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Contributions of Emotional Competence to the Link between Childhood
Maltreatment and Adult Attachment

By

Ashley E. Mlotek, M.A.

A Dissertation
Submitted to the Faculty of Graduate Studies
through the Department of Psychology
in Partial Fulfillment of the Requirements for
the Degree of Doctor of Philosophy
at the University of Windsor

Windsor, Ontario, Canada

2019

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ABSTRACT

The present study tested several alternative path models that assessed the mechanisms through which childhood maltreatment contributes to insecure adult attachment in a sample of undergraduate students ($N=244$). Variables in the models were assessed through an online protocol in which participants completed 6 self-report questionnaires and a writing task that was reliably rated on Depth of Experiencing using an observer rated measure, the Client Experiencing Scale (EXP; Klein, Mathieu, Gendlin, & Kiesler, 1969). Self-report measures included the Childhood Trauma Questionnaire (CTQ; Bernstein & Fink, 1998), History of Parenting Emotion Socialization- Mother Version (HOPES- MV; Hakim-Larson & Scott, 2013), Toronto Alexithymia Scale (TAS-20; Bagby, Parker, & Taylor, 1994; Bagby, Taylor, & Parker, 1994), Resolution Scale (RS; Singh, 1994), Relationship Scales Questionnaire (RSQ; Griffin & Bartholomew, 1994), and Relationship Questionnaire (RQ; Bartholomew & Horowitz, 1991). The model that had the closest fit to the data found that the severity of childhood maltreatment (abuse and neglect) covaried with the degree of maternal emotion socialization in childhood. Together, these predicted the severity of alexithymia which, in turn, predicted the degree of insecure adult attachment. These findings were consistent with expectations. Contrary to expectations, however, neither depth of experiencing (EXP) in written narratives nor degree of “unfinished business” (RS) played a significant role in the relationship between childhood maltreatment and adult attachment.

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CHAPTER I

Introduction

Objectives

The present study tested a path model (see Figure 1) that assessed the mechanisms through which childhood maltreatment contributes to insecure adult attachment in a sample of young adults. Figure 1 presents the predicted “Emotional Transmission of Insecure Attachment” model, whereby childhood abuse and neglect, paired with poor maternal emotion socialization in childhood, contribute to poor emotional competence, evidenced in poor awareness of emotional experience (alexithymia) and ability to reflect on the meaning of affective experience (depth of experiencing) concerning upsetting events, in adulthood. These impairments in emotional competence interfere with the ability to process and resolve interpersonal injuries at the hands of significant others important to development (including perpetrators of abuse and neglect and attachment figures), which, in turn, contribute to difficulties in intimate adult relationships (insecure adult attachment).

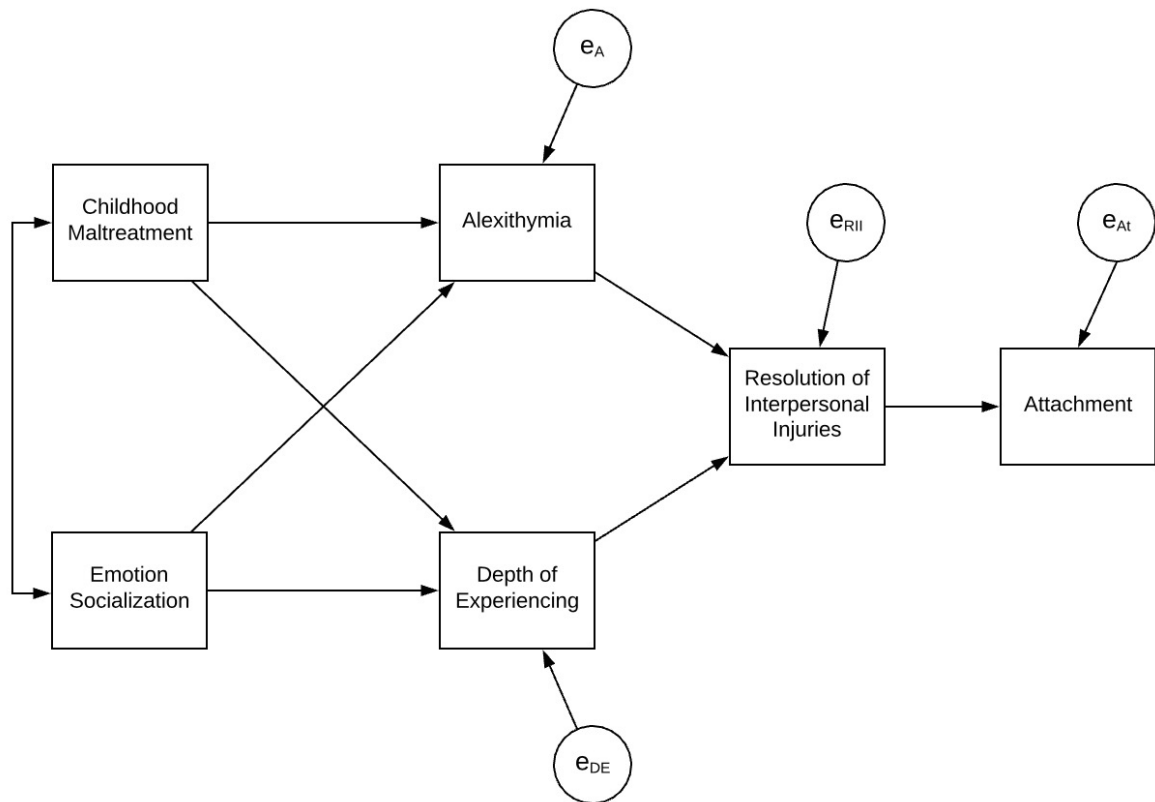


Figure 1. Emotional Transmission of Insecure Attachment Model

Rationale for and Importance of the Study

The present study drew on theory and research in the areas of attachment, childhood maltreatment, emotional development and experiential therapy. Attachment theory and research (Bowlby, 1969; Goldberg, 1991; Main & Goldwyn, 1984) indicate that childhood maltreatment (abuse and neglect) is a type of trauma that, when combined with poor emotion socialization and support (i.e., to teach awareness of feelings and associated meanings) in early attachment relationships, can have deleterious effects on

core developmental tasks, including the development of emotional competence and a positive sense of self and healthy interpersonal relationships (Gottman, 1997). Such effects are long lasting particularly for those who are not able to come to terms with or “resolve” these difficult childhood experiences (for example, through environmental support or intervention). Resolution requires emotional and narrative processing of interpersonal injuries, such as childhood maltreatment, which consists of experiencing and integrating associated feelings and meanings into one’s life story, and developing new more adaptive meanings regarding self, others, and traumatic events (Foa, Hembree, & Rothbaum, 2007). Typically, this occurs in the context of emotion socialization or support in attachment relationships whereby attachment figures (usually mothers) help the child to label and make sense of negative feelings and experiences. Experiential therapy theory and research suggest that, in the absence of such emotional and narrative processing these experiences can remain “unfinished business”, such that past feelings and memories get activated in current relationships and thus interfere with interpersonal functioning (e.g., Greenberg & Malcolm, 2002; Greenberg, Rice, & Elliot, 1993; Paivio & Greenberg, 1995; Paivio & Pascual-Leone, 2010). This would be observed as an insecure attachment style in adulthood (Courtois & Ford, 2013), characterized by dependence on others, or avoidance and fear of intimacy.

Primary constructs in the present study were defined as follows. Childhood maltreatment on the Childhood Trauma Questionnaire (CTQ; Bernstein & Fink, 1998) includes the extent of physical, sexual, and emotional abuse, as well as physical and emotional neglect. Emotional abuse is defined as verbal assaults or humiliation towards a child. Emotional neglect is defined as a failure to care for a child’s emotional and

psychological needs. Physical abuse is defined as a bodily assault that puts a child at risk for injury, while physical neglect is defined as a failure to take care of the child's basic physical needs (e.g., food, health care). Sexual abuse is defined as any sexual contact with an older individual. Emotion socialization on the History of Parenting Emotion Socialization- Mother Version (HOPES- MV; Hakim-Larson & Scott, 2013) refers to the degree to which mothers helped participants as children to identify and regulate their emotions. Alexithymia on the Toronto Alexithymia Scale (TAS-20; Bagby, Parker, & Taylor, 1994; Bagby, Taylor, & Parker, 1994) is defined as the severity of difficulties identifying and describing feelings. Resolution of interpersonal injuries on the Resolution Scale (RS; Singh, 1994) reflects the degree of "unfinished business," which refers to the degree of distress towards an identified significant other person in participants' childhood. Insecure adult attachment is defined as the degree of difficulties with intimacy and trust in adult interpersonal relationships on the Relationship Scales Questionnaire (RSQ; Griffin & Bartholomew, 1994) and Relationship Questionnaire (RQ; Bartholomew & Horowitz, 1991). In the present study, adult attachment is a composite of these two attachment style measures. All the above variables were assessed using participant self-reports. Depth of experiencing was assessed using the Client Experiencing Scale (EXP; Klein, Mathieu, Gendlin, & Kiesler, 1969). Experiencing refers to the *observed* identification and exploration of feelings and associated meanings (self-reflection, causes, insight into events and feelings) in a written narrative about a *specific upsetting event* (Pennebaker Trauma Narrative; PTN, Pennebaker, Kiecolt-Glaser, & Glaser, 1988).

Although the link between childhood maltreatment and insecure adult attachment is well documented, the author could identify no other studies that empirically tested a theoretical model of specific impairments in emotional competence as the mechanisms through which childhood maltreatment contributes to difficulties in adult interpersonal relationships. Since these interpersonal difficulties have profound implications for healthy functioning, findings from the present study can inform prevention and intervention strategies to ensure or improve healthy functioning in young adults, particularly those who are survivors of childhood abuse and neglect.

Literature Review

The following literature review will begin with an introduction to attachment theory, which is the overarching theory that links childhood experiences of abuse and neglect in the context of unsupportive attachment relationships to adult attachment style. Throughout the manuscript, the terms “childhood trauma” and “childhood maltreatment” will be used interchangeably. These terms refer to experiences of sexual, physical, and emotional abuse (e.g., bullying, harsh criticism) at the hands of parents, older peers, siblings, teachers, or other caregivers. These terms also include neglect or failure to protect from harm or attend to the distress associated with upsetting or traumatic experiences (e.g., death of a loved one, or divorce). Sections that follow are organized according to links between individual constructs in the predicted path model (Figure 1).

Attachment Theory

Attachment theory provides the overarching framework for the present study. The theory is based on the fundamental assumption that internal representations of self and significant others, formed in early attachment relationships, continue to influence

relational capacities throughout the lifespan (Bowlby, 1988) and adult styles of attachment (Cicchetti & Toth, 1995). These internal representations guide the way in which interpersonal information is attended to and perceived, which memories will be evoked, which associated emotions will be experienced and how these emotions will be regulated, which will then affect behaviour (Alexander, 1992).

The theory was originated by John Bowlby (1958, 1969), who emphasized the importance of caregiver availability and support in early childhood. He theorized that humans are born as social beings and are biologically wired to respond to a caregiver. Infant behaviours (e.g., crying, clinging, following) facilitate proximity to a caregiver and caregiver responses, as well as fulfill the evolutionary function of receiving protection from predators when exploring the environment. Infants will therefore seek a caregiver at times of distress. Attachment behaviours are organized into an “attachment behavioural system.” Systematic behaviours are utilized to lead to particular goals that facilitate a functional change in the environment. In the case of attachment behaviours, goals are related to security and safety. Sroufe and Waters (1977) explained that the goals of attachment behaviours (in relation to gaining proximity to a caregiver) remain stable though the means of achieving these goals vary within different contexts and stages of development.

Attachment relationships will differ depending on patterns in the child-caregiver relationship and will be encoded as “internal working models” or attachment representations of the self and other in interpersonal relationships (Bowlby, 1958, 1969). Internal working models of the self are dynamic and include cognitive and affective components that assist in predicting and interpreting the behaviour of others, as well as

planning for one's own behaviour within an interaction. Attachment to a caregiver typically occurs regardless of whether an infant's physiological needs are being met, even when the attachment figure is abusive or neglectful (Bowlby, 1958, 1969).

Ainsworth and colleagues (1978) investigated individual differences in the quality of attachment relationships using the Strange Situation, a procedure that consists of a systematic separation and reunion of parent and child (between 12-18 months of age). Through this procedure, Ainsworth and colleagues found that when caregivers were reliably available, responsive, and sensitive, a sense of attachment security was likely to develop.

Infant development within an attachment relationship. Certain mechanisms are required to be in place to facilitate the development of a secure attachment. Sroufe (1990, 1996) posited a six-stage model of self-development in infancy by describing processes that occur within the context of a secure attachment. The first four phases take place in the first year of life during which reciprocal exchanges occur between infant and caregiver. Emotional regulation thus occurs through interactions with the caregiver in the context of an attachment bond. Moreover the degree to which the caregiver is available and responsive to the infant will influence the way in which the infant appraises a situation. The final two stages in Sroufe's model of self-development takes place in the second year. The infant begins awareness of the self as an independent actor, balanced with caregiver responsiveness. A toddler will develop a sense of self-constancy, where the self is viewed as an active initiator with mastery of the world around them. Thus, healthy development will occur in the context of a consistent, responsive, and supportive

attachment relationship. When these parental behaviours do not occur, a less secure attachment will likely develop.

Continuation of attachment into adulthood. Research has demonstrated the continuity of attachment patterns from infancy into adulthood. Main and colleagues developed the Adult Attachment Interview (AAI), a semi-structured interview that consists of questions regarding an individual's past relationships with caregivers in childhood (George, Kaplan, & Main, 1996). A focus of the interview is the coherence of the narrative and how specific memories correspond with generalizations about the attachment relationship. The purpose of the interview was to investigate cognitive and emotional processes related to attachment and the degree to which an individual has resolved past attachment-related traumas or loss. The resolution of interpersonal injuries will be described further in a later section.

Through the AAI interview, specific adult attachment patterns were identified (Main & Goldwyn, 1984) and research supports the continuation of attachment style from infancy into adulthood. For example, a 30-year longitudinal study found that variables related to trust and emotional tones in interpersonal relationships could be predicted from attachment history (Sroufe, 2005). Another study that examined individuals from birth to 18 years of age found that individual differences in adult attachment style were related to the quality of caregiving environments in childhood (Fraley, Roisman, Booth-LaForce, Owen, & Holland, 2013). Waters, Merrick, Treboux, Crowell, and Albersheim (2000) also assessed individuals at 12-months of age and twenty years later and found support for the stability of attachment style throughout the lifespan. Importantly, this study also found that it was possible for positive attachment representations to be altered through

negative experiences in childhood, such as parental divorce, loss of a parent, physical or sexual abuse by a relative, and parent or child's life-threatening illness (Waters et al., 2000).

The following sections focus on the variables in the proposed Emotional Transmission of Attachment Model. depicted in Figure 1, above.

Childhood Maltreatment and Poor Emotion Socialization

The focus of the present study will be on the combined effects of childhood maltreatment and poor emotion socialization that occurs in early attachment relationships. As stated above, childhood maltreatment refers to experiences of sexual, physical, and emotional abuse (e.g., bullying, harsh criticism) at the hands of parents, older peers, siblings, teachers, or other caregivers (Bernstein & Fink, 1998). Maltreatment can also include failure to protect from harm or attend to the distress associated with upsetting or traumatic events (e.g., death of a loved one or divorce).

Prevalence of childhood maltreatment. Understanding the effects of childhood maltreatment experiences is important because of their high prevalence in community samples. For example, one study found that the prevalence for various forms of childhood abuse and neglect was approximately 40% for males and 30% for females, with approximately 13% of participants having experienced multiple types of maltreatment (Scher, Forde, McQuaid, & Stein, 2004). In Canada, an estimated 85, 440 substantiated investigations of child maltreatment occurred in 2008 (Trocmé et al., 2008). According to a survey conducted by MacMillan, Tanaka, Duku, Vaillancourt, and Boyle (2013) in Ontario, physical abuse was reported by 33.7% of males and 28.2% of females. Severe physical abuse was reported for 21.5% of males and 18.3% of females. The

prevalence of sexual abuse was found to be 8.3% for males and 22.1% for females. Two studies (Paivio & Cramer, 2004; Turner & Paivio, 2002) reported the prevalence rates of various forms of abuse in two different undergraduate samples (the population used in the present study) that were generally comparable to those reported in community samples.

Childhood maltreatment and interpersonal functioning. Abundant research links childhood maltreatment to poor relational functioning in adulthood. For example, experiences of sexual abuse in childhood are associated with emotional avoidance, fear of intimacy (Davis, Petretic-Jackson, & Ting, 2001), and sexual dysfunction (Najman, Dunn, Purdie, Boyle, Coxeter, 2005). Various forms of childhood abuse have been associated with dating and intimate partner violence (Bensley, Van Eenwyk, & Simmons, 2003; Dunkle et al., 2004; Ehrensaft, Cohen, Brown, Smailes, Chen & Johnson, 2003). Emotional abuse has been found to be associated with interpersonal conflict and a distrust of other (Messman-Moore & Coates, 2007) later in the lifespan. Importantly, interpersonal dysfunction is also a product of poor emotion socialization by caregivers, which co-occurs with childhood maltreatment and will be reviewed below.

Attachment theory and emotional competence. Attachment theory states that, along with perceptions of self and others, emotional competence is developed in attachment relationships (Bowlby, 1969). Emotional competence includes an awareness of emotional states, as well as the emotional states of others, and the ability to use words to label these emotions (Saarni, 1999). Accurately labelling emotions assists an individual to elaborate, understand the meaning of, and integrate emotional experiences into a coherent life story (Saarni, 1999). As will be elaborated below, emotional

competence is central to healthy functioning, both in terms of self-awareness and interpersonal relationships.

Emotional competence is developed through emotion socialization and narrative processing of stressful events within attachment relationships. Childhood maltreatment and emotion socialization were predicted to be correlated in the proposed Emotional Transmission of Attachment Model (Figure 1). The socialization of emotion by parents involves awareness of the child's feelings, empathically responding to and validating those feelings, accurately labelling the emotions, and assisting in problem solving (Gottman & DeClair, 1998). Overall, emotion socialization assists in developing awareness and appropriate expression of emotions (Oppenheim & Koren-Karie, 2009). Emotion socialization also involves helping the child to make sense of stressful events through narrative processing. In the context of a secure attachment, emotion and narrative processing are developed through parent-child dialogues regarding personal and emotional experiences (Etzion-Carasso & Oppenheim, 2000). Such conversations occur through the re-telling of stories about past events, guided by caregivers, which serve to teach a child how to share and evaluate emotionally laden experiences (Koren-Karie Oppenheim, Haimovich, & Etzion-Carasso, 2003). Parents teach children to create coherent stories by co-constructing a beginning, middle, and end of a narrative, along with the creation of meaning to understand the events within the narrative (Fivush, 2012). Caregivers validate a child's emotions associated with stressful or traumatic events and help the child to reframe these experiences in a healthy and constructive manner. Parents thus assist a child to understand negative emotions and experiences and teach coping strategies to utilize in stressful situations (Laible & Panfile, 2009). Of note, though the

present study focuses on emotion socialization by parents (particularly mothers), children are socialized in multiple social contexts (Saarni, 1999). These include peers, the media, and other adults such as teachers.

For a securely attached child, emotions are organized and a felt security is present, which does not mean that he or she is able to avoid the experience of negative affect, but rather that one is able to tolerate negative emotions (Carlson & Sroufe, 1995; Sroufe, 1990). Emotions are not seen as dangerous but serve as a means of communication. These children are also able to utilize and display their positive emotions in social interactions (Sroufe, Schork, Motti, Lawroski, & LaFreniere, 1984). On the other hand, when children are insecurely attached, arousal may be chronically present, and expressions of distress may be intensified to acquire a response from a caregiver (Carlson & Sroufe, 1995). These individuals may thus become preoccupied with obtaining a response from caregivers and become frustrated from a lack of caregiver response. They also may view many situations as threatening and have a low tolerance for threat (Carlson & Sroufe, 1995).

Emotional competence and narrative processing capacities are central to an individual's psychological well-being. Emotions provide us with important information pertaining to our needs and the appropriate actions that are required to obtain our needs (Damasio, 1999; Leahy, Tirch, & Napolitano, 2011). Furthermore, emotional competence is important for self-worth and resilience when confronted with stressful situations (Kinniburgh, Blaustein, Spinazzola, van der kolk, 2005). It also plays a role in building connections with others and maintaining intimate relationships (Grewal, Brackett, & Salovey, 2006). The development of emotional competence and narrative

processing skills increases self-awareness and contribute to the understanding of important emotional experiences to form an integrated and coherent sense of self or self-narrative (Enosh & Buchbinder, 2005). During the creation of a narrative, images, memories, and implicit thoughts and feelings are transformed into language, making internal processes explicit and conscious (Brody & Park, 2004). Narratives become a means of organizing one's life experiences into a meaningful sequence (Fivush, 2012). When constructing a meaningful story of one's life through personal emotionally rich narratives, one can form a coherent identity (Brody & Park, 2004), as well as establish core values (Thorne & McLean, 2002, 2003)

Childhood maltreatment combined with poor emotion socialization. When childhood maltreatment is combined with poor emotion socialization, there can be an increased risk of impairment in emotional competencies. The child might not learn to make sense of, or cope with, the intense negative feelings engendered by upsetting or traumatic events (Saarni, 1999). They may thus rely on maladaptive coping strategies and harbour an unwillingness to engage in certain private experiences, such as memories, emotions, and bodily sensations (Hayes, Wilson, Gifford, & Follette, 1996). Limited awareness of core emotions related to traumatic experiences, such as abuse and neglect (e.g., fear, shame, anger, grief), and associated meanings can negatively affect functioning throughout the lifespan. These effects will be discussed in further detail in the following sections.

Limited Emotion Awareness

Limited emotion awareness is one of the mechanisms of transmission in the predicted Emotional Transmission of Attachment Model shown in Figure 1. Limited

emotion awareness is associated with difficulties regulating emotions and coping with negative affect (Saarni, 1999). When individuals have such difficulties, they can lack adaptive strategies to cope with intense negative emotions, and it is more likely that they will engage in maladaptive efforts to regulate emotion, such as substance abuse (Briere, 2001) and self-harm behaviours (Gratz & Roemer, 2008).

Limited emotion awareness is operationalized in the present study with the construct of alexithymia. Alexithymia is defined in terms of difficulties identifying and describing emotions, limited imaginal capacities, and an externally oriented thinking style (Taylor, Bagby, & Parker, 1997). Alexithymia also involves difficulties recognizing emotional states in others (Taylor et al., 1997). This is thought to occur through inadequate awareness of one's own emotional states, as well as deficits in imaginal capacities, which creates an inability to picture what another individual may be experiencing emotionally (Krystal, 1974). Such deficits contribute to difficulties relating interpersonally, for example in establishing intimacy or seeking social support.

Attachment relationship and alexithymia. The context of the attachment relationship has been used to explain the origins of alexithymia (Kraemer & Loader, 1995). A consistent pattern of coping in families of children with psychosomatic problems has been found. This pattern includes concern over physical symptoms and behaviour, while the importance of emotional well-being is neglected. Additionally, there is a difficulty expressing feelings and avoidance of conflict, with a sense that everyone in the family should react to events with the same thoughts and feelings. Relationships are not based on trust and empathy, but on being in one another's physical

presence. An unhealthy emotional attachment, as well as alexithymia, is likely to develop within such an environment (Kraemer & Loader, 1995).

According to Kraemer and Loader (1995), alexithymia stems from a mother's inability to identify and respond effectively to emotional states. This contributes to an insecure attachment style, wherein a child may be protected from physical danger, though is not provided with a sense of safety from overwhelming emotional states. As a result, to cope with intense emotional experiences, a child disconnects from the feelings associated with emotions, and only experiences the bodily sensations, deeming these as bothersome physiological states. A child then develops alexithymia, where they have difficulty recognizing or labelling emotional states (Kraemer & Loader, 1995; Taylor, Bagby, & Parker, 1997).

Alexithymia in adulthood. Alexithymia also has been found to be associated with insecure adult attachment style (Montebarocci, Maurizio, Codispoti, & Rossi, 2004; Taylor, et al., 1997; Troisi, D'Argenio, Peracchio, & Petti, 2001). Montebarocci and colleagues (2004) found that discomfort with closeness and the need for approval were positively related to alexithymia. Confidence was negatively associated with alexithymia. The authors suggest that the association between alexithymia and attachment insecurity can be explained through a limited ability of caregivers to properly read and respond to a child's emotional cues. They also suggest that alexithymia may be a consequence of parental emotional and cognitive dysfunction such as limited imagination processes and externally-oriented thinking style that is stimulus-bound (Montebarocci et al., 2004).

Difficulties in identifying and communicating emotional experience (alexithymia) have been related to a variety of dysfunctions in adulthood including social anxiety, depression, somatic symptom disorder, and eating disorders (for a review see Taylor et al., 1997). Alexithymia has been associated with interpersonal problems and, in particular, hostility and socially avoidant behaviour (Spitzer, Siebel-Jürges, Barnow, Grabe, Freyberger, 2005), cold/distant and non-assertive interpersonal functioning (Ghiabi & Besharat, 2011; Vanheule, Desmet, Meganck, & Bogaerts, 2007), interpersonal distrust, and loneliness (Qualter, Quinton, Wagner, & Brown, 2009) thus providing support for a link between limited emotion awareness and insecure adult attachment.

Negative childhood experiences and alexithymia. Existing literature also links childhood maltreatment, traumatic experiences, and poor emotion socialization in early attachment relationships to alexithymia (Matti et al., 2008; Paivio & McCulloch, 2004; Turner, 2001). Berenbaum and James (1994), investigated the childhood experiences of adults who met criteria for alexithymia using retrospective reports. They found that alexithymia in adulthood was associated with feeling less emotional safety in childhood, poor expressiveness in the family environment, and low levels of positive communication within the family. In a study of college students, alexithymia was related to the participants' mother's alexithymia and dysfunctional family expression of affect (Lumley, Mader, Gramzow, & Papineau, 1996).

Alexithymia in adulthood also has been specifically associated with retrospective reports of childhood maltreatment trauma (e.g., Paivio & McCulloch, 2004; Ralston, 2006; Turner, 2001; Zlotnick, Mattia, & Zimmerman, 2001). For example, Zlotnick and

colleagues (2001) investigated a sample of 252 adult outpatients and found that childhood emotional and physical neglect was positively correlated with alexithymia. Additionally, they found that alexithymia scores were positively correlated with the number of such traumatic experiences. Härtwig, Härtwig, Heuser, and Bajbouj (2013) found that early emotional neglect predicted alexithymia in adulthood. Similarly, Ralston (2006) found that 83% of a sample of 40 clients undergoing emotion-focused therapy for childhood abuse met criteria for alexithymia. Paivio and McCulloch (2004) found that alexithymia mediated the relationship between various forms of childhood maltreatment and self-injurious behavior in a sample of 100 college women. Another study that used a sample of 204 undergraduate students found that more severe childhood maltreatment (of various forms) was associated with social avoidance and limited social support, partially due to alexithymia (Turner, 2001). In a sample of 410 undergraduates, it was found that various types of childhood maltreatment were associated with alexithymia (Gaher, Arens, & Shishido, 2015).

In the predicted Emotional Transmission of Attachment Model (Figure 1), limited awareness of emotional experience and poor capacity to reflect on affective meaning both serve as mechanisms of transmission since, by definition, these variables are highly correlated. In the present study, the capacity to reflect on the meaning of emotional experiences will be operationalized using the construct of “experiencing.” The effects of limited capacity for experiencing will be reviewed in the following section.

Limited Capacity for Experiencing

The construct of experiencing refers to the capacity to attend to, verbally symbolize, and explore subjective internal experience (typically feelings and meanings)

and construct new meaning from this process (Gendlin, 1997). The assumption is that the process of verbal symbolization makes internal experience, especially affective experience, comprehensible (Elliott, Watson, Goldman, & Greenberg, 2004; Gendlin, 1997; Greenberg, 2011). Depth of experiencing is a useful and unique construct in the present context as the proposed Emotional Transmission of Attachment Model posits this construct as fundamental in resolving interpersonal injuries such as those related to childhood maltreatment and, in turn, contributes to secure adult attachment.

Experiencing is a central construct in experiential and humanistic therapies, where distressing internal states are verbally symbolized, their meanings explored, and new meaning constructed. Just as in early childhood development, specific emotions provide information regarding one's responses to the environment and serve to organize thoughts and actions by establishing goals that guide cognitions and conduct (Frijda, 1986). Through the verbal articulation and exploration of affective experience, feelings and meanings can be understood and new meanings can be constructed. The way in which the self, others, and the world are experienced can be transformed once a connection between affect and meaning is made and articulated (Paivio & Pascual-Leone, 2010). When one has a limited capacity for experiencing, emotions related to distressing interpersonal experiences such as childhood abuse and neglect remain unresolved (unfinished business), which can contribute to interpersonal difficulties (an insecure adult attachment style).

There is agreement across theoretical perspectives that awareness of subjective internal experience is essential to healthy functioning. For example, the construct of experiencing has some similarities to that of mindfulness which is a skill taught in

cognitive behavioral therapies (e.g., Hayes, Follette, & Linehan, 2011). Both constructs and skills require a quiet and introspective stance, as well as nonjudgmental observation and acceptance of the flow of thoughts, feelings, and bodily sensations. However, the process of experiencing is exclusively intended to construct new meaning, whereby internal experience is a source of wisdom, rather than emotion regulation (Paivio & Pascual-Leone, 2010). The construct of experiencing, derived from the phenomenological tradition (Gendlin, 1997), also bears some resemblance to the developmental concept of mentalization (Bowlby 1998; Fonagy, Gergely, Jurist, Target, 2011). The basic assumption underlying both constructs is that understanding of self and others is dependent on reflective functioning, that is, awareness of subjective internal processes (i.e., emotions, thoughts, feelings, desires). Moreover, a secure relational bond is viewed as essential for exploring and symbolizing emerging internal states (Paivio & Angus, 2017).

Another model that has conceptual similarities to experiencing is the theory of ego development created by Loevinger and colleagues (Loevinger, 1976; Loevinger & Wessler, 1970; Loevinger, Wessler, & Redmore, 1970). The theoretical framework conceptualizes a series of stages throughout the lifespan, each consisting of a frame of reference through which an individual attributes meaning to the experience of the self and others. The theory presents nine stages of ego development that are based on milestones. The first three stages (*presocial*, *impulsive*, and *self-protective*) are characterized by an egocentric view, perceiving the self as under the control of external factors and emotions as bodily states or impulses, a limited variety of experienced emotions, and a limited ability to relate to others. In the fourth stage, the *conformist* stage, social acceptance is a

main area of focus and relationships are seen through concrete actions rather than underlying emotions and motives. The next stage, the *self-aware* stage, is characterized by emotional awareness, a broader range of experienced emotion, and the ability to understand the emotions of others. In this stage, acting in a manner that one deems correct is dependent on the situation and context. Most adolescents and adults will reach this phase at some point in their lives. The later stages (*conscientious*, *autonomous*, and *integrated*) involves increasing recognition of individual differences, appreciating inner experiences, and awareness of one's own unique morality. Relationships in these stages are viewed through emotions and connections and the complexity of interpersonal interactions is recognized. As stages progress, inner conflicts are increasingly felt by the individual and efforts to manage conflicts are made. The theory of ego development is thus similar to the concept of experiencing since it presents a framework of creating meaning from experiences through emotional and interpersonal elements.

Measurement of experiencing. The Client Experiencing Scale (EXP; Klein, Mathieu-Coughlan, & Kiesler, 1986), which will be used in the present study, was originally developed to measure the depth or level of psychotherapy clients' engagement in exploring subjective internal experience and associated meanings. The scale has been used to assess taped and transcribed therapy dialogues across a range of theoretical perspectives (e.g., Castonguay, Goldfried, Wiser, Raue, & Hayes, 1996; Goldman, Greenberg, & Pos, 2005; Pascual-Leone & Yeryomenko, 2017; Ralston, 2006; Robichaud, 2004; Silberschatz, Fretter, & Curtis, 1986), as well as written narratives with both clinical (e.g., Mundorf & Paivio, 2011) and non-clinical samples (e.g., Harrington, 2012; Le, 2006). Low levels of experiencing are characterized by impersonal and

superficial descriptions of external events, with little reference to internal states and emotional reactions to the situation being discussed (e.g. “My dad saw that I had broken the glass. He began to punch and kick me”). Moderate levels of experiencing include personal accounts and discussion of internal experience rather than descriptions of events alone. The speaker, however, does not engage in elaboration, exploration of internal states, or self-examination (e.g. “I was terrified and humiliated as I tried to tell him that it was an accident, but I knew that my efforts were pointless”). At high levels of experiencing there is an internal focus where felt senses, emotions, and meanings are reflected on and explored in response to questions and problems regarding the self and experiences (e.g., “His actions have continued to affect me today and I am still constantly full of fear that I will say or do the wrong thing. I always feel as though everything is somehow my fault”). At the highest levels questions about the self begin to be answered and self-related problems begin to be solved (Klein et al., 1986).

Experiencing in the general population. Experiencing capacity is related to healthy functioning in non-clinical contexts. According to Gendlin (1997), experiencing is related to all thoughts and behaviour, and not necessarily to remarkable life events. Experiencing allows an individual to think beyond logic or rules by symbolizing direct experience as a “felt meaning.” Behaviour is guided by connections and meanings, that provide more information than can be obtained through rational analysis. Through experiencing, an individual interacts with events in the moment, through a felt sense of a situation, and is then able to respond appropriately (Gendlin, 1997). Teaching the skill of experiencing has been used with the general population for growth and stress reduction (Gray, 2014) and has been used in many settings including businesses, schools, spiritual

groups, and in creative writing (Gendlin, 1982). For example, the Focusing Institute provides community members with training on obtaining information about the self from a bodily felt sense for use in everyday life. The skill of experiencing is used to guide behaviour in a variety of contexts and the capacity to process and make sense of upsetting interpersonal events, such as childhood abuse and neglect, is particularly useful to healthy functioning in adult interpersonal relationships. The present study examined capacity for experiencing and its relation to healthy interpersonal functioning in a non-clinical sample of undergraduate students.

Empirical studies on experiencing. Greater depth of experiencing has been linked to better therapy outcome across therapeutic orientations (Castonguay, Goldfried, Wiser, Raue, & Hayes, 1996; Goldman, 1997; Goldman, Greenberg, & Pos, 2005; Pascual-Leone & Yeryomenko, 2017; Silberschatz, Fretter, & Curtis, 1986). For example, Pos, Greenberg, Goldman, and Korman (2003) found that depth of experiencing was associated with decreased symptomology and increased self-esteem in a sample of 34 clients in experiential treatment for depression. In terms of therapies specifically for trauma, although interventions differ, traumatic experiences are always converted into language, with the process of change occurring through the verbal symbolization of the feelings and meanings associated with traumatic events (Briere, 2002; Paivio, Jarry, Chagigiorgis, Hall, & Ralston, 2010; Paivio & Pascual-Leone, 2010; Shapiro, 2002). In therapy specifically for childhood abuse and neglect, greater depth of experiencing during trauma exploration was related to better outcome in a sample of 30 clients undergoing emotion-focused therapy (EFTT) for childhood abuse and neglect (Ralston, 2006). Similarly, in another sample of 37 clients undergoing EFTT, depth of experiencing

during the exploration of trauma material in early sessions predicted aspects of client change, including reduced interpersonal problems, and increased resolution of issues with identified perpetrators of abuse and neglect (Robichaud, 2004). Thus, findings provide some support for depth of experiencing as a mechanism through which resolution of interpersonal injuries and increased interpersonal functioning can occur.

Past research also supports the relationships between experiencing and other variables in the predicted Emotional Transmission of Attachment Model (Figure 1). For example, Le (2006) analyzed the written trauma narratives (Pennebaker, Keicolt-Glaser, & Glaser, 1988) of 60 female undergraduates (the same protocol that will be used in the present study) and found that low levels of experiencing were associated with higher levels of alexithymia (poor emotion awareness). Most other research linking experiencing to variables assessed in the present study comes from clinical samples. For example, Ralston (2006) reported a link between high levels of alexithymia and low levels of in-session experiencing during trauma exploration for 30 clients in EFTT. Further support for links among variables assessed in the present study was demonstrated in a study (Mundorf & Paivio, 2011) of 37 clients in EFTT. Authors used depth of experiencing as an index of complex meaning in trauma narratives (Pennebaker, Kiecolt-Glaser, & Glaser, 1988) written before and after therapy. Results indicated an association between low levels of experiencing and more trauma symptoms at pre-treatment and that deeper experiencing at the end of therapy was associated with fewer trauma symptoms and resolution of issues with identified perpetrators. These findings thus support the association between emotion awareness (alexithymia) and depth of experiencing capacities, as well as depth of experiencing and the resolution of

interpersonal injuries, in this case, childhood maltreatment issues. This dimension of emotional competence is the final vehicle of transmission between childhood maltreatment and insecure adult attachment in the predicted Emotional Transmission of Attachment Model (Figure 1). The following section focuses on the links among depth of experiencing, alexithymia, and resolution of interpersonal injuries.

Unresolved Interpersonal Injuries (Unfinished Business)

Theory and research support the view that recovery from upsetting and traumatic experiences, including childhood abuse and neglect, requires narrative and “emotional processing” of these experiences (Courtois & Ford, 2013; Foa, Hembree, Rothbaum, 2007; Paivio & Pascual-Leone, 2010). As noted above, narrative and emotional processing involves identifying and expressing feelings and associated meanings, making sense of and integrating distressing events into current meaning systems, and thereby developing a new perspective of the self, others, and traumatic experiences (Paivio & Pascual-Leone, 2010; Paivio & Angus, 2017). This process is the focus of trauma therapies and is analogous to the process of maternal emotion socialization described above.

Research supports emotional and narrative processing as mechanisms of change in trauma therapy. Written narratives about distressing experiences that specifically refer to related emotions are associated with improvements in physical and mental health across diverse samples, such as prisoners, victims of crimes, men who have recently lost their jobs, and sufferers of chronic pain (e.g., Frattaroli, 2006; Freda & Martino, 2015; Pennebaker & Seagal, 1999). Improvements in psychological wellbeing also were found to be associated with narratives that included meaning-making processes, connections

between events and emotions, and re-evaluation of the event (Freda & Martino, 2015). Conversely, impoverished narratives with limited references to feelings and meaning were indicative of psychological disturbance in general, and unresolved trauma (PTSD) in particular (O’Kearney & Perrott, 2006). Carpenter, Angus, Paivio, and Bryntwick (2016) also found that client in-session narratives in brief experiential therapy that were devoid of feelings and meanings were associated with poorer therapy outcome defined in terms of reduced trauma symptoms and resolution of maltreatment issues. The present study will use the same index of resolution as the one used in the study by Carpenter and colleagues (2016) and Paivio studies of EFTT (Paivio, Jarry, Chagigiorgis, Hall, Ralston, 2010; Paivio & Nieuwenhuis, 2001).

The construct of unfinished business. In the present study, resolution of interpersonal injuries will be operationalized in terms of the construct of “unfinished business”. The construct of “unfinished business” was originally derived from Gestalt therapy (Perls, Hefferline, & Goodman, 1951) and refers to persisting negative feelings towards another individual who was important to one’s development. In a study of unfinished business using a general clinical sample (Paivio & Greenberg, 1995) experiences were related to general development, loss, and abandonment, at the hands of parents, caregivers, friends, and ex-partners. Unfinished business or interpersonal injuries also included experiences of childhood trauma, described earlier, that is, sexual, physical, and/or emotional abuse (e.g., bullying, harsh criticism) by parents, siblings, babysitters, teachers, or other caregivers, as well as emotional neglect. The latter can involve failure to protect the child from harm or from emotional distress (e.g., in the case of death of a loved one or divorce). These are the same types of abuse and neglect

experiences assessed by the Childhood Trauma Questionnaire (CTQ, Bernstein & Fink, 1988) used in the present study.

In trauma research with clinical samples, trauma resolution is typically assessed in terms of the presence or absence of posttraumatic stress (PTSD ; American Psychiatric Association, 2013) symptoms (e.g., O’Kearney & Perrot, 2006). However, adults with histories of childhood abuse and neglect, such as those described above, do not necessarily meet criteria for PTSD (Paivio et al., 2010) but frequently experience persistent feelings of anger, guilt, or shame and pain from unmet needs in relation to these childhood experiences and significant others involved (perpetrators and those who failed to protect or respond to distress). Absence of a PTSD diagnosis would be especially the case in non-clinical samples such as the one used in the present study. Thus, resolution of interpersonal injuries (including childhood maltreatment) in the present study can also be operationalized in terms of “unfinished business.” Unfinished business has been found to be linked to various interpersonal problems, anxiety, and depression (e.g., Greenberg & Malcolm, 2002; Paivio & Greenberg, 1995).

Emotion competence and resolving unfinished business. Emotion awareness is required for the resolution of unfinished business. In their seminal work on the centrality of emotion to healthy functioning, dysfunction, and therapeutic change, Greenberg, Rice, and Elliot (1993), described *emotion schemes* as complex mental networks or meaning systems consisting of cognitive, affective, motivational and action components that provide information pertaining to an individual’s experience of the self in relation to the world. When activated, these emotion schemes guide our perceptions of the world and the meaning that we attach to our emotions throughout the lifespan (Greenberg, 2015).

Healthy functioning occurs when one is aware of the emotions that are activated in situations, the meaning attached to that emotion, and the associated action tendencies.

Emotion structures or schemes developed in the context of childhood maltreatment typically consist of intense feelings, such as rage, disgust, helplessness, fear, guilt, and shame (Courtois & Ford, 2013; Paivio & Pascual-Leone, 2010). When emotions are not in awareness, avoided, or ignored, memories and meanings cannot be processed and distressing experiences such as childhood abuse and neglect continue to impact the way in which the individual views the self and others (Paivio & Pascual-Leone, 2010).

Information associated with one's emotions, in relation to the upsetting event, remains unavailable to provide guidance towards healthy functioning (e.g., anger at maltreatment or sadness about loss) or for modification if the emotion is maladaptive (e.g., guilt and shame associated with childhood abuse).

Furthermore, the constructs of emotion and narrative processing, central to the predicted Emotional Transmission of Attachment Model (Figure 1) also are central to unresolved interpersonal injuries and the construct of unfinished business. According to experiential therapy theory, the source of unfinished business is the blocking or suppression of feelings and needs associated with painful or overwhelming experiences involving significant others (e.g., parents, siblings, caregivers); these painful feelings and unmet needs do not disappear but remain encoded in memory and are activated in current situations, thus interfering with current functioning (Greenberg, 2011; Paivio & Pascual-Leone, 2010). When emotions related to painful events with significant others remain unexpressed, associated meanings cannot be accessed, and understanding and closure cannot be attained. The individual continues to be bothered by negative feelings and

unmet needs, resentment toward the significant other from the past, and feeling badly about the self in relation to the other.

Model of the resolution of unfinished business. Greenberg and colleagues (Greenberg & Foerster, 1996; Greenberg & Malcolm, 2002) developed an empirically-verified model specifying steps in the process of resolving “unfinished business” with significant others from the past. Steps that discriminated clients who resolved issues from those who did not included expressing previously constricted feelings toward an imagined other. The individual thereby becomes aware of new information associated with these previously blocked emotions and is able to construct new meanings concerning these past experiences. For example, guilt and shame related to childhood sexual abuse can be transformed by accessing and expressing anger at violation and holding the perpetrator, rather than the self, responsible for harm. Thus, resolution involves perceiving the significant other and the self in a new way (i.e., holding the other accountable for harm and increased self-empowerment, and self-affiliation). Thus, perceptions of self and other and associated feelings are more positive and adaptive, reflecting a more secure adult attachment style.

Research has supported the validity of the resolution model. For example, a study with a sample of 34 clients in experiential therapy with “unfinished business” towards a significant other from the past (Paivio & Greenberg, 1995) found significant improvements in multiple dimensions, including reduced interpersonal problems and resolution of issues with specifically identified significant others. A subgroup of clients in that sample were dealing with issues of childhood maltreatment. More recent studies of therapy based on the same resolution model tailored specifically for issues of

childhood abuse and neglect (EFTT; Paivio & Nieuwenhuis, 2001; Paivio et al., 2010) found similar results. Research thus supports a link between emotional expressiveness and the resolution of issues related to interpersonal injuries, including childhood maltreatment, and change processes, including those related to interpersonal functioning.

In the predicted Emotional Transmission of Attachment Model (Figure 1), unresolved interpersonal injuries, including issues concerning childhood maltreatment occur because the individual has had limited emotion coaching and support in the primary attachment relationship, and thus develops limited emotional awareness and capacity to reflect on affective meaning. They thus have been unable to emotionally process and come to terms with or resolve these early childhood experiences. This results in an insecure adult attachment style (difficulties with intimacy and trust), the dependent variable in the proposed Emotional Transmission of Attachment Model (Figure 1). Insecure adult attachment will be reviewed in the following section.

Insecure Adult Attachment

As previously presented, attachment theory states that adult attachment style develops from early attachment experiences and guides interpersonal functioning in later stages of the lifespan. Childhood experiences of abuse and neglect in childhood, in the context of poor emotional support in early attachment relationships (insecure attachment), can engender negative feelings and perceptions of self and significant others (e.g., anger, sadness, shame, distrust) that are encoded in memory in the form of internal working models (Bowlby, 1988). When these childhood experiences are unresolved, these maladaptive memory structures are activated in current interpersonal relationships, reflecting an insecure adult attachment style. A secure adult attachment style is largely

contingent on self-reflection, insight, and degree of resolution of past experiences with parents (George, Kaplan, & Main, 1996).

Insecure adult attachment styles. An insecure adult attachment style is characterized by views of the self that include a negative self-concept and a sense of being unworthy of attention and love (Bartholomew, 1990, 1993). Others are viewed as distant, uncaring, rejecting, and untrustworthy. Bartholomew (1990, 1993) identified three sub-categories of insecure adult attachment style. A *preoccupied* attachment consists of a positive appraisal of others but a sense of self as unworthy of love with self-worth dependent on the validation received from others. A *fearful-avoidant* attachment style consists of both a sense of self as unworthy of love from others, as well as negative evaluations of others. Individuals with this style often avoid close relationships with others in order to protect themselves from anticipated rejection. Lastly, a *dismissive-avoidant* style consists of a sense of self as worthy of love but with negative expectations of others. These individuals tend to be overly independent and self-sufficient as protection against being hurt by others (Bartholomew, 1990, 1993).

Insecure adult attachment and childhood maltreatment history. According to Courtois and Ford (2013), insecurely attached individuals with a history of childhood maltreatment can have a tendency to behave in interpersonal interactions in ways that were previously developed for protection. These experts identify two main patterns of insecure attachment style that are common among survivors of child abuse trauma. One pattern involves a conflict between avoiding close relationships and a desire for interpersonal connections. Though these individuals are interpersonally needy, they may display independence, detachment, superficial compliancy, and caretaking. A second

pattern related to child abuse trauma involves defiance, hostility, aggression, and coercion. The present study posits that the behavioural patterns associated with insecure adult attachment among individuals with a history of childhood maltreatment are a result of failed emotional processing of these painful interpersonal injuries. Moreover, emotional processing does not occur because of poor emotional socialization by attachment figures resulting in impaired emotional competence (awareness and reflection capacities).

Insecure adult attachment and emotional competence. To reiterate, the present study posits that deficits in emotional competence are central in the development of insecure adult attachment. According to attachment and experiential theory, emotions and associated meanings related to experiences of childhood maltreatment (e.g., fear, resentment, helplessness, guilt, shame; negative views of self and intimate others) are encoded in memory. These memory structures are activated in current interpersonal situations so that the individual experiences the current interpersonal situation in terms of the feelings and perceptions that had occurred in the past and reacts in ways that may be inappropriate to the present situation. This is the hallmark of insecure adult attachment. As previously reviewed, deficits in emotional competence interfere in the ability to process past interpersonal injuries, including experiences of abuse and neglect, construct new meaning and resolve these interpersonal issues. These factors contribute to the continuation of insecure attachment in adulthood.

Insecure attachment in young adults. Insecure adult attachment is associated with several well documented negative effects. Of particular relevance to the present study, are the effects that attachment style has on developmental tasks that occur in

young adulthood (Scharf, Mayseless, & Kivenson-Baron, 2004). According to Arnett (2000, 2001) insecure attachment in young adulthood interferes with three main developmental tasks. These individuals can have more difficulties leaving the family home than those with secure attachments and experience more distress and loneliness. Additionally, insecurely attached young adults may have more difficulty forming mature relationships due to learned behaviours of distancing the self from others and being self-sufficient. Finally, for insecurely attached individuals at this age, differentiation of the self may be hindered by excessive dependence or extreme autonomy that often functions as a defense.

Research supports the negative influence of insecure attachment on healthy functioning among young adults. For example, in a sample of 284 undergraduates, insecure attachment styles were associated with higher depression, generalized anxiety, and emotion dysregulation (Marganska, Gallagher, & Miranda, 2013). Wei, Russell and Zakalik (2005) found that in first year college students ($n = 308$), high levels of attachment anxiety, characterized by a fear of abandonment and rejection, as well as high levels of attachment avoidance, characterized by a fear of dependency and intimacy, was associated with loneliness and subsequent depression. In another sample of young adults ($N=100$), fear of intimacy mediated the association between alexithymia and insecure attachment (Lyvers, Edwards, & Thorberg, 2017). Furthermore, in a sample of young adult heterosexual dating couples (115 couples at Time 1 and 57 at Time 2), attachment security was found to predict the quality of romantic relationship functioning (Holland & Roisman, 2010). Thus, understanding the factors that contribute to insecure adult attachment can be important to enhancing the psychological well-being of young adults.

The Present Study

The literature reviewed above suggests a chain of influence whereby childhood maltreatment, combined with poor emotion socialization predicts insecure adult attachment. The model was developed based on theory and research in the areas of attachment, childhood maltreatment, emotional development, and experiential therapy. The present study tests a path (Figure 1) from childhood maltreatment combined with poor maternal emotion socialization (characteristic of insecure childhood attachment) to impaired emotional competence (awareness of emotion and capacity to reflect on feelings and meanings or experiencing), particularly concerning upsetting events. These deficits, in turn, interfere with emotional and narrative processing of emotional injuries with significant others from the past, including perpetrators of childhood maltreatment. Emotional processing is required for resolution of such interpersonal injuries. The degree to which such interpersonal injuries remain unresolved (i.e., the degree of “unfinished business”) will predict attachment capacities in adulthood.

In the present study, all variables except depth of experiencing were assessed through self-report questionnaires. Childhood abuse and neglect were assessed by retrospective accounts of childhood maltreatment, defined above. Emotion socialization was assessed through retrospective reports of awareness of emotions, acceptance of emotions, and emotion socialization by mothers only, because the literature suggests that mothers play a pivotal role in the development of a child’s emotional and narrative capacities (Fivush & Vasudeva, 2002; Nelson & Fivush, 2004). Emotion socialization by fathers was investigated in exploratory analyses. Alexithymia was assessed in terms of reported difficulties identifying and describing feelings, and externally oriented thinking.

Resolution of interpersonal injuries was assessed through self-reports of “unfinished business” with identified significant others from the past. Adult attachment was assessed through self-reports of the degree of difficulties with safety, intimacy and trust, in current adult intimate relationships. Depth of experiencing was assessed through an observer-rated measure used to rate written narratives about upsetting life experiences.

Research Question and Hypotheses

Research Question: What are the mechanisms through which childhood maltreatment predicts insecure adult attachment?

Though ample support has been found for the association between childhood maltreatment and insecure adult attachment, no study could be located that examines multiple variables that serve as the mechanisms through which this link occurs. The present study investigates the role that specific deficits in emotional competence can have on interpersonal dysfunction in adulthood for individuals that have a history of childhood maltreatment. Findings from the present study are important because they have implications for prevention and intervention to support healthy functioning in young adults.

The following hypotheses are presented in Figure 1.

Hypothesis 1. Childhood maltreatment (abuse and neglect) and maternal emotion socialization are expected to covary (i.e., both have common predictors outside the scope of the present model)..

Hypothesis 2. A greater extent of childhood maltreatment is expected to predict deficits in emotional competence, in terms of greater reported alexithymia and lower depth of experiencing in written narratives about upsetting events.

Hypothesis 3. Less maternal emotion socialization is expected to predict deficits in emotional competence, in terms of alexithymia and less depth of experiencing in written narratives.

Hypothesis 4. Deficits in emotional competence, in terms of greater alexithymia and lower depth of experiencing in written narratives are expected to predict less resolution of interpersonal injuries from the past (more “unfinished business”).

Hypothesis 5. Less resolution of past interpersonal injuries (more unfinished business) is expected to predict greater insecure adult attachment.

Alternative Models and Predictions

The literature on SEM (Kline, 2011) recommends that additional models are specified prior to analyses. Thus six additional models were predicted as alternatives to the original model and were developed based on the theoretical framework and research on which the study is based. As part of model testing in structural equation modelling, it is recommended to predict possible changes to the original model that are also justified based on theory and previous empirical literature because fit of the initial model can be poor (Kline, 2011).

Two modifications of the model were predicted to account for a hypothesized relationship between the variables of alexithymia and depth of experiencing. These included adding a path from alexithymia to experiencing to test for a direct effect (Model 2; see Figure 2) and correlating error terms of these two variables to determine if common factors that are not fully accounted for within the model were the source of a potential relationship (Model 3; see Figure 3).

An alternative prediction (Model 4) is that emotion socialization will mediate the effects of childhood maltreatment on both alexithymia and depth of experiencing in written narratives (see Figure 4). As is predicted in the original Emotional Transmission of Attachment model, greater alexithymia will predict less resolution of interpersonal injuries (more unfinished business). Lower experiencing will also predict less resolution. Less resolution will predict insecure adult attachment.

Alternatively, alexithymia could mediate the relation between childhood maltreatment and depth of experiencing in written narratives, as well as the relation between emotion socialization in childhood and depth of experiencing (Model 5; see Figure 5). Lower experiencing will also predict less resolution of interpersonal injuries. Less resolution will be related to more insecure adult attachment.

Another possible arrangement of the model (Model 6) includes direct effects of alexithymia and depth of experiencing in narratives on adult attachment (see Figure 6). Specifically, greater alexithymia and lower experiencing will predict greater insecure adult attachment.

Lastly, Model 7 proposes direct effects from both childhood maltreatment and emotion socialization to insecure attachment so that other variables in the model only partially predict insecure attachment (see Figure 7).

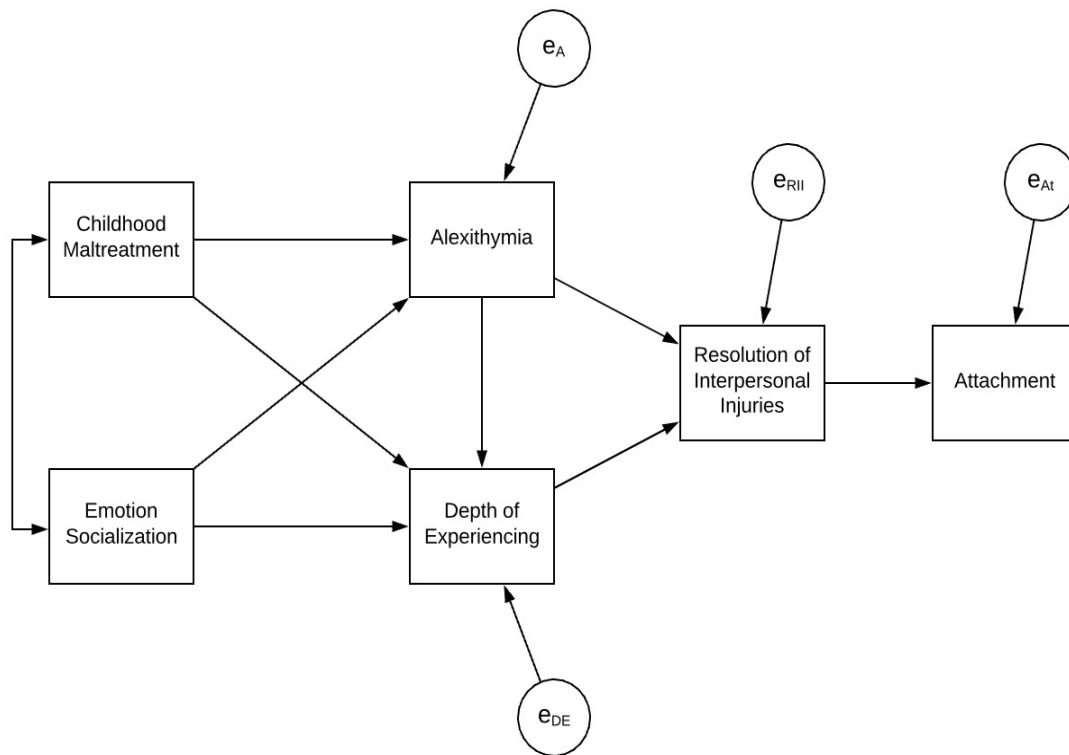


Figure 2. Hypothesized alternative path model (Model 2) of the mechanisms through which childhood maltreatment predicts insecure adult attachment.

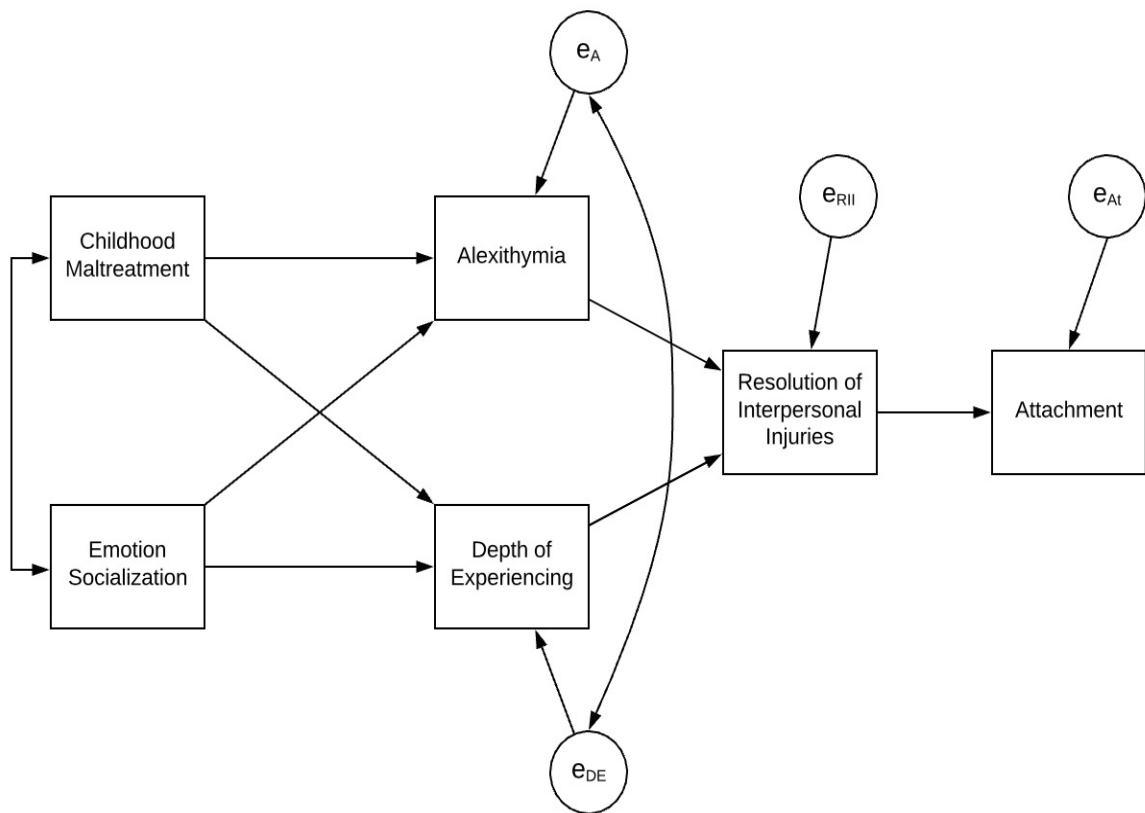


Figure 3. Hypothesized alternative path model (Model 3) of the mechanisms through which childhood maltreatment predicts insecure adult attachment.

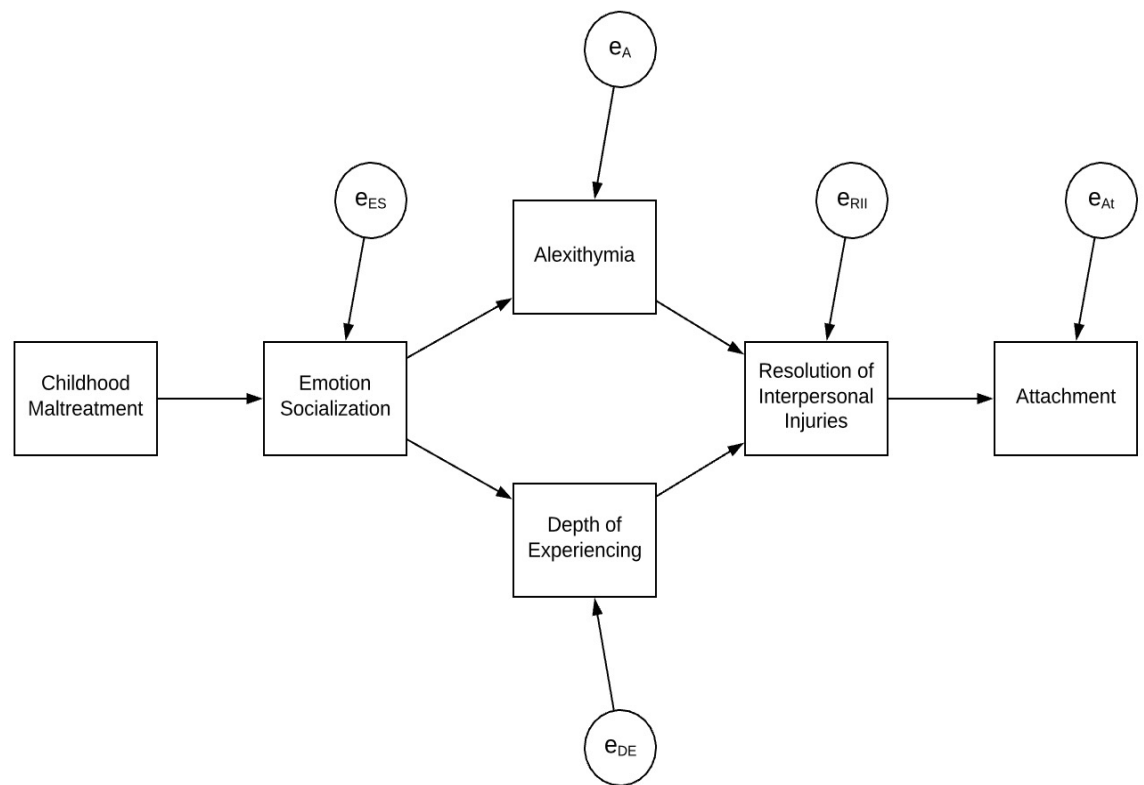


Figure 4. Hypothesized alternative path model (Model 4) of the mechanisms through which childhood maltreatment predicts insecure adult attachment.

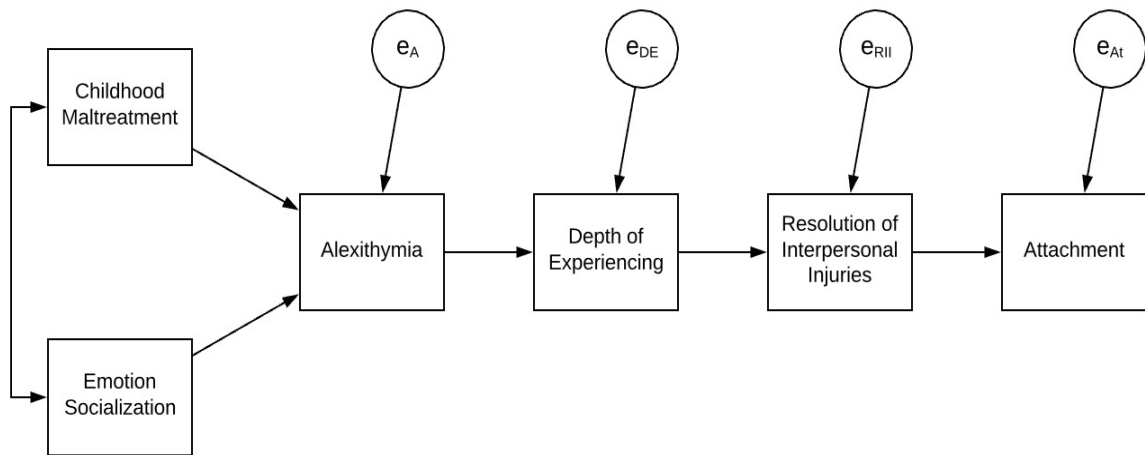


Figure 5. Hypothesized alternative path model (Model 5) of the mechanisms through which childhood maltreatment predicts insecure adult attachment.

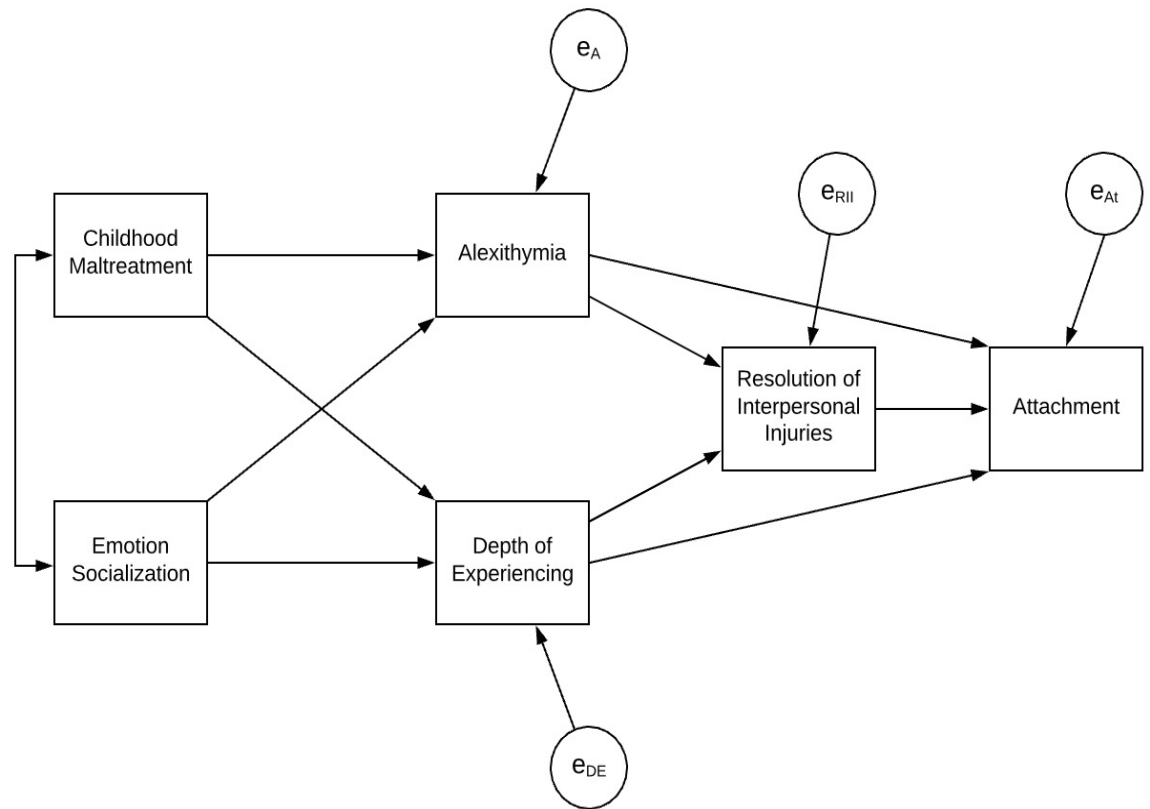


Figure 6. Hypothesized alternative path model (Model 6) of the mechanisms through which childhood maltreatment predicts insecure adult attachment.

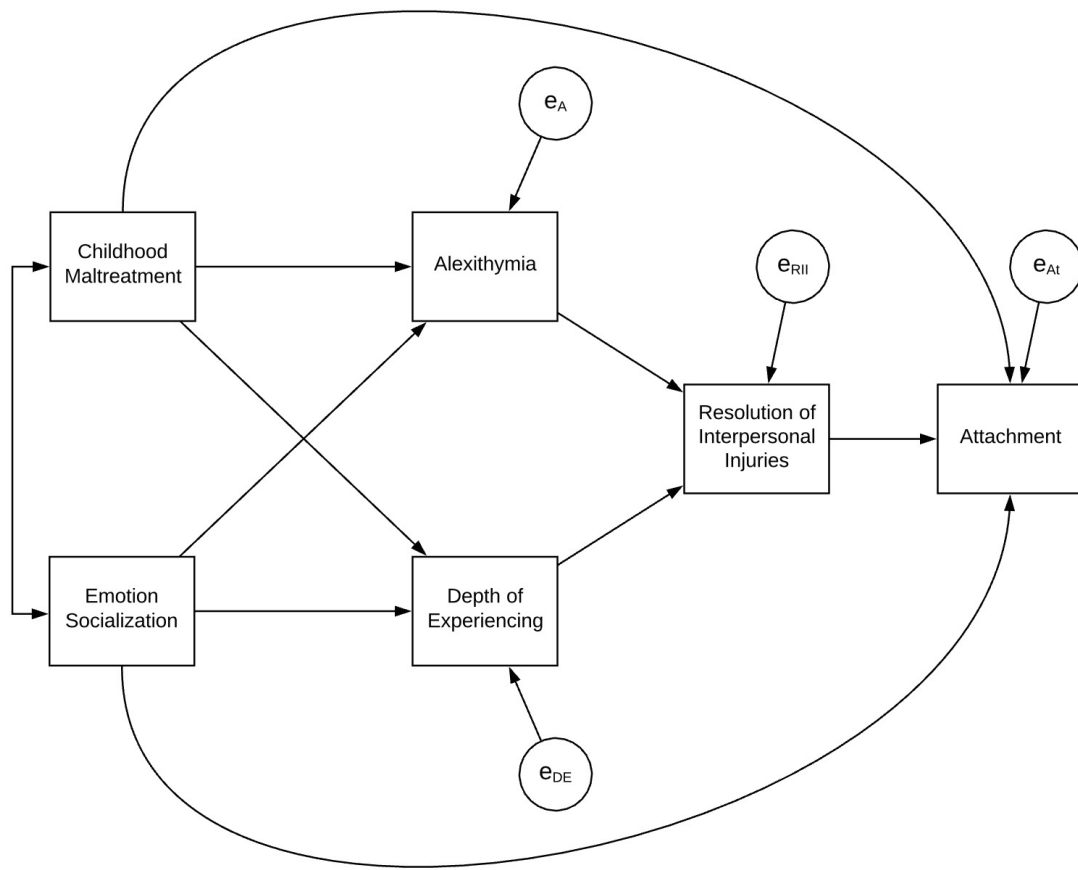


Figure 7. Hypothesized alternative path model (Model 7) of the mechanisms through which childhood maltreatment predicts insecure adult attachment.

CHAPTER II

Method

Participants

Students were recruited through the participant pool at the University of Windsor's Psychology Department. The minimum number of students was calculated through a rule of thumb (Jackson, 2003), although for the present statistical analyses a sample greater than 200 participants is considered ideal (Barrett, 2007; Kelloway, 1998). Although the study concerns the effects of childhood maltreatment, there was no requirement that participants have a history of these experiences. This requirement was not included to maximize variability in the study, as well as to maximize power by obtaining a large number of participants that are required for this type of analysis. Additionally, there are few studies that have examined the path from childhood maltreatment to insecure adult attachment in non-clinical samples. Examining a non-clinical sample is important because it can have implications for . Participants responded to an ad indicating that the study is about associations among upsetting childhood experiences, emotion socialization, and interpersonal relationships. Originally, 252 individuals completed the online study. Of the 252 participants, six of these did not consent to the use of their data and their data were deleted. One participant did not provide a complete narrative, so this case was deleted. One participant had filled out the questionnaire twice with the second response set having a very shortened summary of the previously written narrative. The second set of data was deleted. The final data set used for statistical analyses consisted of 244 participants.

Writing Task

Pennebaker Trauma Narrative (PTN; Pennebaker, et al., 1988). The PTN is a task that requires participants to write continuously for 15 minutes about the most upsetting experience they have had in their lives and associated thoughts and feelings. The narratives were used to code for depth of experiencing. Instructions followed the standard protocol used by Pennebaker in numerous non-clinical contexts assessing the effects of disclosing traumatic experiences (e.g., Harrington, 2012; Le, 2006; Pennebaker, Kiecolt-Glaser, & Glaser, 1988; Pennebaker & Seagal, 1999). Participants thus were directed to connect the topic of the narrative to relationships with others, including parents, lovers, friends, or relatives, to the participant's past, present, or future, or to who the participant has been, who they would like to be, or who they are now. It was expected that deficits in the capacity to reflect on depth of experiencing would be evident in narratives about any highly stressful/upsetting event (the most upsetting in participant's life), as per the standard PTN instructions.

Observer-rated Measure

Client Experiencing Scale (EXP; Klein, Mathieu, Gendlin, & Kiesler, 1969). As previously described, the EXP is an observer-rated measure, originally created to evaluate the quality of a client's exploration of internal experience (usually feelings and meanings) during therapy. The scale was used to measure depth of experiencing in written trauma narratives in the present study. The scale consists of 7 separate categories corresponding to different levels of internal states. Lower levels of experiencing (1 and 2) are characterized by superficial and impersonal content. Moderate levels (3 and 4) involve content that consists of limited personal descriptions of private thoughts or feelings but do not include elaboration or self-examination. Higher levels of

experiencing (5, 6, and 7) are characterized by posing questions or problems about the self, as well as an elaboration of meaning of experiences and beginning to answer questions about the self and experience. This includes making various connections, gaining insight, and finding meaning related to the inner self. The EXP was used in the present statistical analyses as a continuous measure.

Though the EXP was created for use with video recordings and transcripts of therapy sessions, it has been demonstrated to be reliable with other formats such as written responses to open-ended questions and transcripts from interviews (e.g. Barrilleaux & Bauer, 1976; Le, 2006; Mundorf & Paivio, 2011; Sells & Martin, 2001). When used to code written materials, reported inter-rater reliabilities have ranged from Cohen's K of .81 to .98 (Barrilleaux & Bauer, 1976; Le, 2006; Sells & Martin, 2001). Klein and colleagues (1986) reported high correlations with other indicators of successful therapeutic treatment. In the present study, written trauma narratives were divided into statements, which were typically sentences. Then the most frequent or modal EXP rating in the narrative was calculated.

Rating of Narratives

Rater Training. The author and another graduate student in clinical psychology were trained by an expert EXP rater (Dr. Sandra Paivio) in use of the EXP scale to rate written narratives. Each statement in the narratives was assigned a rating. Training included review of the EXP manual (Klein et al., 1986) and examples of expert ratings. Expert ratings were used to understand criteria for each of the seven levels of the scale. Inter-rater reliability was established on practice narratives. Raters consulted with Dr. Paivio when there were difficulties resolving discrepancies. In addition to guidelines

provided in the EXP manual, a list of rules was developed throughout training, to clarify the criteria required for each rating. Intraclass correlation was the statistical analysis used to calculate interrater reliability because of the use of EXP as a continuous variable in the present study (Dennis Jackson, personal communication). Both modal (most frequent) and peak (highest) ratings were determined for each narrative but only modal rating was used for the main analyses. Peak ratings were used for descriptive purposes only. .

Training continued until a satisfactory interrater agreement was reached for the modal ($ICC=.94$) and peak ($ICC=.91$) ratings. Training on the EXP took approximately 20 hours, which is consistent with previous studies (e.g., Holowaty & Paivio, 2012; Mundorf & Paivio, 2011).

Rating Procedure. Raters were blind to scores on self-report questionnaires. The primary rater (the author) rated each narrative in the sample. The reliability rater rated one-third of the narratives. This has been considered sufficient overlap for measures with established psychometric properties (e.g. Goldman, 1997; Greenberg & Malcolm, 2002; Stemler, 2004), and studies utilizing the EXP usually established reliability based on 33% overlap (Pascual-Leone & Yeryomenko, 2017). The overlapped narratives were used to calculate inter-rater reliability. Throughout the process, raters independently rated narratives and alternated between rating overlapping (the reliability sample) and non-overlapping narratives. In order to control for rater drift, ratings were discussed and discrepancies resolved after every sixth narrative in the reliability sample. Satisfactory interrater reliability was obtained for the 81 narratives in the reliability sample for both mode ($ICC=.85$) and peak ($ICC=.81$) ratings.

To examine the validity of EXP ratings, 18 narratives were randomly selected (6 with low level EXP, 6 with moderate level EXP, and 6 with high level EXP) and emotion words were counted. This method was chosen as a validity check since EXP levels largely pertain to the identification and exploration of feelings. Number of emotion words have been found to be significantly correlated with EXP level (Le, 2006). Low EXP levels consisted of levels 1 and 2, moderate level EXP consisted of levels 3 and 4, and high level EXP involved levels 5 and 6. There were no ratings of 7 on the EXP in the present study. The emotion word count was based on the Mind Reading Emotions Library (2004). Both absolute and unique occurrences were examined. Absolute emotion word count (EWC-A) involves all emotion words in a narrative, including repetitions. The unique emotion word count (EWC-U) involved counting each emotion word in a narrative only once. Low EXP resulted in mean EWC-A = 1.5 (SD =1.05) and mean EWC-U =1.5 (SD =1.05); moderate EXP resulted in mean EWC-A = 8.83 (SD =4.16) and mean EWC-U =5.67 (SD =1.75); and high EXP resulted in mean EWC-A = 13.83 (SD =5.74) and mean EWC-U =11.67(SD =4.37). Thus, EXP levels were consistent with identified emotion words which supports validity of EXP ratings.

The present statistical analyses used the modal EXP score (the rating that was most frequently used in the narrative), which is the score used in previous literature to assess enduring levels of experiencing (e.g. Harrington, 2012; Mundorf & Paivio, 2011, Pos et al., 2003). This seemed most indicative of participants' overall capacity to reflect on affective meaning in the present study

Self-Report Questionnaires

Demographic Questionnaire. The demographic questionnaire was used to obtain descriptive information. The questionnaire asked participants to provide information including age, gender, relationship status, ethnic background, student status, and employment status (see Appendix A). Past therapy experience and current psychotropic medication were assessed to gain information on the portion of participants that received psychological or psychiatric treatment in the past. This was asked to gain a sense of the degree to which participants have processed upsetting events in the past and thus have previously reflected on the meaning of these events.

Childhood Trauma Questionnaire (CTQ; Bernstein & Fink, 1998). The CTQ retrospectively assesses the extent (frequency x severity) of childhood abuse and neglect. The questionnaire includes items describing experiences that range in severity and clients are instructed to rate the frequency of each experience on a 6-point Likert scale (1=never true, 5=very often true). Consistent with other studies, the longer 70-item version was administered in the present study (e.g., Didie, Tortolani, Pope, Menard, Fay, & Phillips, 2006; Kelly, Tykra, Anderson, Price, & Carpenter, 2008; Lee, Geraciotti, Kasckow, & Coccaro, 2005). However more recent studies have used and validated the short form of the scale (e.g., MacDonald, 2016; Spinhoven, Hickendorff, Bernstein, Penninx, van Hemert, Elzinga, 2014, Suliman, Mkabile, Fincham, Ahmed, Stein, Seedat, 2009). Thus, the present study used the more empirically validated, 28 item measure in analyses. Subscale scores are yielded for multiple types of abuse (emotional, physical, sexual) and neglect (emotional, physical). Convergent validity has been demonstrated with interview-based ratings and therapist-ratings of abuse (Bernstein & Fink, 1998; Fink, Bernstein, Handelsman, Foote, & Lovejoy, 1995). Additionally, internal consistency was

found to range between .79 and .95 and test-retest reliability ranging from .79 to .86 over an average of 4 months. The CTQ was demonstrated to be appropriate for use in community and student samples (Paivio & Cramer, 2004; Scher, Stein, Asmundson, McCreary, & Forde, 2001) with five factors accounting for 53.5% of the variance among items (representing the various forms of abuse and neglect) that replicated those found in studies of inpatient and clinical samples (Paivio & Cramer, 2004). Total scores were used for the statistical analyses in the present study. In the current study, Cronbach's alpha for the 28 items overall was .94 indicating good internal consistency.

History of Parenting Emotion Socialization- Mother Version (HOPES- MV; Hakim-Larson & Scott, 2013). The HOPES-MV is an unpublished questionnaire that retrospectively assesses the degree to which mothers taught participants (as children) to identify and regulate emotions (emotion socialization). The measure was developed based on a meta-emotion theory (Gottman & DeClaire, 1998), as well as interviews on meta-emotion conducted by the measure authors. The questionnaire consists of 36 items that are rated on a 5-point Likert scale (1=strongly disagree, 5=strongly agree). At present, there are preliminary findings regarding the psychometric properties of the measure. Though both mother and father versions were administered, only data from the mother versions were used in the main analyses of the present study. Data from the father versions were used in supplementary exploratory additional analyses. Johnson (2014) found high internal consistency through high alpha values for the various subscales of the mother version (.89 for Awareness of Emotions, .91 for Acceptance of Emotions, and .85 for Emotion Coaching). Additionally, the measure was significantly correlated with variables that are theoretically correlated with emotion socialization (i.e.,

behaviours based on guilt and shame; Johnson, 2014). In the present study, high internal consistency was also found for the overall items (.97) for both the mother and father versions of the scale. Internal consistency for all subscales on both the mother (.91 for Awareness of Emotions, .94 for Acceptance of Emotions, and .90 for Emotion Coaching) and father (.90 for Awareness of Emotions, .94 for Acceptance of Emotions, and .90 for Emotion Coaching) versions were also high, supporting good internal consistency for the measure. Additionally, in the present study, both HOPES-MV and HOPES-FV total scores were significantly correlated with variables that should be correlated theoretically (e.g., childhood trauma; see Table 8).

Toronto Alexithymia Scale (TAS-20; Bagby, Parker, & Taylor, 1994; Bagby, Taylor, & Parker, 1994). The TAS-20 assesses alexithymia on three subscales that measure (a) difficulty identifying feelings, (b) difficulty describing feelings, and (c) externally oriented style of thinking. The questionnaire consists of 20 items rated on a 5-point Likert scale (1=strongly disagree, 5=strongly agree). The alpha coefficient for the full scale was reported as .73 (Paivio & McCulloch, 2004) and test-retest reliability for a 3-week interval was reported as .77 for the total score (Bagby, Parker, & Taylor, 1994). Evidence for concurrent, convergent, and discriminant validity were also found (Bagby, Taylor, & Parker, 1994). Overall internal consistency (Cronbach's alpha) for the measure was .88 in the present study, indicating good internal consistency.

Resolution Scale (RS; Singh, 1994). The RS was designed to measure the degree of negative feelings, unmet needs, and feelings of worthlessness in association with a particular significant other person from the past ("unfinished business") who is identified on the questionnaire. As described above, "unfinished business" consists of enduring

negative feelings towards an individual who was important to development, such as a parent or caregiver, extended family member, or teacher. The scale was used to measure resolution of interpersonal injuries in the present study. The RS measure was selected since unfinished business is a commonly occurring phenomenon in non-clinical samples (Paivio, personal communication) and was successfully validated using an undergraduate sample (Singh, 1994). Original instructions for the scale, administered to a student sample, were modified for the present study. Present instructions asked participants to identify a person specifically from their childhood (e.g., mother, father, brother) and respond to items in terms of the degree of lingering bad feelings or “unfinished business” with this person. The modification was done to potentially link experiences to an experience earlier in the lifespan that may have interfered in the development of emotional competence and/or the development of a healthy or secure attachment. Additionally, the specification of unfinished business that occurred in childhood maintains consistency across cases. In the case that a participant did not have unresolved issues with a person from childhood, they were asked to write N/A in the space provided on the questionnaire and to not complete the measure. The 12-item scale was administered, though only the 11 items in the scale that were found to be psychometrically sound were used in the analysis (Singh, 1994). Items are rated on a 5-point Likert scale (1=not at all, 5=very much). Higher scores on the scale are indicative of more “unfinished business” from childhood interpersonal injuries. Individuals who indicated N/A were given a rating of 1 on each of the items to indicate that they did not have any “unfinished business.” Singh reported test-retest reliability of .73 with a student sample ($n = 135$) and .81 with a clinical sample ($n = 71$) over the period of one

month, and significant correlations between change on the RS and change on measures of therapeutic outcome, including global distress from interpersonal problems. Paivio and colleagues (2010) reported alpha on the RS to be .82 with a clinical sample ($n=51$) undergoing emotion-focused therapy for trauma. Internal consistency for the RS in the present study was a Cronbach alpha of .92 indicating good internal consistency.

Relationship Scales Questionnaire (RSQ; Griffin & Bartholomew, 1994). The RSQ is a 30-item questionnaire that assessed adult attachment patterns. Items in this measure were taken from three measures of adult attachment (Bartholomew & Horowitz, 1991; Collins & Read, 1990; Hazan & Shaver, 1987) and are measured on a 5-point Likert Scale (1= not at all like me, 5= very much like me). The measure consists of four subscales measuring attachment styles (secure, preoccupied, fearful, and dismissing). Subscale scores are derived by averaging the items for each attachment style. The scale was designed to yield continuous subscale scores rather than categorical. Test-retest reliability was reported as ranging from .39 to .58 (Scharfe & Bartholomew, 1994). Internal consistencies for the various scales were reported with coefficient alphas of .48 for preoccupied style, .70 for dismissing style, and .76 for fearful style (Brussoni., Jang, Livesley, & Macbeth, 2000). In the present study, internal consistencies for the RSQ subscales scales were Cronbach's alphas of .40 for preoccupied style, .72 for dismissing style, and .76 for fearful style. Given the low internal consistency found for the preoccupied style, this measure was used in combination with corresponding items on a second measure of adult attachment, the Relationship Questionnaire, described below.

Relationship Questionnaire (RQ; Bartholomew & Horowitz, 1991). The RQ provides paragraph descriptions for four prototypical attachment patterns (secure, fearful,

preoccupied, and dismissing) in close relationships. Similarity to each prototype is rated on a 7-point Likert scale (1= not at all like me, 7=very much like me). This scale was designed to provide continuous ratings for each of the attachment style patterns.

Participants are first given a forced choice question, for which they are required to choose one prototype that best characterizes themselves. The forced choice question is not used in analyses but serves to minimize order effects that might occur when asked to rate correspondence to each prototype. RQ attachment ratings were demonstrated to be significantly related with the Adult Attachment Interview (AAI; George, Kaplan, & Main, 1996) ratings ($\chi^2(6) = 24.8, p < .0001$; Bartholomew & Shaver, 1998). Moderate convergent validity within each attachment dimension was demonstrated with scores ranging from .34 to .50 (Griffin and Bartholomew, 1994). Moderately high stability was found, with 63% of a sample of young women endorsing the same attachment style following an eight months long period (Scharfe & Bartholomew, 1994).

Insecure attachment composite score. For an overall measure of insecure attachment, a composite score for each insecure attachment pattern was made by combining the two attachment measures. The RSQ insecure subscale scores and insecure items on the RQ were converted to standard scores, then insecure subscale scores on the RSQ were combined with corresponding insecure prototype scores on the RQ to compose a total score for insecure attachment. This composite score was a modified form of a procedure developed by Ognibene and Collins (1998). Since many measures of adult attachment are categorical, these two measures were chosen because of their continuous nature, which is required for the path analysis. Since most measures of attachment are developed to yield subscale scores of attachment patterns rather than an overall score, this

method was also chosen in the present study due to the ability to form an overall score for insecure attachment that will be used to test the hypothesized model.

The correlation between overall scores on the two scales was .592 ($p < .01$). In regards to correlations between corresponding subscales of the two measures, significant correlations were found for the fearful subscales ($r = .56$, $p < .001$), the preoccupied subscales ($r = .58$, $p < .001$), and the dismissive subscales ($r = .438$, $p < .001$). Only insecure subscales were used to obtain an overall score for insecure attachment. For the 16 individual items used in the insecure attachment composite (Kendall Soucie, personal communication), Cronbach's alpha was .74, indicating sufficient internal consistency.

A summary of the measures used is presented in Table 1.

Table 1.

Summary of measures and the interpretation of total scores in the present study

Variable Construct	Measure(s) Used	Range of Total Scores		Interpretation of Scores
		Min.	Max.	
Childhood Maltreatment	Childhood Trauma Questionnaire (CTQ)	25	125	Higher scores indicate more severe childhood abuse and neglect
Emotion Socialization	History of Parenting Emotion Socialization -Mother Version (HOPES-MV) and Father Version (Hopes-FV)	36	180	Higher scores indicate better quality emotion socialization
Alexithymia	Toronto Alexithymia Scale (TAS-20)	20	100	Higher score indicate more disturbance from alexithymia
Depth of Experiencing	Client Experiencing Scale (EXP)	1	7	Higher scores indicate better quality or higher levels of experiencing
Resolution of Interpersonal Injuries	Resolution Scale (RS)	1	55	Higher scores indicate more disturbance from “unfinished business”
Insecure Adult Attachment	Relationship Scales Questionnaire (RSQ) and Relationship Questionnaire (RQ)	N/A (composite score derived from standardized scores)		Higher scores indicate more disturbance from insecure attachment

Procedure

Data were collected using an online survey consisting of a writing task and self-report questionnaires. Participants were directed to the online study after responding to an advertisement on the University of Windsor participant pool. The advertisement indicated that individuals should not participate in cases where they had recently (i.e., within the past three months) deliberately injured themselves, experienced suicidal thoughts, or have experienced a severely traumatic event (e.g., sudden death of a loved one). Additionally, instructions stated not to participate if hospitalized for psychiatric purposes in the past year or have recently had extreme reactions to stress such as feeling disconnected from thoughts, emotions, and sense of identity. Participants were provided with a consent form prior to participation in the study.

The writing task was administered first because of the 15-minute time limit for the task. Participants are notified of the 15-minute time limit in the instructions for the task and a timer was visible on the page throughout the writing task. At the end of the 15 minutes, participants were instructed to commence to the 6 self-report questionnaires. Participants were required to manually click the button for the next page when the timer presented on the page indicated that they have been on the page for 15 minutes. The data output from the online survey had a record of the duration of time that they were on the page. Data were analyzed with and without participants that went over the time limit and no differences were found. The questionnaires were in the same order for all participants. Demographic items were administered first, then the measures were administered in the following order: CTQ, HOPES-MV, TAS-20 RS, RSQ, then RQ.

Following completion of the questionnaires, participants were directed to a page that described the terms pertaining to consent of data retention, as well as the use of data in subsequent research. Participants were then directed to a page that included contact information of the primary investigator, counselling services at the university, and resources in the community.

CHAPTER III

Results

Overview of Statistical Analyses

Path analysis was used to statistically analyze the predicted path models. Prior to conducting the analysis, assumptions of the analyses were tested in order to screen the data.

A path model refers to a structural model for observed variables (Kline, 2011). Path models represent causal hypotheses which are represented from left to right in the diagram of the model, with direct effects represented as a single arrow head (see Figures 1 to 7). Errors (residuals) are represented by circles in the diagrams and represent any unexplained variance in a variable (Kline, 2011). Path analysis was chosen as the appropriate procedure for the present study because all hypotheses consisted of observed (measured) variables and the predicted models did not include any latent variables. Effects of variables in the model were estimated with path coefficients and are interpreted as regression coefficients in multiple regressions (Kline, 2011). The hypothesized path model in the present study was analyzed using maximum likelihood estimation, which produces parameter estimates that maximize agreement between the model and the observed data (Kline, 2011).

The following results are reported for 244 cases. Data screening, descriptives, and correlations were conducted using SPSS (Version 22.0) and model testing was conducted using R Studio (Version 3.3.3).

Data Screening

Prior to conducting data analyses, the data were examined for missing data. A missing data analysis revealed that all six variables in the analysis had less than 5 percent of their data missing. Little's MCAR test was not significant, indicating that data were missing completely at random. When less than 5% of data points are missing and data are missing completely at random, most methods of handling data are applicable and will provide comparable results (Tabachnick & Fidell, 2006). Expectation maximization (EM) was used to replace missing items because it is considered the best method of handling missing data when only a small amount is missing and the data are missing at random (Cohen, Cohen, West, Aiken, 2003).

The data were then examined to test whether the assumptions for the reported data analyses were met. Regarding the nature of the data, the assumption of continuous data for all variables was met. The assumption of independence of observations was met and accomplished through the design of the study, which included random sampling from a student population. The assumption of adequate sample size was also examined. The collected sample size was calculated through a rule of thumb that recommended having a ratio of 20 cases to every parameter in the model (Jackson, 2003). Experts also state that for the required analysis, a sample greater than 200 participants is ideal (Barrett, 2007; Kelloway, 1998). The present sample size is 244 and is therefore adequate.

The assumption of specification of the hypothesized models was fulfilled by using theory and previous empirical research to form the predicted parameters of the original and alternative models (Kline, 2011).

To test for univariate outliers, data were converted to z-scores. Z scores with absolute values greater than 3.29 are possible outliers for continuous variables

(Tabachnick & Fidell, 2006). One outlier was found for one participant, with a z-score higher than 3.29 on the CTQ. This data point was examined and no patterns of responding for this participant were evident. This data point was winsorized (Warner, 2012). Outliers that exceeded the 3.29 z-score cutoff in the EXP variable were not considered outliers, since these scores were not due to measurement error, but were thought to represent high levels of experiencing. The variables used in the analyses were then examined for multivariate outliers using Mahalanobis distance (Kline, 2011). To test for multivariate outliers, Mahalanobis distance was examined at $p < .001$ using a χ^2 square critical value with the number of variables in the analysis as the degrees of freedom (Tabachnick & Fidell, 2006). Mahalanobis distance statistics for three cases were above the critical value for this model, $\chi^2(6) = 22.46$. Cook's distance was then used to assess for influential cases that had multivariate outliers (Tabachnick & Fidell, 2006). Cook's distances with a value greater than 1 are considered concerning influence (Cook & Weisberg, 1982). In the present data, none of the Cook's distance values were greater than 1 and therefore no influential cases were present. All cases were thus left in the data set.

Next, the data were examined for the assumption of multivariate normality of endogenous variables. First, univariate normality was tested by examining skewness and kurtosis of each variable included in the analyses using the Shapiro-Wilk test. All skewness values were in the normal range (in the range of -2 and 2; Field 2009). The depth of experiencing variable (EXP) was not in the normal range for kurtosis (-2 and 2; Field, 2009) with a value of 4.01. This could be due to the outliers indicated above that were a result of high scores on the EXP scale. These data were not removed because no

measurement error had occurred as high scores were results of narrative coding. The rest of the variables were within the normal range for kurtosis. Results of the Shapiro-Wilk test of normality indicated that the resolution of interpersonal injuries (RS), alexithymia (TAS-20), and depth of experiencing (EXP) were significantly different than the normal distribution ($p > .05$). One potential cause of the non-normal distribution of resolution variable were the scores of 1 for participants that indicated that they did not have any “unfinished business.” The Shapiro-Wilk test indicated that the adult attachment variable was normally distributed ($p > .05$). Because univariate normality of the endogenous variables was not in place, this indicated that the assumption of multivariate normality of endogenous variables was also not met (Kline, 2011). As a result, the Satorra- Bentler correction was applied to analyses of the models being tested to correct for non-normality (Kline, 2011).

Multicollinearity was examined using tolerance and variance inflation factor (VIF) values. Tolerance values were all greater than .1 and VIF values were all below 10 (Field, 2009), indicating that multicollinearity was not present in the data.

Demographic Characteristics

Demographic characteristics for 244 participants in the sample are presented in Table 2. Participants’ ages ranged from 18-53 years, most were female, were employed, were not on psychiatric medication and had not attended therapy. Approximately half were single or in a relationship and were in first or second year of university. Close to half of participants identified with an ethnic or racial group other than European or Caucasian.

Table 2.

Participant Demographic Characteristics

Variable	M	SD
Age	20.19	3.11
	N	%
Gender		
Male	52	21.3
Female	191	78.3
Other	1	.4
Ethnic Origin		
European or Caucasian	140	57.4
African	8	3.3
Aboriginal	3	1.2
East Asian	13	5.3
South Asian	14	5.7
Arab or West Asian	36	14.8
Caribbean	3	1.2
South or Central American	6	2.5
Other	21	8.6
Relationship Status		
Single	133	54.5
In a relationship	106	43.4
Married	4	1.6

Table 2 continued.

Client Demographic Characteristics

Variable	N	%
Employment Status		
Not employed	86	35.2
Employed part-time	148	60.7
Employed full-time	7	2.9
Year in University		
First year	75	30.7
Second year	65	26.6
Third year	49	20.1
Fourth year	39	16.0
Fifth year	7	2.9
Sixth year	1	.4
Received Therapy		
In the past	48	19.7
Currently	16	6.6
None	177	72.5
Current medication	15	6.1

Note: $N=244$; Three values were missing for Age and one response was invalid; one value was missing for Relationship Status; Eight values were missing for Year in University; Three values were missing for Employment Status; Three values were missing for therapy services; One value was missing for Education.

Independent sample t-tests were conducted to compare differences in demographic characteristics in variables used in the analyses. -Means for males and females, as well as results of t-tests are reported for each variable in Table 3. No significant differences were found between genders for any of the variables in the analyses.

Table 3.

Independent Sample T-test between Female and Male Participants

Variable	Female (n=191)		Male (n=52)		<i>df</i>	<i>t</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
CTQ	37.49	14.78	38.90	15.59	241	.60	.547
HOPES-MV	135.75	30.46	135.23	23.22	103.85	-.14	.894
TAS-20	49.63	13.03	51.20	12.62	241	.78	.439
EXP	3.09	0.77	2.88	0.64	241	-1.74	.082
RS	26.82	12.01	26.40	13.20	241	-.215	.830
IA	0.14	3.56	-0.59	2.65	106.54	-1.62	.109

Note: CTQ=Childhood Trauma Questionnaire (Bernstein & Fink, 1998); HOPES-MV= History of Parenting Emotion Socialization- Mother Version (Hakim-Larson & Scott, 2013); EXP = Client Experiencing Scale (Klein, Mathieu, Gendlin, & Kiesler, 1969); RS= Resolution Scale (Singh, 1994); Insecure Attachment = combined standardized scores for insecure scales on the Relationship Scales Questionnaire and the Relationship Questionnaire.

Similarly, no significant differences were found for relationship status for any of the variables in the main analyses. Results of these t-tests are reported for each variable in Table 4.

Table 4.

Independent Sample T-test between Single Participants and Those in a Relationship

Variable	Single (n=133)		In Relationship (n=110)		df	t	p
	M	SD	M	SD			
CTQ	37.39	13.94	38.56	16.16	241	-.61	.544
HOPES-MV	135.63	27.15	134.90	31.68	241	-.19	.847
TAS-20	51.05	12.84	48.86	13.06	241	1.31	.190
EXP	3.02	0.76	3.07	0.74	241	-.52	.605
RS	26.60	11.83	26.73	12.71	241	-.08	.936
IA	0.24	3.40	-0.32	3.38	241	1.28	.202

Note: In relationship= in any romantic relationship, including marriage; CTQ=Childhood Trauma Questionnaire (Bernstein & Fink, 1998); HOPES-MV= History of Parenting Emotion Socialization- Mother Version (Hakim-Larson & Scott, 2013); EXP = Client Experiencing Scale (Klein, Mathieu, Gendlin, & Kiesler, 1969); RS= Resolution Scale (Singh, 1994); Insecure Attachment = combined standardized scores for insecure scales on the Relationship Scales Questionnaire and the Relationship Questionnaire.

However significant differences for ethnicity (European and Caucasian versus other ethnic/racial groups) were found for the CTQ, with higher means found for non-European and non-Caucasian participants than European and Caucasian participants (see Table 5). No other differences between these two groups were found for any other variables in the main analyses.

Table 5.

Independent Sample T-test between European or Caucasian participants and Those from Other Ethnic/Racial Groups

Variable	European or Caucasian (n=140)		Other ethnic/racial groups (n=104)		<i>df</i>	<i>t</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
CTQ	36.16	13.68	40.17	16.30	198.65	2.04	.043
HOPES-MV	137.71	29.11	132.28	29.18	242	-1.44	.063
TAS-20	48.95	13.51	51.49	12.06	242	1.52	.130
EXP	2.96	0.63	3.15	0.87	177.10	1.87	.063
RS	27.03	11.87	26.31	12.73	242	-.46	.650
IA	0.15	3.48	-.20	3.29	242	-.77	.439

Note: CTQ=Childhood Trauma Questionnaire (Bernstein & Fink, 1998); HOPES-MV= History of Parenting Emotion Socialization- Mother Version (Hakim-Larson & Scott, 2013); EXP = Client Experiencing Scale (Klein, Mathieu, Gendlin, & Kiesler, 1969); RS= Resolution Scale (Singh, 1994); Insecure Attachment = combined standardized scores for insecure scales on the Relationship Scales Questionnaire and the Relationship Questionnaire.

Additionally, t-tests indicated significant differences for multiple variables when comparing those who had participated in therapy, in the past or at the time of data collection, and those who had never received therapy. As is shown in Table 6, variables included the CTQ, with higher means for a more severe history of childhood maltreatment, for those who had received therapy than those who did not. Similarly, significant differences were found for the HOPES-MV with lower means (less emotion socialization) for those who received therapy than those who had never received therapy. This was similar for differences for the HOPES-FV with less emotion socialization. for those that received therapy than those who had not. Significantly higher EXP scores were also found for those who had received therapy than those who did not. Composite insecure attachment scores were also significantly higher (more insecure adult attachment) for those who had received therapy than those that had never received therapy. Of note, the group that did not participate in therapy was larger than the group that had such experience.

Table 6.

Independent Sample T-test between Participants who Received Therapy and Those Who Have Never Received Therapy

Variable	Experience in Therapy (n=64)		No Therapy Experience (n=177)		<i>df</i>	<i>t</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
CTQ	45.97	17.65	35.03	12.82	88.18	-4.54	<.001
HOPES-MV	127.47	35.65	137.89	26.12	88.62	2.14	.035
TAS-20	52.71	14.96	49.23	11.98	93.80	-1.68	.097
EXP	3.23	0.89	2.98	0.69	92.10	-2.10	.038
RS	27.69	12.59	26.43	11.99	239	-.71	.479
IA	1.63	3.39	-.55	3.20	239	-4.60	<.001

Note: CTQ=Childhood Trauma Questionnaire (Bernstein & Fink, 1998); HOPES-MV= History of Parenting Emotion Socialization- Mother Version (Hakim-Larson & Scott, 2013); EXP = Client Experiencing Scale (Klein, Mathieu, Gendlin, & Kiesler, 1969); RS= Resolution Scale (Singh, 1994); Insecure Attachment = combined standardized scores for insecure scales on the Relationship Scales Questionnaire and the Relationship Questionnaire.

Themes of Trauma Narratives

Table 7 presents common themes that were derived from narratives. A large portion of narratives were focused on the death of someone close to the individual. Out of all the participants, only 15 (6%) focused their narrative on childhood maltreatment.

Focus of parents in narratives. In regards to the focus on parents in narratives, 11 (4.51%) narratives were specifically related to mothers (including one step-mother) with 8 narratives focused on abuse or relationship issues with the participant's mother, 2 on the death of a participant's mother, and 1 on a participant's mother's illness. Twenty-eight (11.48%) were specifically related to fathers with 16 narratives focused on relationship issues with the participant's father or abuse by the participant's father, 2 were related to the father's illness, 8 were focused on death of the participant's father, and 2 focused on suicide or a suicide attempt of the participant's father. Twenty-eight (11.48%) of the narratives focused on both parents (e.g., divorce, relationship with parents).

Table 7.

Themes from Trauma Narratives

Theme	<i>n</i>	%
Death of a close individual	64	26.22
Troubled relationships with parents (mother or father)	20	8.20
Mental health difficulties (self or someone close to them)	16	6.56
Parents' divorce or marital issues	16	6.56
Abuse in childhood	15	6.15
Difficulties within romantic relationships and break ups	14	5.74
Issues within friendships	12	4.92
Physical Illness or disability of family member	7	2.87
Bullying	6	2.46
Abusive romantic relationship	4	1.64
Death of pet	4	1.64
Other	66	27.05

Note: *n*= number of participants that wrote a narrative that encompassed the identified theme; %= percentage of 244 participants; Other = themes that did not fall under a similar category as the focus of other narratives (e.g., getting lost as a child, incident that caused feelings of embarrassment, job loss)

Resolution Scale

Table 8 presents individuals identified on the RS. These individuals included a variety of significant others, including family members and friends. As well, 16% of participants did not identify their relationship to the significant other and 27.46% reported having no unfinished business.

Table 8.

Individuals Identified as Focus of Resolution Scale

Individual	<i>n</i>	%
Father or step-father	28	11.48
Mother	8	3.28
Brother or sister	17	6.97
Extended family member	11	4.51
Romantic-partner	26	10.66
Friend	44	18.03
Other	4	1.64
Unknown	39	15.98
N/A	67	27.46

Note: *n*= number of participants that identified the indicated relationship on the RS; %= percentage of 244 participants; Romantic partner =most referred to past romantic partners, many in teenage years; Other= an individual that did not fall under main categories (e.g., teacher); Unknown = participant did not provide an individual with whom they had unfinished business in the space provided (i.e., left the space blank) or participants identified the individual by name without indicating the relationship (e.g., mother, friend); N/A = participant denied having unfinished business.

Connection between the Resolution Scale and other variables. A minority of participants (19%) identified individuals on the Resolution Scale, measuring the resolution of interpersonal injuries, who were clearly related to individuals and events that were the focus of other measures. Analyses indicated that 3.28% of participants identified their mothers as the person with whom they had unfinished business, thus there was a connection between the RS and HOPES-MV for only these cases. Four participants (1.64%) identified a perpetrator of abuse on the RS that they also wrote about in the narrative; one participant wrote a narrative about an abusive romantic partner that was also identified in the RS; 18 (7.34%) participants wrote about upsetting events on the PTN that were related to a parent identified in the RS but childhood abuse or neglect was not specifically indicated in these narratives; 17 (6.97%) participants wrote narratives about the individual identified on the RS but these were not parents and not related to abuse. Of all the narratives, 5 (2.05%) identified mothers on the RS and focused on their mothers in narratives. Additionally, 15 (6.15%) participants identified their fathers on the RS and wrote about them in the narrative. For 21 (8.61%) participants, it was unclear whether there was a connection between the focus of the narrative and the individual identified in the RS.

Descriptives

Table 9 presents the means and standard deviations of the variables in the path analysis. The mean total CTQ (childhood maltreatment) score was comparable to CTQ means seen in other undergraduate samples (e.g., Bernstein & Fink, 1998; Paivio & Cramer, 2005; Paivio & McCulloch, 2004). Descriptive information for both the mother and father version of the HOPES (emotion socialization) are presented. Although the

mean score for the HOPES-FV is lower, it is not substantially different than the mean score on the HOPES-MV. In terms of alexithymia (TAS-20), on average, participants scores fell in the non-alexithymic range, as scores of 52 and above represent significance or potential significance on the TAS (Bagby, Parker, & Taylor, 1994; Bagby, Taylor, & Parker, 1994). These scores are comparable to those found in other undergraduate populations (Le, 2006; Paivio & McCulloch, 2004). The mean EXP ratings in Table 4 represents moderate levels of experiencing (EXP), that is, narratives on average were personal and affective, but had limited references to meaning, insight, or causation. Resolution of interpersonal injuries (RS) scores in Table 5 are comparable to scores seen post- treatment in clinical samples (Mundorf & Paivio, 2011; Paivio & Greenberg, 1995), thus indicating that most participants felt “resolved” in terms of unfinished business with the other identified on the questionnaire. In terms of Insecure Attachment, Table 5 presents the mean from the composite score derived from standardized scores on the RSQ and RQ. The scores for this composite in the present study ranged from -8.75 to 8.78.

Table 9.

Means and Standard Deviations of Variables in Path Model

Variable	<i>M</i>	<i>SD</i>
CTQ	37.87	14.95
HOPES-MV	135.4	29.2
HOPES-FV	121.97	30.99
TAS-20	50.03	12.94
EXP	3.05	.75
RS	26.72	12.22
Insecure Attachment	.00	3.4

Note: CTQ=Childhood Trauma Questionnaire (Bernstein & Fink, 1998); HOPES-MV= History of Parenting Emotion Socialization- Mother Version (Hakim-Larson & Scott, 2013); HOPES-FV= History of Parenting Emotion Socialization- Father Version (Hakim-Larson & Scott, 2013); EXP = Client Experiencing Scale (Klein, Mathieu, Gendlin, & Kiesler, 1969); RS= Resolution Scale (Singh, 1994); Insecure Attachment = combined standardized scores for insecure scales on the Relationship Scales Questionnaire and the Relationship Questionnaire.

Childhood Trauma Questionnaire subscale scores. Overall, 132 participants indicated a low to severe level of childhood maltreatment on at least one of the types of abuse or neglect measured on the CTQ. As such, 112 of the participants indicated minimal/ no childhood abuse or neglect in childhood. Means and standard deviations for the various forms of childhood abuse and neglect as measured on the CTQ are presented in Table 10. Table 11 presents the proportion of participants that experienced each type of abuse, according to severity. Together these scores indicate that approximately half of the participants reported mild to moderate levels of severity for at least one of the types of abuse and neglect with highest reported prevalence for experiences of emotional abuse and neglect. These results are comparable to means reported in other studies of undergraduate populations (e.g., Paivio & Cramer, 2004).

Table 10.

Means and Standard Deviations for Types of Abuse as Measured on the Childhood Trauma Questionnaire

Type of Abuse	<i>M</i>	<i>SD</i>
Emotional abuse	9.48	5.41
Physical abuse	6.54	3.15
Sexual abuse	6.03	2.93
Emotional neglect	9.41	4.8
Physical neglect	6.48	2.7

Note: N=244

Table 11.

Number and Percentage of Participants Who Experienced the Various Forms of Abuse, as Measured on the Childhood Trauma Questionnaire, Categorized by Severity

Type of Abuse	Low (to Moderate)		Moderate (to Severe)		Severe (to Extreme)	
	<i>n</i>	%	<i>N</i>	%	<i>n</i>	%
Emotional Abuse	35	14.34	19	7.79	40	16.39
Physical Abuse	16	6.56	11	4.51	18	7.38
Sexual Abuse	20	8.2	20	8.2	10	4.1
Emotional Neglect	51	20.9	29	11.89	16	6.56
Physical Neglect	22	9.02	13	5.33	14	5.74

Note: N=244

Correlations among Variables

Table 12 presents the inter-correlations among all variables in the main analyses. As expected, higher levels of the CTQ were associated with lower levels of maternal and paternal emotion socialization (HOPES-MV and HOPES-FV), greater scores on the TAS and greater insecure adult attachment. These findings support the effects of childhood maltreatment on variables in the Emotional Transmission of Attachment Model (Figure 1). Also consistent with expectations, lower scores on the HOPES-MV and HOPES-FV were associated with higher scores on the TAS and greater insecure adult attachment, and higher scores on the TAS were associated with higher insecure adult attachment.

Contrary to expectations, however, no significant associations were found between scores on the RS and the other variables in the model. Most noteworthy are findings concerning EXP in trauma narratives which was unrelated to RS scores and significantly related to other variables but in the opposite direction than expected -- greater EXP in trauma narratives was associated with a greater CTQ scores, lower perceived HOPES-MV scores, higher TAS scores, and more insecure attachment (IA composite). The positive association between TAS scores and EXP seem particularly counterintuitive and are inconsistent with findings in other studies (e.g., Le, 2006).

Table 12.

Correlations Among Observed Variables

Variable	1	2	3	4	5	6	7
1. CTQ	—	-.75***	-.58***	.41***	.19**	-.03	.29***
2. HOPES-MV	-.75***	-	.58***	-.39***	-.15*	.06	-.26***
3. HOPES-FV	-.58***	.58***	-	-.37***	-.14*	.05	-.33***
4. TAS-20	.41***	-.349***	-.37***	-	.16**	-.04	.48***
5. EXP	.19**	-.15*	-.14*	.16**	-	.01	.17**
6. RS	-.03	.06	.05	-.04	.01	-	.05
7. IA	.29***	-.26***	-.33***	.48***	.17**	.05	-

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

Note: CTQ=Childhood Trauma Questionnaire (Bernstein & Fink, 1998); HOPES-MV= History of Parenting Emotion Socialization- Mother Version (Hakim-Larson & Scott, 2013); HOPES-FV= History of Parenting Emotion Socialization- Father Version (Hakim-Larson & Scott, 2013); EXP = Client Experiencing Scale (Klein, Mathieu, Gendlin, & Kiesler, 1969); RS= Resolution Scale (Singh, 1994); Insecure Attachment = combined standardized scores for insecure scales on the Relationship Scales Questionnaire and the Relationship Questionnaire.

Correlations among History of Parenting Emotion Socialization (HOPES)

subscale scores and other variables. Since the HOPES is a relatively new measure, it was important to examine its psychometric properties in some depth. Table 13 presents the correlations between the various subscales of the HOPES (both mother and father versions) and the other variables in the path model. As indicated in Table 9, both the HOPES- MV and FV subscales were strongly correlated with the CTQ. All HOPES subscale scores (including Awareness of Emotions) were moderately correlated with the TAS-20. All subscales had low correlations with EXP and in the opposite direction than was expected. None of the HOPES MV-subscale were correlated with the RS. Subscales were low to moderately correlated with IA.

Table 13.

Correlations between HOPES-MV and HOPES-FV Subscales and Model Variables

Subscale	CTQ	TAS-20	EXP	RS	IA
Mother Version					
Awareness	-.71***	-.34***	-.17**	.03	-.27***
Acceptance	-.71***	-.38***	-.12*	.05	-.24***
Coaching	-.72***	-.41***	-.14*	.07	-.25***
Father Version					
Awareness	-.53***	-.33***	-.13*	.04	-.34***
Acceptance	-.60***	-.38***	-.13*	.06	-.29***
Coaching	-.55***	-.34***	-.13*	.05	-.32***

Note: Awareness= Awareness of Emotions; Acceptance = Acceptance of Emotions;
 Coaching= Emotion Coaching. *p < .05 **p < .01 ***p<.001

Model Testing

Original and alternative models were estimated with maximum likelihood path analysis. Table 14 presents the fit statistics for the tested models with the Sattora- Bentler correction for non-normality. To assess fit, maximum likelihood chi-square and associated degrees of freedom were used along with four additional fit indices. The two incremental fit indices that were used were the Comparative Fit Index and the Tucker-Lewis Index, with a cut-off of $>.95$ indicating adequate fit (Hu & Bentler, 1998, 1999). Additionally, the absolute fit indices of Standardized Root-Mean Square Residual (SRMR) and Root-Mean Square Error of Approximation (RMSEA) were also used. RMSEA fit value cutoffs were utilized for which a value close to .06 and lower represents close fit (Hu & Bentler, 1999). RMSEA 90 percent confidence intervals are also provided. SRMR cutoff of $\leq .06$ was used to represent good fit (Hu & Bentler, 1999). As previously stated, modifications to the model were made based on the theoretical framework and previous research. Out of the 244 participants, 24 went over the instructed time (exceeded more than 90 seconds) on the writing task. Following the analysis of the full data set, the data was reanalyzed with the 24 participants removed to see if there were differences in results. The removal of these participants did not alter the goodness of fit for each of the models, as indicated by the examined fit indices.

Table 14.

*Fit Statistics for Tested Models with the Sattora-Bentler Correction used for Analyses
with HOPES-MV*

Model	df	χ^2	p	TLI	CFI	SRMR	RMSEA	90% CI
1	7	73.09	<.001	0.55	0.79	0.13	0.20	[0.16, 0.24]
2	6	70.43	<.001	0.48	0.79	0.12	0.21	[0.17, 0.26]
3	6	70.43	<.001	0.48	0.79	0.12	0.21	[0.17, 0.26]
4	9	77.50	<.001	0.59	0.76	0.13	0.19	[0.15, 0.23]
5	9	71.27	<.001	0.64	0.79	0.13	0.18	[0.14, 0.21]
6	5	4.52	.478	1.01	1.00	0.03	0.00	[0.00, 0.09]
7	5	53.96	<.001	0.56	0.85	0.07	0.19	[0.15, 0.24]

Note: df= degrees of freedom; TLI= Tucker-Lewis Index; CFI= Comparative Fit Index; SRMR= Standardized Root-Mean Square Residual; Root-Mean Square Error of Approximation.

The first model that was tested (Model 1) was the originally proposed Emotional Transmission of Attachment Model as shown in Figure 1 (page 2). This model was shown to have poor fit.

Two revised models were then tested to account for the association between alexithymia (TAS-20) and depth of experiencing (EXP). One model (Model 2) was tested with a path from TAS-20 to EXP (Figure 2, page 37). The other model (Model 3) was examined with the error terms of these two variables correlated (Figure 3, page 38). Fit indices for Model 2 indicated poor fit. Fit indices for Model 3 were identical to Model 2, indicating poor fit.

The remaining alternative predicted models were then tested. Model 4 (Figure 4, page 39) predicted that emotion socialization (HOPES-MV) would mediate the effects of childhood maltreatment (CTQ) on both alexithymia (TAS-20) and depth of experiencing (EXP) in written narratives. As was predicted in Model 1, greater TAS-20 would predict less resolution of interpersonal injuries (RS). Lower EXP would predict less RS. Less RS would predict insecure adult attachment (RSQ and RQ). As is shown in Table 10, fit indices for Model 4 represented poor fit.

Model 5 (Figure 5, page 40) predicts that TAS-20 mediates the relationship between CTQ and EXP in written narratives, as well as the relationship between HOPES-MV and EXP. Lower EXP would also be related to less RS. Less RS would be related to insecure adult attachment. Fit indices indicated poor fit for this model.

Model 6 which added direct effects of TAS and EXP in narratives on adult attachment to the original model (see Figure 6, page 41) was then tested. Specifically,

this model predicted that CTQ and HOPES-MV would covary. CTQ would predict TAS-20 and EXP in written narratives. Similarly, HOPES-MV would predict TAS -20 and EXP in narratives. The severity of TAS would predict the degree of insecure adult attachment both directly and indirectly and through RS. EXP would predict insecure adult attachment both directly and through RS. Model 6 had close fit to the data, as indicated in all examined fit indices (Table 10). As is shown in Table 11, significant regression estimates included CTQ to TAS-20, HOPES-MV to TAS-20, and TAS-20 to insecure adult attachment. The covariance of CTQ and HOPES-MV was also significant. R^2 is also presented in Table 8, which measures effect size and estimates the proportions of explained variance for the present model's endogenous variables (Kline, 2011). R^2 for both EXP and the RS are very low. The model explains 19% of the variance for TAS-20 and 24% of the variance for insecure attachment.

Model 7 was then tested, which added direct effects from the CTQ and HOPES-MV to insecure adult attachment (see Figure 7, page 42). This model was found to have poor fit.

Model 6, the Revised Emotional Transmission of Attachment Model was thus used as the final model (see Figure 8) for the present analyses as this model had the closest fit to the data out of all the predicted models. Table 15 presents the path coefficients, standardized path coefficients, standard error, and effect size (R^2).

Table 15.

Unstandardized and Standardized Path Estimates in Model 6 for Analyses with HOPES-MV

Endogenous Variable	Paths	Path Estimates	Standardized Path Estimates	s.e.	R ²
TAS					0.19
	CTQ → TAS-20	0.23**	0.27	0.08	
	HOPES-MV → TAS-20	-0.09*	-0.19	0.04	
EXP					0.04
	CTQ → EXP	0.010	0.19	0.01	
	HOPES-MV → EXP	-0.00	-0.00	0.00	
RS					0.00
	TAS-20 → RS	-0.04	-0.04	0.06	
	EXP → RS	0.25	0.02	0.98	
IA					0.24
	RS → IA	0.02	0.07	0.02	
	TAS-20 → IA	0.12***	0.47	0.01	
	EXP → IA	0.41	0.09	0.24	
Covariance					
	CTQ ~ HOPES-MV	324.26***	-0.75	34.37	

Note: CTQ=Childhood Trauma Questionnaire (Bernstein & Fink, 1998); HOPES-MV= History of Parenting Emotion Socialization- Mother Version (Hakim-Larson & Scott, 2013); EXP = Client Experiencing Scale (Klein, Mathieu, Gendlin, & Kiesler, 1969); RS= Resolution Scale (Singh, 1994); Insecure Attachment = combined standardized scores for insecure scales on the Relationship Scales Questionnaire and the Relationship Questionnaire.; s.e.=standard error. * $p < .05$ ** $p < .01$ *** $p < .001$

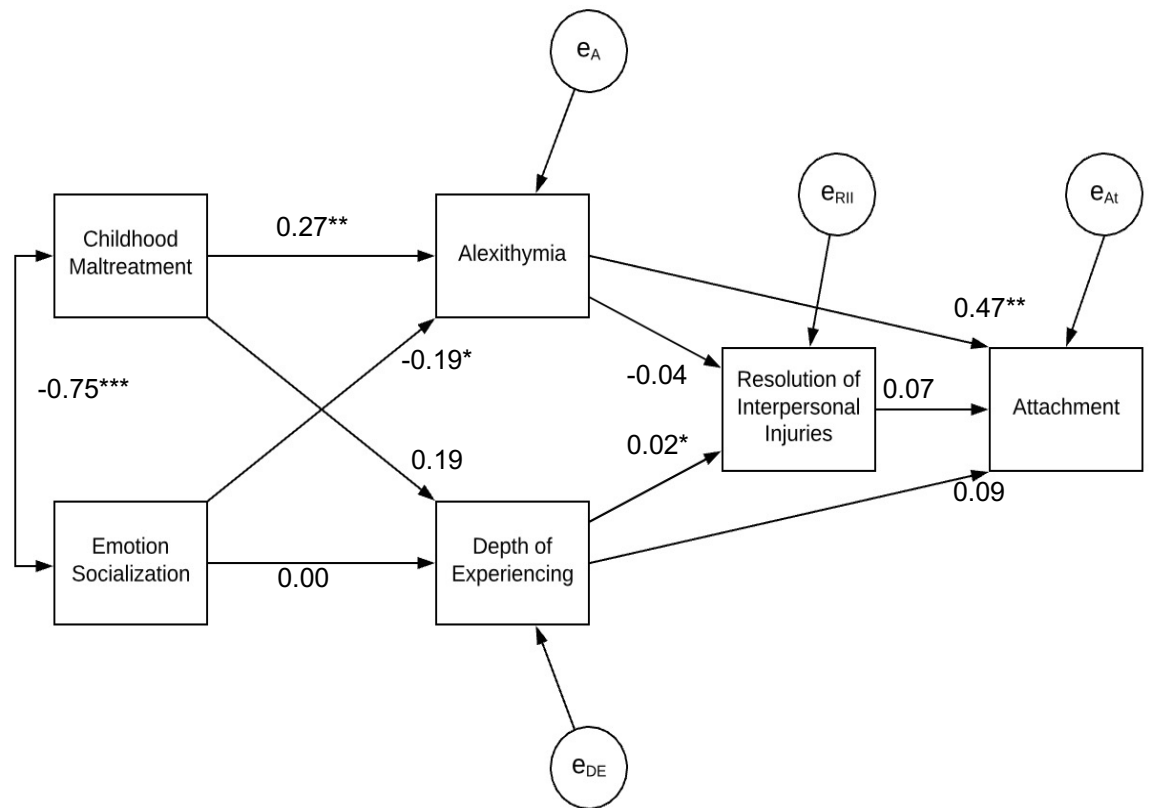


Figure 8. Revised Emotional Transmission of Attachment Model with standardized path coefficients

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

Based on t-tests reported earlier, the models were then re-analyzed with the demographic variable of ethnicity controlled on the CTQ due to significant differences found between Caucasian and non-Caucasian participants. As was the case for the first set of models tested (without controlling for ethnicity), Model 6 was the only model to have close fit with the ethnicity-adjusted CTQ. There were no significant differences between this model and the Revised Emotional Transmission of Attachment Model (Figure 6).

Additional Analyses

An analysis of present data was conducted removing the 67 participants who reported no unfinished business to investigate results. Results of that analysis, however, failed to clarify present findings in regards to the RS and EXP.

Additionally, due to the significant correlations found with the HOPES-FV and other variables in the path model, the paths were analyzed with the father version as well (see Table 16). Results of model testing were similar to analyses that included the HOPES-MV. Models 1 to 5, as described above, were all found to have poor fit. Model 6 was found to have close fit, with the fit indices of TLI and RMSEA at the cut-off for close fit. Path coefficients from the HOPES-FV are presented in Table 17. Significant paths were similar to those of path analyses with the HOPES-MV (see Table 15). The covariance of childhood trauma and emotion socialization was significant. As was found in analyses with HOPES-MV, significant regression estimates included CTQ to TAS-20, HOPES-FV to TAS-20, and TAS-20 to insecure adult attachment.

Table 17 also presents effect sizes (R^2). As was consistent with path coefficients, R^2 for both EXP and the RS are very low. The model explains 20% of the variance for TAS and 24% of the variance for insecure attachment.

Table 16.

Fit Statistics for Tested Models with the Sattora-Bentler Correction used for Analyses with HOPES-FV

Model	df	χ^2	p	TLI	CFI	SRMR	RMSEA	90% CI
Hypothesized Model Testing								
1	7	79.67	<.001	0.34	0.69	0.13	0.21	[0.17, 0.25]
2	6	79.22	<.001	0.23	0.69	0.13	0.22	[0.18, 0.27]
3	6	79.22	<.001	0.23	0.69	0.13	0.22	[0.18, 0.27]
4	9	89.33	<.001	0.32	0.59	0.14	0.20	[0.17, 0.24]
5	9	76.21	<.001	0.48	0.69	0.13	0.18	[0.15, 0.22]
6	5	9.44	.093	0.94	0.98	0.04	0.06	[0.00, 0.12]
7	5	48.47	<.001	0.46	0.82	0.07	0.19	[0.14, 0.23]

Note: TLI= df= degrees of freedom; TLI= Tucker-Lewis Index; CFI= Comparative Fit Index; SRMR= Standardized Root-Mean Square Residual; Root-Mean Square Error of Approximation.

Table 17.

Unstandardized and Standardized Path Estimates in Model 6 with Analyses of HOPES- FV

Endogenous Variable	Paths	Path Estimates	Standardized Path Estimates	s.e.	R ²
TAS					0.20
	CTQ → TAS-20	0.26***	0.26	0.30	
	HOPES-FV → TAS-20	-0.08**	-0.20	0.03	
EXP					0.04
	CTQ → EXP	0.01	0.18	0.01	
	HOPES-FV → EXP	-0.00	-0.03	0.00	
RS					0.00
	TAS-20 → RS	-0.04	-0.04	0.06	
	EXP → RS	0.25	0.02	0.98	
IA					0.24
	RS → IA	0.02	0.07	0.02	
	TAS-20 → IA	0.12***	0.47	0.01	
	EXP → IA	0.41	0.09	0.24	
Covariance					
	CTQ ~ HOPES-MV	-274.20***	-0.59	33.39	

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

Note: Note: CTQ=Childhood Trauma Questionnaire (Bernstein & Fink, 1998); HOPES-MV= History of Parenting Emotion Socialization- Mother Version (Hakim-Larson & Scott, 2013); EXP = Client Experiencing Scale (Klein, Mathieu, Gendlin, & Kiesler, 1969); RS= Resolution Scale (Singh, 1994); IA= Insecure Attachment composite score; s.e.=standard error.

CHAPTER IV

Discussion

The present study examined the mechanisms through which childhood trauma contributes to insecure adult attachment in an undergraduate sample. Main findings supported the link between severity of childhood maltreatment and perceived parental (maternal and paternal) emotion socialization, and the prediction that both these variables negatively impact emotional awareness (alexithymia), which then predicts insecure adult attachment. The following sections discuss characteristics of the sample, variable values, potential sources of unsupported hypotheses, as well as contributions to the literature and implications of supported predictions.

Characteristics of the Sample

Age, gender, relationship status. Mean age of participants in the present study was comparable to that reported in other studies of childhood maltreatment using student samples (DiLillo et al., 2006; Paivio & Cramer, 2004). Thus, most participants would be considered in late adolescence or early adulthood in terms of stage of development. This has relevance in terms of maturity levels and capacity for self-awareness which will be discussed in later sections. The proportion of female participants (78.3%) in the present study also is comparable to several studies examining childhood maltreatment. For example, the sample that was used in Paivio and Cramer's (2004) study was 65% female and DiLillo and colleague's (2006) sample was 72.2% female. Current statistics suggest universities and psychology departments are predominantly female (Statistics Canada, 2015b). As well, approximately half of the sample in the present study were in an intimate relationship, consistent with expectations at this stage of development.

Results of t-tests comparing gender and relationship status revealed no significant differences between these subgroups in terms of study variables.

Socioeconomic status. Most participants were employed part-time in addition to being registered at the University of Windsor. The University of Windsor is located within a predominately middle-class city.

Ethnicity. The present study used an ethnically diverse sample with almost half from ethnic and racial backgrounds other than European and Caucasian. This reflects current trends in Canadian colleges and universities (e.g., McGill University, 2009). However, results showed that, on average, non-Caucasian participants endorsed a significantly greater extent of childhood maltreatment than Caucasian participants. This finding is consistent with previous research that has supported ethnicity as a correlate of childhood maltreatment. For example, Scher and colleagues (2004), found that racial background correlated with childhood maltreatment. These authors suggest that this may be a factor of culture differences in perceptions or endorsement of maltreatment, though this finding can also be a reflection of socioeconomic status. This is important because there is substantial diversity in university settings in Canada. For example, more children of immigrants are participating in post-secondary education than individuals born in Canada (Statistics Canada, 2011). Reports from Fall 2016 indicate that 0.6% to 31% of undergraduates and 12.7% to 57.2% of graduate students across Canadian universities were from outside of Canada (Dwyer, 2017). As such, results of the present study have implications for potential problems with emotional competence and interpersonal functioning among university students and highlights a need for resources (e.g., counselling, programming) in college and universities to address these issues. These

differences in childhood maltreatment between Caucasian and non-Caucasian participants did not affect results of model testing.

Another consideration given the ethnically diverse sample in the present study, are cultural variations in emotion expression stemming from beliefs about emotion. For example, there is some evidence that cultures with a collectivist orientation (e.g., Japanese, Chinese, Korean) tend to suppress emotions, while individualistic cultures (e.g., Canadian, American, German) tend to engage in more emotional expression (Markus & Kitayama, 1991). Another example of cultural differences in emotion is the African American value placed on control of emotions and limited self-disclosure as an adaptive response to a history of oppression (Consedine & Magai, 2002; Nelson, Leerkes, O'Brien, Calkins, Marcovitch, 2012). In one study, African American mothers were less likely than European American mothers to believe that the expression of negative emotions was appropriate for children, both privately and publicly (Nelson, et al., 2012). The complexity of ethnicity and culture are therefore important aspects to keep in mind when examining emotion socialization across various ethnic backgrounds.

Receipt of therapy. Most participants in the present study had not received therapy in the past or present. However, significant differences were found for participants who had attended therapy, either in the past or during the time that the participant completed the study, versus those who had no therapy experience. Participants who had therapy experience had more severe childhood trauma and more limited perceived emotional socialization (maternal and paternal). This finding makes sense since individuals with such childhood experiences would be more likely to seek or be referred for psychological services for difficulties that are experienced due to these

childhood experiences. Therapy could help these individuals to engage in narrative and emotional processing of abuse and neglect experiences in childhood. This is supported by the finding that individuals who had attended therapy had higher depth of experiencing than those who had not attended therapy. Lastly, participants who received therapy had more insecure adult attachment than those without therapy experience, which could be explained by these individuals having sought therapy for presenting issues associated with insecure attachment.

Overall, the present sample seems to be representative of an undergraduate population in terms of age, gender, SES, ethnic diversity. Generalizability of results are thus limited to an undergraduate population, with relatively higher levels of functioning and lower levels of distress compared to clinical samples. likely generalize to ethnically diverse, middle-class, young adults in university.

Values of Variables

Childhood trauma. In the present study, mild to moderate severity (Bernstein & Fink, 1988) was mainly endorsed, with the highest prevalence for emotional abuse and neglect, followed by physical abuse and neglect, then sexual abuse. This is largely comparable to the results found in the study of undergraduates by Paivio and Cramer (2004), with the highest prevalence as emotional abuse and neglect, which was then followed by physical abuse, then sexual abuse and physical neglect. Present findings were also consistent with the General Social Survey in 2014 that surveyed Canadian adults regarding childhood maltreatment (defined in this survey as physical and emotional abuse, as well as witnessing violence) experienced prior to the age of 15 years. Results of this survey found that 26% of Canadians had experienced physical abuse,

while 8% experienced sexual abuse in childhood (Statistics Canada, 2015). Since the prevalence of childhood maltreatment is high, this has implications for treatment and prevention of psychological problems associated with abuse and neglect, as is outlined in the Revised Emotional Transmission of Attachment model.

Parental emotion socialization. On average, perceived parental emotion socialization was in the moderate-high range. Although perceived emotion socialization practices, on average, were lower for fathers than for mothers, means were not substantially different. Previous research has found evidence to support mothers as the caregivers who typically take on the role of the primary provider of emotion socialization, while the father takes the role of a “playmate” and also provides support to the caregiver providing the majority of emotion socialization practices (Denham, Bassett, Hamada, Wyatt, 2010; Thomas, Dillillo, Walsh, & Polusny, 2011). Support has also been found for mothers having longer conversations about emotional experiences (Fivush, Brotman, Buckner, & Goodman, 2000), more emotion coaching practices (Cassano, Perry-Parrish & Zeman, 2007), and more supportive responses to negative emotions (Nelson O’Brien, Blankson, Calkins, Keane, 2009) than fathers with their children. Even with these findings, the importance of fathers in emotion socialization has been supported in the literature. For example, past studies have found a link between paternal emotion socialization practices and social competence (Baker, Fenning, & Crnic, 2011; McDowell & Parke, 2005). Findings from the present study provide further support for the role of fathers in emotion socialization.

Alexithymia. Most participants in the present sample did not meet criteria for alexithymia (a score above 50 on the TAS), which is comparable to results of other

studies using undergraduate samples. For example, studies of female undergraduates (e.g., Le, 2006; Paivio & McCullough, 2004) and mixed gender have reported similar findings. In a sample of 371 undergraduates, the mean for both females and males approximated the mean in the present study (Mason, Tyson, Jones, & Potts, 2010). However, these means are just slightly below the cut-off for alexithymia which suggests that many undergraduates, including participants in the present study, are only marginally competent in terms of awareness of emotional experience, which is considered a central component in healthy interpersonal functioning.

Depth of experiencing. The mean depth of experiencing (modal EXP) ratings in the present study represents moderate depth of experiencing, that is, narratives on average were personal and affective but had limited references to insight or causation, and limited range. This is comparable to means found in both undergraduate samples and clinical samples prior to and in the early phase of therapy. For example, in an undergraduate sample (N =232), Le (2006) reported a comparable mean for written trauma narratives. Modal ratings also were found to have a restricted range of EXP levels 1 to 3 in another undergraduate sample (N=110) using written narratives (Harrington, 2012). In terms of clinical samples, a meta-analysis (Pascual-Leone & Yeryomenko, 2017) of in-session processes reported a mean for modal ratings in early treatment phases (using data from 7 studies) that approximated the mean found for written narratives in the present study. The meta-analysis also reported that mean modal scores in the literature range between 2.8 and 3.2. Pos and colleagues (2003) found average modal ratings in early and late sessions that were comparable to the mean found in the present study, though the mean from the present study more closely approximated later session scores. Thus, the present

sample was comparable to other young adults and clients in non-clinical and clinical samples, with limited observed capacity to explore the meaning of subjective internal experience.

Resolution of interpersonal injuries. Few studies have used the Resolution Scale (RS) with undergraduate students. The RS has primarily been used with clinical samples of clients in therapy for general unfinished business or unfinished business related to childhood abuse (e.g., Mundorf & Paivio, 2011, Paivio et al., 2010; Paivio & Greenberg, 1995). In terms of the identified individual on the RS, a substantial proportion of participants in the present study identified family members -- father (or father figure), mother, sibling, extended family member who clearly could have been important to childhood development. However, other participants identified a friend or romantic partner and it was uncertain whether events concerning these others occurred during childhood. For other participants the relationship to the individual indicated on the questionnaire was not identified. Thus, results concerning the identified other were difficult to interpret. It is evident that the instructions should have been more specific regarding the age range that is considered childhood and that instructions should have indicated to identify the *relationship* to the identified other. Additionally, although a substantial minority (27%) reported no unfinished business, a majority reported some level of distress toward a significant other suggesting that this is a commonly occurring phenomenon among young adults. This is consistent with observations, for example, regarding presenting problems in university counselling centers (Paivio, personal communication).

Scores on the Resolution Scale in the present sample are comparable to scores seen post-treatment in clinical samples with a history of abuse, for example, those reported in a study of 37 clients participating in emotion-focused therapy for resolving issues with perpetrators of childhood maltreatment (Mundorf & Paivio, 2011). Present RS scores were also similar to post-treatment scores of clinical samples dealing with general “unfinished business,” (N = 34, Paivio and Greenberg, 1995; N = 64, Singh, 1994). Thus, the present sample would be considered resolved, that is, were not significantly distressed by negative feelings and unmet needs concerning individuals important to development. As such, either they had come to terms with issues (suggesting resources and emotional competence) or they had never had meaningful issues. This may potentially assist in explaining the null findings in relation to the resolution of interpersonal injuries, discussed in more detail below. Nonetheless, 23% of present participants reported levels of distress comparable to clinical samples at pre-treatment, suggesting considerable distress from past interpersonal injuries, and thus this would be expected to effect model testing in relation to meeting hypotheses. As previously described, experiential therapy theory posits that these unresolved problems could negatively influence current interpersonal functioning (Greenberg & Paivio, 1997), which, again, is consistent with presenting problems frequently observed in university and college counselling centers.

Insecure adult attachment. Since insecure adult attachment was measured by a novel composite score that combined two scales to assess overall insecure attachment, mean values were unable to be compared to previous studies in the literature.

Correlations Among Variables

Positive findings. Intercorrelations among study variables (childhood maltreatment, perceived maternal emotion socialization, alexithymia, adult attachment) support study hypotheses and a link between adverse childhood experiences, poor perceived maternal emotion socialization, poor emotional competence in terms of awareness of feelings, and difficulties with intimacy and trust in adult relationships. These associations warranted further analyses of causal relations and will be discussed in the section on path analysis. Because variables that are not associated in simple correlations cannot play a causal role, correlational associations that fail to support hypotheses will be discussed in the following section.

Null findings. Correlations in the present study concerning observed depth of experiencing (EXP) in written narratives (as a dimension of emotional competence) and resolution of interpersonal injuries or distress from unfinished business (RS) and other measures did not support study hypotheses. The following paragraphs focus on potential sources of null findings.

Depth of experiencing. Correlational analyses showed that observed depth of experiencing (EXP) or reflection on feelings and meanings in narratives, was significantly related to childhood maltreatment, perceived emotion socialization, alexithymia, and insecure adult attachment *but in the wrong direction*. Most remarkably and counter-intuitively, results indicated that poorer self-reported awareness of one's own feelings, was associated with greater depth of experiencing in narratives about specific upsetting events, and vice versa. This finding is difficult to explain.

Since the TAS (Bagby, Parker, & Taylor, 1994; Bagby, Taylor, & Parker, 1994), measuring alexithymia, performed as expected in relation to other variables in the model,

demonstrating concurrent and predictive validity, results suggest a potential problem with validity of the EXP (Klein, Mathieu, Gendlin, & Kiesler, 1969) ratings. However, as is indicated in the Method sections of the present manuscript, good inter-rater reliability was established for the EXP and there was evidence supporting validity in terms of expected references to emotions in narratives rated as low, moderate, and high levels of experiencing.

In terms of narrative content, instructions for the written narrative stated to write down thoughts and feelings about the most upsetting experience in the participants' lives. As shown in Table 3, a substantial number of narratives focused on what would be considered serious events, including death of someone close, parental divorce or marital issues, and abuse. This is representative of exposure to trauma defined by the DSM -5 (American Psychiatric Association, 2013) and small "t" trauma reported in the literature (e.g., Courtois & Ford, 2013; Paivio & Pascual-Leone, 2010). These events are likely to engender intense negative feelings that would be difficult to cope and come to terms with without adequate internal and external resources or support (e.g., parental emotion socialization), and some degree of emotional competence. In the absence of such resources, these types of events also could be difficult to write coherently about and make sense of in a written narrative, with potential for low levels of experiencing which is an index of emotional competence in the present study. A smaller proportion (in the "Other" category) of narratives in the present study (9%) focused on relatively superficial topics (e.g., embarrassing incident, argument with bank teller). Others focused on topics, such as conflict with a friend in childhood (18%), which often seemed somewhat superficial in nature (e.g., a friend developing new friendships that interfered in the

friendship with the participant). It is unclear whether this represents the participant's actual extent of exposure to trauma or what they were willing to write about. In any case, these themes would be unlikely to generate intense negative feelings and narratives would not necessarily be a good indicator of participants' emotional competence capacities.

Another potential explanation for unexpected correlations between depth of experiencing and other variables in the present study could be related to the time period or others involved in the narrative. Instructions asked participants to write their thoughts and feelings about the most upsetting experience in their lives but did not include specific guidelines to focus on childhood trauma or relational issues with one's mother. The writing task also was administered prior to all other measures in the study. Thus, participants were neither instructed nor primed to focus on these past attachment issues and, as noted above, at least 9% clearly focused on superficial topics. In clinical studies on the effects of childhood abuse and neglect clients are typically primed to write about these childhood experiences. For example, the seminal Adult Attachment Interview (AAI; George et al., 1996), focuses on childhood experiences and relationship with one's mother. In more recent studies using the PTN protocol, the writing task was administered prior to the first session for clients in therapy specifically for resolving child abuse-related issues (e.g., Mundorf & Paivio, 2011). In the present study, participants were not primed to focus on abuse and neglect. Since avoidance is a common feature of abuse and neglect and unresolved interpersonal injuries (Paivio & Pascual-Leone, 2010), it is possible that those with more extensive abuse/neglect and poor perceived emotion socialization in childhood were unwilling or unable to write about particularly upsetting

events. Most participants (72.5%) in the present study also had never received therapy. It is thus possible that avoidant participants would choose a more superficial topic that they were able to affectively tolerate and were able to make sense of, thus demonstrating higher levels of experiencing. Arguably, numerous references to the feelings and meanings associated with a superficial event, presented as the worst experience of one's life, would also be superficial and could indicate difficulties with intimacy and trust. This could help to explain the link between deeper experiencing and more insecure adult attachment in the present study. Thus, depth of experiencing would not be a good indicator of emotional competence for participants who focused on superficial topics in their narratives, and this could have skewed present results.

A better method of data collection, therefore, could have been to prime participants by using a specific (rather than random) order of administration of self-report measures prior to the writing task. This could have been accomplished by first administering the CTQ (measuring childhood maltreatment) and HOPES-MV (measuring emotion socialization) to prime participants to focus on issues related to childhood maltreatment and mothers, then to follow with the PTN. As well, instructions on the PTN could have asked participants to think about their worst childhood experience prior to the age of 16 years, and to consider the events and individuals that were described in the previous two measures or some other highly distressing childhood experience (e.g., death of loved one, bullying, parental divorce, childhood abuse).

Results related to depth of experiencing in the present study could also be partly related to the age and maturity of participants -- the stage of ego development described in Loevinger's seminal work (Loevinger, 1976; Loevinger & Wessler, 1970; Loevinger,

Wessler, & Redmore, 1970). Westenberg and Gjerde (1999) conducted a 9-year longitudinal study and assessed participants at age 14 and 23 years. At age 23 (the approximate age of the present sample), there was a range of six ego levels from *self-protective* to *autonomous*. Similarly, another study that used an undergraduate sample found that participants were distributed across five ego levels (*self-protective* to *individualistic*), with the majority of participants in the *self-aware* or *conscientious* stages (Duffy, Ruegger, Tiegreen, & Kurtz, 2017). Thus in the present study, participants in the stages of self-protective and conformist would potentially have lower experiencing ratings since they have not yet reached an ego level that is sufficiently mature to engage in greater reflection on subjective internal experience.

Resolution. Contrary to expectations, the present study also found that lingering bad feelings toward specific significant others from the past on the RS was unrelated to other measures in the study. This could partly be a function of the identified others on the measure who were not necessarily related to individuals associated with other measures (i.e., perpetrators of abuse and neglect on the CTQ, mothers on the HOPES, and others who were the focus of the PTN).

Instructions regarding the identified other on the Resolution Scale (measuring resolution of interpersonal injuries) in the present study, were designed to be consistent with previous studies and the original instructions that were developed for the scale (Singh, 1994). The decision to allow responses on the Resolution Scale to pertain to any individual from childhood also was made in the context of recruiting a sample with maximum variability in terms of extent of childhood maltreatment. As such, participants could refer to any individual from their childhood, not necessarily their mother or a

person involved in childhood abuse/neglect, or to an individual identified in their narrative (nor were any of these individuals and events necessarily related to each other, which could account for other null findings discussed earlier in this section). This differed from other studies using the RS with clinical samples in which the identified other on the measure was a perpetrator or attachment figure that was the focus of treatment (Mundorf & Paivio, 2011; Paivio & Greenberg, 1995). In another study, the individual identified on the RS was also the focus of a written trauma narrative rated using the EXP (Mundorf & Paivio, 2011). Mundorf and Paivio found that higher modal EXP ratings in trauma narratives concerning childhood abuse and neglect were associated with less distress concerning perpetrators of abuse and neglect on the RS. Null findings in the present study, therefore, could partly be a function of non-specific instructions for participants and a lack of a link between the RS and written narratives.

A small percentage of participants identified individuals on the Resolution Scale who were clearly related to individuals and events that were the focus of other measures. In some cases, however, it was unclear whether there was a connection between the narrative theme and the individual identified in the RS. The methodological assumption that, without explicit instructions or priming, participants would refer to these individuals was obviously faulty.

Another potential source of null findings in relation to the Resolution Scale was that approximately one fourth of participants reported having no “unfinished business” with significant others from their past. These were included in the present sample, again, to maximize variability. However, the measure was originally designed to assess therapeutic outcome in relation to unfinished business (Singh, 1994). Thus, although

Singh validated the RS on both an undergraduate sample ($n = 112$) and a clinical sample ($n = 64$), only participants in the undergraduate sample who indicated at least a moderate degree of unfinished business were included in her validation analyses. As mentioned in the Results section, a retrospective analysis of present data was conducted with the participants who reported no unfinished business removed, but results of this analysis failed to clarify present findings.

The following sections discuss positive findings concerning path analyses and causal relations among variables in the present study.

Path Models

Links between individual variables in the path model will be discussed first, followed by mediational effects of emotional competence.

Maltreatment and emotion socialization. Results of the path analysis in the present study provided support for the hypothesis that when children experience a greater extent of abuse and neglect, there is likely to be less perceived emotional coaching (maternal and paternal) and support, and vice versa. The link between these variables is arguably one of the hallmarks of an insecure childhood attachment.

This link between poor perceived emotion socialization and vulnerability to victimization as is consistent with findings from other studies. For example, Ladd and Ladd (1998) found that less parental responsiveness was associated with high levels of peer victimization in kindergarten, which the authors suggested was partially due to inhibiting rather than secure emotional states. Finnegan (1995) found that lack of responsiveness to a child was related to passiveness and peer victimization in girls. Therefore, present results highlight the importance of emotion socialization in prevention

of harm in the first place, and protection from repeated victimization (a greater extent of maltreatment), a well-documented effect of childhood maltreatment (Courtois & Ford, 2013).

Maltreatment and poor emotion socialization predict alexithymia. Present findings also support the prediction that both the extent of maltreatment and limited maternal emotion socialization negatively impact emotional competence, in terms of ability to identify and accurately label feelings (alexithymia). These findings are consistent with theory and research in the area. When childhood maltreatment occurs with poor emotion socialization, a child may not learn to manage or make sense of negative feelings that are caused by upsetting or traumatic events (Saarni, 1999). Research consistently supports the link between childhood maltreatment and alexithymia. In a sample of 1033 psychiatric patients in primary care, alexithymia was found to be related to a history of emotional, sexual, and physical abuse (Matti et al., 2008). Paivio and McCulloch (2004) also found a significant association between various forms of childhood maltreatment and alexithymia for a sample of 100 female undergraduate students. Paivio et al (2010) found that 80% of clients in emotion-focused therapy for child abuse trauma met criteria for alexithymia. Similarly, Zlotnick and colleagues (2001) found that childhood emotional and physical neglect was positively correlated with alexithymia in a sample of 252 adult outpatients.

Present findings also are consistent with theory and research that examines the role of effective emotion socialization on a child's development of emotional competence (see Taylor, Bagby, & Parker, 1997 for review). Conversations between caregiver and child teach children to engage in labelling and processing emotions (Etzion-Carasso &

Oppenheim, 2000), which helps them to tolerate and make sense of negative affect (Sroufe, 1990). Alexithymia specifically is thought to stem from a mother's inability to identify and appropriately respond to affective states (Kraemer & Loader, 1995; Taylor et al., 1997), so the child does not learn to cope with intense emotions. Rather, the child learns to disconnect from their emotions as a means of coping, only noticing bodily sensations related to emotions. This then develops into alexithymia in adulthood, where affect is poorly recognized or labelled. Research supports this theoretical framework. For example, alexithymia in adulthood has been found to be associated with feeling less emotional safety in childhood, poor expressiveness in the family environment, and low levels of positive communication within the family (Berenbaum & James, 1994). The present study further supports these findings.

Alexithymia predicts insecure adult attachment. Poor emotion awareness has been linked with numerous mental health problems, including depression, eating disorders, social anxiety, and interpersonal difficulties (see Taylor et al., 1997 for a review). Results of other studies support a link between alexithymia and insecure adult attachment. For example, Montebanocci, Maurizio, Codispoti, and Rossi (2004) found that alexithymia was associated with discomfort with closeness, need for approval, and decreased confidence in a sample of 301 university students. In a sample of young men with clinical levels of mood symptoms (N=72), degree of alexithymia was found to be associated with insecure attachment (Troisi, D'Argenio, Peracchio, & Petti, 2001). Turner (2001) found that alexithymia was associated with poor perceived social support and more interpersonal problems in a sample of undergraduate students. Results of the present study further suggest that alexithymia plays a causal role in insecure adult

attachment. Accordingly, limited capacity to identify and communicate emotional experience directly interferes with the capacity for intimacy and trust in adult relationships. Present results therefore highlight the importance of enhancing emotional awareness in young adults for whom cultivating intimate relationships is a core developmental task.

Childhood experiences predict insecure adult attachment via alexithymia.

There is abundant research linking childhood maltreatment to poor interpersonal functioning in adulthood (e.g., Davis, Petretic-Jackson, & Ting, 2001; Najman, Dunn, Purdie, Boyle, & Coxeter., 2005). Present findings further indicate that it is the *combination* of maltreatment and poor parental emotional support that is predictive. This is consistent with basic attachment theory on which the present study is based.

Accordingly, experiences in early attachment relationships result in internal working models of self and intimate others (feelings, perceptions, expectations) that continue to influence close relationships throughout the lifespan. Thus, repeated childhood experiences of abuse and neglect coupled with poor maternal emotional support to help mitigate and make sense of these experiences would result in internal working model of self as unsafe and uncared for and intimate others as not protective or nonresponsive (insecure childhood attachment). In the absence of intervention (about three quarters of participants in the sample did not have therapy experiences), these internal working models would be activated and influence perceptions and feelings in adult relationships (insecure adult attachment). Basic experiential therapy theory (Greenberg et al., 1993; Greenberg & Paivio, 1997) posits a similar transmission process whereby childhood

experiences are embedded in emotion structures or schemes (complex cognitive-affective meaning systems) which are activated in adult relationships.

Both the above theories emphasize the importance of emotional competence in secure attachment and healthy functioning. Moreover, in the absence of parental support, children frequently cope with the intense negative feelings associated with abuse and neglect through avoidance. Chronic avoidance would result in lack of awareness of feelings and associated meanings concerning self and others (alexithymia) which, in turn, would interfere with healthy interpersonal relationships (Paivio & Pascual-Leone, 2010), that is, insecure adult attachment.

In sum, results of the present study provide support for impaired emotion awareness as the *mechanism* linking insecure childhood attachment (i.e., maltreatment combined with poor maternal emotional socialization) to long-term difficulties with intimacy and trust in adult relationships (insecure adult attachment). Again, present findings point to the importance of enhancing emotion awareness in promoting healthy relational functioning among young adults, *especially* those with histories of abuse and neglect and poor maternal emotional support.

Contributions of the Present Study

Findings of the present study emphasize the importance of emotional awareness on interpersonal functioning, which has several social and clinical implications.

Emotional awareness. Emotional awareness is developed from the effective response of a caregiver to emotions in a child (Kraemer & Loader, 1995). For a caregiver to implement this skillfully, they must have the capacity to identify their own emotional states. When parents do not possess these skills, the child also may have difficulties

labelling and describing emotions and thus can experience difficulties regulating emotions and coping with stressful events (Saarni, 1999). As such, those who have not experienced appropriate emotion socialization in childhood, and have been the victim of childhood maltreatment, may have difficulties managing negative emotions related to the abuse or neglect. These negative emotions can be activated in current interpersonal contexts. The present study therefore highlights the importance of emotional awareness in healthy interpersonal functioning. Thus, results of the present study have direct implications for prevention and intervention of interpersonal problems.

Prevention. As mentioned above, when poor emotion socialization practices take place in childhood, an individual can learn to rely on avoidance as a coping strategy (Paivio & Pascual-Leone, 2010). As such, findings of the present study support programs that work to enhance emotion socialization skills in parents, and to teach their children to identify, label, and articulate the meaning of their feelings. One method of enhancing emotional competence in children is to focus on caregivers' own emotional awareness in cases where difficulties may be present. Enhancing parental emotional competence could occur in the form of psychoeducation or individual/group therapy. Programs that assist parents to learn ways to appropriately respond to their child's feelings can help to prevent the development of alexithymia. For example, parents can be taught how to use conversations about intense negative emotions associated with stressful experiences to help children recognize and make sense of their own feelings (Laible & Panfile, 2009). Parent-child conversations include explaining the causes and consequences of emotions, as well as how to appropriately express negative feelings (Denham, Mitchell-Copeland, Strandberg, Auerbach, & Blair, 1997). Parents also can learn to provide a child with

coping strategies in the moment that they are experiencing intense emotion, which will equip the child with the skills needed to cope with negative emotions in the future (Laible & Panfile, 2009). It also is important to teach parents the negative consequences of dismissing distressing emotions (e.g., criticizing, invalidating, or avoiding negative affect) because chronic avoidance can become a coping strategy that contributes to poor self awareness and future interpersonal difficulties (Lunkenheimer, Shields, & Cortina, 2007).

Another form of prevention is the direct teaching of emotional competence to children, particularly to those in at-risk environments. Learning to label and understand emotions, as well as coping strategies to manage difficult emotions could be integrated into grade school curricula or other programming. Examples (Domitrovich, Cortes, & Greenberg, 2007) of these interventions include explicit lessons teaching children to recognize feelings, understand emotions, and develop self-control when emotionally aroused. Additionally, concepts related to affect can be incorporated into the general curriculum to include skills related to emotional competence. Additionally, teachers can be trained to use situations as they naturally occur to provide emotion socialization as a child experiences affective reactions (Domitrovich, Cortes, & Greenberg, 2007). Ways to cope with distress, such as mindfulness strategies (Schonert-Reichl & Lawlor, 2010) can also be practiced regularly within a classroom setting.

Research supports the utility of programs that assist in emotion socialization, both to assist children directly and to assist parents in learning appropriate emotion socialization practices to help prevent future interpersonal dysfunction. The importance of these interventions has increasingly been recognized and the benefits of such programs

have been reported. For example, Keho, Havighurst, and Harley (2013) found that a parenting program to assist in improving emotion socialization with children in the sixth and seventh grades significantly improved parent emotion socialization practices and child internalizing difficulties. Similarly, psychoeducational programs to improve emotional intelligence and competence in non-clinical contexts (e.g., mindfulness-based education program for adolescents; Schonert-Reichl & Lawlor, 2010) are increasingly recognized as improving interpersonal functioning.

Intervention. Findings from the present study support the use of interventions designed to help parents learn to identify and describe feelings. This is the foundation of emotion-focused family therapy (Foroughe, 2018), for example, which teaches parents emotion awareness, expression, validation, and reflection skills as a means of facilitating their child's recovery from psychological trauma. More generally, many parents who seek therapy for their own unresolved childhood trauma also have difficulties with parenting (Courtois & Ford, 2013; Paivio & Pascual-Leone, 2010). Interventions that help these adults resolve their own trauma through increased emotional competence can have direct implications for improving the emotional competencies of their children. For example, Paivio et al. (2010) found a reduction in alexithymia from 80% to 20% following 16 sessions of emotion-focused therapy for child abuse trauma (EFTT; Paivio & Pascual-Leone, 2010). These reductions occurred in conjunction with decreased distress from interpersonal problems. Interventions that facilitate "emotional processing" of and recovery from trauma involve accessing and exploring the meaning to trauma feelings and memories so that new adaptive meanings can be constructed. Increasing emotional awareness is the first step before trauma resolution can take place.

EFTT is one example of an effective experiential approach to therapy. Research supports the underlying principles of experiential therapies in general (Greenberg, 2011). Experiential therapies focus on accessing emotions and using emotions to provide clients with adaptive information that guides healthy functioning (Paivio, 2013). Accordingly, emotions provide insight into goals and needs of the individual, which orients action and behavior. Although the specific interventions differ, this focus on enhancing emotion awareness and competence also is central to other trauma-informed approaches, such as dialectical behavior therapy (Linehan, 1997) and acceptance and commitment therapy (Hayes & Strosahl, 2004). Present findings concerning the centrality of emotion awareness in the link between childhood experience and adult interpersonal difficulties, therefore, also have important implications for therapist practice and training. Therapists should be trained to attend to affect in session, prioritize labeling emotions to enhance emotional awareness, use emotions to orient thoughts and action, and teach coping strategies to manage distress.

Strengths of the Present Study

One strength of the present study was the online design that allowed for recruitment of a sample large enough to detect effects. Thus, failure to support some hypotheses in the present study was not a function of insufficient power.

Additionally, the undergraduate sample seemed representative of middle-class university students in terms of demographics and areas of concern seen, for example, among clients in student counselling centers. Most other studies in the area have focused on clinical samples. Present results therefore generalize to non-clinical populations of

young adults for whom interpersonal intimacy and trust are primary developmental issues.

Another strength of the present study was the use of a statistical path analysis which allows causal hypotheses to be tested and can support temporal links between variables, in this case, between maltreatment and perceived emotion socialization in childhood, alexithymia, and relationships in adulthood. Many studies use correlational analyses that can establish associations only. Present findings therefore add important support to theory in the area.

Because numerous studies have focused on the role of mothers in emotion socialization (e.g., Chan, Bowes, & Wyver, 2009; Newland & Crnic, 2011; Yap, Allen, Ladouceur, 2008), one unique contribution of the present research is the examination of perceived emotion socialization by fathers, as well as the contribution of fathers' perceived emotion socialization practices to adult interpersonal functioning. As mentioned earlier in this section, the present study did not find substantial differences between the degree to which mothers and fathers implemented emotion socialization practices, and furthermore, findings regarding path models were similar for mother and father emotion socialization practices. Given changes in the family structure that have occurred in more recent years, present findings highlight a direction for future research to investigate how these shifts have impacted the roles of both mothers and fathers in emotion socialization practices, as well as any differential impact that this may have had on adult functioning.

Another important contribution of the present study is support for the validity of the HOPES- MV and HOPES- FV measure (Hakim-Larson & Scott, 2013) used to assess

perceived emotion socialization by the adult child. High internal consistency was found for the overall items and the measure was significantly correlated with variables that theoretically should be correlated, which included all variables except for the resolution of interpersonal injuries. These are valuable findings because there are few existing *retrospective* measures of perceived emotion socialization. Given theory in the area and results of the present study that support the contribution of perceived maternal and paternal emotion socialization to interpersonal difficulties in adulthood, a valid retrospective measure of perceived emotion socialization is important to further research the effects of emotion socialization on adult functioning.

Of note, the present sample was ethnically diverse, almost half of the sample was non-European or non-Caucasian. This serves as a strength of the present study since results are generalizable across multiple ethnicities. Given the increasing ethnic diversity in Canada (Statistics Canada, 2018) and present findings that support higher prevalence of childhood maltreatment for non-Caucasian compared to Caucasian participants, findings have implications for the allocation of resources in Canada towards prevention and intervention for problems related to childhood maltreatment, including psychoeducation regarding effective parenting practices. Moreover, results support a need for these resources to be accessible to a broad range of individuals, including those from diverse ethnicities.

Limitations of the Present Study

In addition to the methodological limitations discussed in the above sections on correlations (e.g., failure to link individuals and events across measures), several factors limit conclusions that can be drawn from the present study. In terms of internal validity,

significant findings in the present study were found only for self-reports so that positive results could be partly due to shared method variance. Additionally, although there is support for the accuracy of retrospective self-reports concerning childhood experiences, including abuse and neglect (Brewin, Andrews, & Gotlib, 1993; Paivio & Cramer, 2001), caution is warranted in terms of the CTQ and HOPES in the present study due to the potential for memory distortions and biases (Brewin et al., 1993; Maughan & Rutter, 1997). Moreover, since all participants completed measures in the same sequence, order effects may have occurred. For example, participants could have developed fatigue while completing the questionnaire resulting in more attention allotted to the first questionnaires completed.

In terms of external validity, the undergraduate sample in the present study may not be representative of other young adults, for example, in terms of SES. Young adults in university have different characteristics than those who do not attend university and therefore results may not be generalizable to young adults outside of university/psychology class settings.

Another limitation concerns the measurement of insecure attachment. Like many measures of attachment, the ones used in the present study (RSQ and RQ) were originally created to be dimensional. Additionally, a composite score was created for an overall measure of insecure attachment, modified from a composite developed by Ognibene and Collins (1998). As such, the present study did not use the measures in the manner they were originally intended. Future research could focus on developing a psychometrically sound adult attachment scale that can be used to obtain an overall continuous score of attachment to assess general interpersonal dysfunction in adulthood.

Of note, although the sample used in the present study is representative of a university population, the sample was quite diverse. Because trauma and emotion are also diverse issues, it could be beneficial for future research to test the Emotional Transmission of Insecure Attachment Model with various subgroups such as those based on gender, culture, or generation.

Conclusions and Implications

Findings support the importance of enhancing emotional competence during development to promote healthy interpersonal functioning throughout the lifespan. This has important implications for early prevention, intervention, and education in childhood, particularly for children in at-risk environments. These results also have implications for parent education and training in terms of cultivating emotion socialization skills. Findings also have clinical implications for young adults seeking help for relationship difficulties, which is a prevalent presenting problem in university and college counselling centers. Developing intimate relationships is a core developmental task at this age, which has broad-reaching implications in terms of transgenerational transmission of secure attachment. Finally, results highlighting the importance of emotional competence have implications for therapist training and practice in the treatment of complex childhood trauma and presenting problems related to childhood maltreatment.

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APPENDICES

Appendix A

Demographic Questionnaire

Age: _____

Gender: Male ☐ Female ☐Marital status: Single ☐ In a relationship ☐ Married/common law ☐ Separated ☐
Divorced ☐ Widowed ☐

Number of children: _____

Which best represents the ethnic group that you identify with?

Aboriginal	<input type="checkbox"/>
African	<input type="checkbox"/>
East Asian	<input type="checkbox"/>
South Asian	<input type="checkbox"/>
European	<input type="checkbox"/>
South or Central American	<input type="checkbox"/>
Arab or West Asian	<input type="checkbox"/>
Carribean	<input type="checkbox"/>
Other _____	<input type="checkbox"/>

Education:

Year in university: _____

Student Status: Part-time student ☐ Full-time student ☐

University major(s): _____

University minor(s): _____

Other post-secondary education (please specify): _____

Employment:Not currently employed ☐Employed ☐Please specify: Part-time ☐ Full-time ☐

Position: _____

Mother's education (highest grade or degree): _____

Mother's occupation: _____

Father's education (highest grade or degree): _____

Father's occupation: _____

Are you currently taking any psychotropic medication (i.e., medication for a psychiatric condition)?

☐ Yes

☐ No

If yes, please provide the name of the medication: _____

Please indicate if you have experience seeking help from a mental health professional (e.g., therapist, psychiatrist):

☐ None

☐ Yes, in the past.

☐ Yes, currently.

Appendix B

Participant Pool Recruitment Advertisement

Title: Upsetting Childhood Experiences and Adult Interpersonal Relationships Relationships

Researchers: Ashley Mlotek, Dr. Sandra Paivio

Duration: 60 minutes

Credits: 1.0

Description:

The purpose of this study is to assess the associations among upsetting life experiences, emotion socialization, and functioning in interpersonal relationships. The study is completed online in one session. You will be asked to write continuously for 15 minutes about the most upsetting experience you have had in your life, including associated thoughts and feelings. Following this task, you will be directed to an online survey what consists of a number of questionnaires. The entire session will take approximately 60 minutes.

Do NOT participate in this study if you have recently (i.e. within the past three months), deliberately injured yourself, experienced suicidal thoughts, or have experienced a severely traumatic event (e.g., sudden death of a loved one). Additionally, do not participate if you have been hospitalized for psychiatric purposes in the past year or have recently had extreme reactions to stress such as feeling disconnected from your own thoughts, emotions, and sense of identity.

If you complete the study, you will receive 1.0 bonus points, which will go towards one or more of your eligible psychology courses for which you are registered, via the participant pool.

Appendix C

Informed Consent Form



CONSENT TO PARTICIPATE IN RESEARCH

Title of Study: Upsetting Childhood Experiences and Adult Interpersonal Relationships

You are asked to participate in a research study conducted by Ashley Mlotek, supervised by Dr. Sandra Paivio, from the Department of Psychology at the University of Windsor. The results of this study will be used to fulfil the requirements of a doctoral dissertation.

If you have any questions or concerns about the research, please feel to contact the primary investigator, Ashley Mlotek, at xxxx@uwindsor.ca or xxx-xxx-xxx. The faculty supervisor, Dr. Paivio, can be contacted at xxxxx@uwindsor.ca.

PURPOSE OF THE STUDY

The purpose of this study is to assess the associations among upsetting childhood experiences, emotion socialization, and functioning in interpersonal relationships.

PROCEDURES

If you volunteer to participate in this study, you will be asked to do the following tasks:

Following consent to participate in this study and indication that you understand the potential risks, you will be directed to a page where you will be instructed to write continuously for 15 minutes about the most upsetting experience you have had in your life, including associated thoughts and feelings. Following this task, you will be directed to an online survey that consists of a number of questionnaires. The questionnaires will take approximately 40 minutes to complete. The entire session will take approximately 60 minutes.

Following the online survey, you will be directed to a form for your personal information in order to verify your bonus credit.

POTENTIAL RISKS AND DISCOMFORTS

The completion of some of the questionnaires and/or writing task may bring up some emotional distress. This usually lasts for a short period of time. If you continue to feel upset and wish to seek

support, you may contact one of the following resources. In the event that you are experiencing thoughts of self-harm or suicide, contact the Windsor Distress Centre (519-265-5000) or the Community Crisis Centre (519-973-4435). You also can contact the University of Windsor Student Counselling Centre (519-253-3000 Ext. 4616), which provides free counselling for students registered at the university. Additional resources in the community are Family Services ([519-254-1831](tel:519-254-1831)) and Community Counselling Alliance ([519-254-3426](tel:519-254-3426)), which both provide services that are on a sliding scale, and the Teen Health Centre (519-253-8481), which provides services to individuals up to 24 years of age. You may also contact the primary investigator, Ashley Mlotek (xxx-xxx-xxx or xxxxx@uwindsor.ca) if you are experiencing concerns or have any issues related to this study.

Note: Do NOT participate in this study if you have recently (i.e. within the past three months), deliberately injured yourself, experienced suicidal thoughts, or have experienced a severely traumatic event (e.g., sexual assault, sudden death of a loved one). Additionally, do not participate if you have been hospitalized for psychiatric purposes in the past year or have recently had extreme reactions to emotional stress such as feeling disconnected from your own thoughts, emotions, or sense of identity.

POTENTIAL BENEFITS TO PARTICIPANTS AND/OR TO SOCIETY

Participation in this study provides an opportunity for personal reflection and increased self-awareness. Additionally, research indicates that writing about distressing experiences can be beneficial to physical and mental health. Participating in this study also gives you the opportunity to contribute to psychological research. Findings in this study potentially will inform psychological theory, and prevention and treatment programs for interpersonal difficulties among young people,

COMPENSATION FOR PARTICIPATION

You will receive 1.0 bonus point for 60 minutes of participation in this study, which will go towards one or more of your registered, eligible courses, via the participant pool. In the event that you are found to be ineligible to participate at the beginning of the study, and you are directed out of the online server, bonus points will not be awarded.

CONFIDENTIALITY

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission. Your data will be identified by participant number only and will be kept separate from your name and student number. Data will be stored electronically and will be encrypted and password protected, as well as stored on a secure online server. Data will be retained for 10 years and will then be securely deleted. Only group results will be disseminated to the public.

Note: There are legal limits to confidentiality that pertain to the writing task in the study. Limits include disclosure of information regarding present child abuse or neglect, sexual abuse by a health care professional, or intention of significant harm to oneself or others.

PARTICIPATION AND WITHDRAWAL

Participation in this study is voluntary. You may refuse to answer any questions that you don't want to answer and are free to withdraw from participation at any time without penalty and without being required to provide a reason. Following participation in the study, you have the right to withdraw your data from the study. The investigator may withdraw you from this research if circumstances arise which warrant doing so.

FEEDBACK OF THE RESULTS OF THIS STUDY TO THE PARTICIPANTS

Research findings for this study will be available and posted on the University of Windsor REB website.

Web address: www.uwindsor.ca/reb

Date when results are available: December 2016

SUBSEQUENT USE OF DATA

These data may be used in subsequent studies, in publications and in presentations.

RIGHTS OF RESEARCH PARTICIPANTS

If you have questions regarding your rights as a research participant, contact: Research Ethics Coordinator, University of Windsor, Windsor, Ontario, N9B 3P4; Telephone: 519-253-3000, ext. 3948; e-mail: ethics@uwindsor.ca

Please print this page for your reference.

SIGNATURE OF RESEARCH PARTICIPANT/LEGAL REPRESENTATIVE

‘I understand the information provided for ‘The Relationship Between Upsetting Childhood Experiences And Adult Interpersonal Relationships’ as described herein. My questions have been answered to my satisfaction, and I agree to participate in this study. I will print a copy of this consent form for my own reference.’”

I have read the letter of information and consent, and I understand the risks associated with this study.

☐ Yes

☐ No

Based on the material provided in the letter of information and consent, I agree to participate in this study.

By selecting 'Yes' below, I am providing my informed consent.

☐ **Yes**

☐ **No**

Appendix D

Post- Study Information

Thank you for participating in the study, ‘Upsetting Childhood Experiences and Adult Interpersonal Relationships.’

Your time and effort is greatly appreciated.

If you have any questions or concerns about the study, please do not hesitate to contact the primary investigator, Ashley Mlotek, Department of Psychology, at xxxxx@uwindsor.ca or xxx-xxx-xxxx.

If you are experiencing distress that has emerged through participation in this study, you can contact the Windsor Distress Centre (519-265-5000) or the Community Crisis Centre (519-973-4435), which provide assistance over the phone in the form of crisis intervention, emotional support, and referrals to community resources.

If you wish to talk to someone about issues that were brought to your attention in the study, you can contact the University of Windsor Student Counselling Centre (519-253-3000 Ext. 4616), which provides free counselling for students registered at the university.

Additional resources in the community are Family Services ([519-254-1831](tel:519-254-1831)) and the Community Counselling Alliance ([519-254-3426](tel:519-254-3426)), which both provide services that are on a sliding scale, and the Teen Health Centre (519-253-8481), which provides services to individuals up to 24 years of age.

Results for this study will be available and posted on the University of Windsor REB website in December 2016.

Please print this page for your reference.

VITA AUCTORIS

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Honours with Thesis, Toronto, ON, 2010

University of Windsor, Master's of Arts,
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