please answer all questions as best you can. All your responses will be kept confidential.

Example:
Who do you know whom you can trust with information that could get you in trouble?

| No one | 1) R. N. (brother) | 4) T. N. (father) |
| 2) L. O. (friend) | 5) L. M. (employer) |
| 3) R. S. (friend) | 6) |

How satisfied?

6 – very satisfied 3 – a little satisfied 2 – fairly satisfied 1 – very dissatisfied
5 – fairly satisfied 4 – a little satisfied 3 – a little dissatisfied

1. Whom can you really count on to listen to you when you need to talk?

| No one | 1) | 4) |
| 2) | 5) |
| 3) | 6) |

How satisfied?

6 – very satisfied 5 – fairly satisfied 4 – a little satisfied 3 – a little dissatisfied 2 – fairly dissatisfied 1 – very dissatisfied
2. Whom could you really count on to help you if a person whom you thought was a good friend insulted you and told you that he/she didn’t want to see you again?

| No one  | 1) | 4) | 7) |
| 2)      | 5) | 8) |
| 3)      | 6) | 9) |

How satisfied?

| 6 – very satisfied | 5 – fairly satisfied | 4 – a little satisfied | 3 – a little dissatisfied | 2 – fairly dissatisfied | 1 – very dissatisfied |

3. Whose lives do you feel that you are an important part of?

| No one  | 1) | 4) | 7) |
| 2)      | 5) | 8) |
| 3)      | 6) | 9) |

How satisfied?

| 6 – very satisfied | 5 – fairly satisfied | 4 – a little satisfied | 3 – a little dissatisfied | 2 – fairly dissatisfied | 1 – very dissatisfied |

4. Whom do you feel would help you if you were married and had just separated from your spouse?

| No one  | 1) | 4) | 7) |
| 2)      | 5) | 8) |
| 3)      | 6) | 9) |

How satisfied?

| 6 – very satisfied | 5 – fairly satisfied | 4 – a little satisfied | 3 – a little dissatisfied | 2 – fairly dissatisfied | 1 – very dissatisfied |

5. Whom could you really count on to help you out in a crisis situation, even though they would have to go out of their way to do so?

| No one  | 1) | 4) | 7) |
| 2)      | 5) | 8) |
| 3)      | 6) | 9) |

How satisfied?

| 6 – very satisfied | 5 – fairly satisfied | 4 – a little satisfied | 3 – a little dissatisfied | 2 – fairly dissatisfied | 1 – very dissatisfied |
6. Whom can you talk with frankly, without having to watch what you say?

No one 1) 4) 7)  
2) 5) 8)  
3) 6) 9)  

How satisfied?
6 – very satisfied 5 – fairly satisfied 4 – a little satisfied 3 – a little dissatisfied 2 – fairly dissatisfied 1 – very dissatisfied

7. Who helps you feel that you truly have something positive to contribute to others?

No one 1) 4) 7)  
2) 5) 8)  
3) 6) 9)  

How satisfied?
6 – very satisfied 5 – fairly satisfied 4 – a little satisfied 3 – a little dissatisfied 2 – fairly dissatisfied 1 – very dissatisfied

8. Whom can you really count on to distract you from your worries when you feel under stress?

No one 1) 4) 7)  
2) 5) 8)  
3) 6) 9)  

How satisfied?
6 – very satisfied 5 – fairly satisfied 4 – a little satisfied 3 – a little dissatisfied 2 – fairly dissatisfied 1 – very dissatisfied

9. Whom can you really count on to be dependable when you need help?

No one 1) 4) 7)  
2) 5) 8)  
3) 6) 9)  

How satisfied?
6 – very satisfied 5 – fairly satisfied 4 – a little satisfied 3 – a little dissatisfied 2 – fairly dissatisfied 1 – very dissatisfied
10. Whom could you really count on to help you out if you had just been fired from your job or expelled from school? 

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How satisfied?

6 – very satisfied 5 – fairly satisfied 4 – a little satisfied 3 – a little dissatisfied 2 – fairly dissatisfied 1 – very dissatisfied

11. With whom can you totally be yourself? 

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How satisfied?

6 – very satisfied 5 – fairly satisfied 4 – a little satisfied 3 – a little dissatisfied 2 – fairly dissatisfied 1 – very dissatisfied

12. Whom do you feel really appreciates you as a person? 

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How satisfied?

6 – very satisfied 5 – fairly satisfied 4 – a little satisfied 3 – a little dissatisfied 2 – fairly dissatisfied 1 – very dissatisfied

13. Whom can you really count on to give you useful suggestions that help you to avoid making mistakes? 

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How satisfied?

6 – very satisfied 5 – fairly satisfied 4 – a little satisfied 3 – a little dissatisfied 2 – fairly dissatisfied 1 – very dissatisfied
14. Whom can you count on to listen openly and uncritically to your innermost feelings?

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**How satisfied?**

| 6 – very satisfied | 5 – fairly satisfied | 4 – a little satisfied | 3 – a little dissatisfied | 2 – fairly dissatisfied | 1 – very dissatisfied |

15. Who will comfort you when you need it by holding you in their arms?

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**How satisfied?**

| 6 – very satisfied | 5 – fairly satisfied | 4 – a little satisfied | 3 – a little dissatisfied | 2 – fairly dissatisfied | 1 – very dissatisfied |

16. Whom do you feel would help if a good friend or yours had been in a car accident and was hospitalized in serious condition?

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**How satisfied?**

| 6 – very satisfied | 5 – fairly satisfied | 4 – a little satisfied | 3 – a little dissatisfied | 2 – fairly dissatisfied | 1 – very dissatisfied |

17. Whom can you really count on to help you feel more relaxed when you are under pressure or tense?

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**How satisfied?**

| 6 – very satisfied | 5 – fairly satisfied | 4 – a little satisfied | 3 – a little dissatisfied | 2 – fairly dissatisfied | 1 – very dissatisfied |
18. Whom do you feel would help if a family member very close to you died?

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19. Who accepts you totally, including your worst and your best points?

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20. Whom can you really count on to care about you, regardless of what is happening to you?

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21. Whom can you really count on to listen to you when you are very angry at someone else?

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22. Whom can you really count on to tell you, in a thoughtful manner, when you need to improve in some way?

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How satisfied?

| 6 – very satisfied | 5 – fairly satisfied | 4 – a little satisfied | 3 – a little dissatisfied | 2 – fairly dissatisfied | 1 – very dissatisfied |

23. Whom can you really count on to help you feel better when you are feeling generally down-in-the-dumps?

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How satisfied?

| 6 – very satisfied | 5 – fairly satisfied | 4 – a little satisfied | 3 – a little dissatisfied | 2 – fairly dissatisfied | 1 – very dissatisfied |

24. Whom do you feel truly loves you deeply?

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How satisfied?

| 6 – very satisfied | 5 – fairly satisfied | 4 – a little satisfied | 3 – a little dissatisfied | 2 – fairly dissatisfied | 1 – very dissatisfied |

25. Whom can you count on to console you when you are very upset?

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How satisfied?

| 6 – very satisfied | 5 – fairly satisfied | 4 – a little satisfied | 3 – a little dissatisfied | 2 – fairly dissatisfied | 1 – very dissatisfied |
26. Whom can you really count on to support you in major decisions you make?

No one  1)  4)  7)  
2)  5)  8)  
3)  6)  9)  

How satisfied?
6 – very satisfied  5 – fairly satisfied  4 – a little satisfied  3 – a little dissatisfied  2 – fairly dissatisfied  1 – very dissatisfied

27. Whom can you really count on to help you feel better when you are very irritable, ready to get angry at almost anything?

No one  1)  4)  7)  
2)  5)  8)  
3)  6)  9)  

How satisfied?
6 – very satisfied  5 – fairly satisfied  4 – a little satisfied  3 – a little dissatisfied  2 – fairly dissatisfied  1 – very dissatisfied
VITA AUCTORIS

Andrea Turner was born in 1976 in Toronto, Ontario. She graduated from Earl Haig Secondary School in 1995. She then went to the University of Toronto where she obtained an Honours Bachelor of Science degree in psychology in 1999. She is currently in the Ph.D. programme in clinical child psychology at the University of Windsor.