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Emotion Regulation: The Role of Trauma, Emotion-Related Parenting, and Resilience

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EMOTION REGULATION:
THE ROLE OF TRAUMA, EMOTION-RELATED PARENTING, AND RESILIENCE

By

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ABSTRACT

There is robust evidence that some people achieve resilience despite adverse experiences (Cicchetti, 2013). The purpose of the present study was to examine if resilience as a trait predicted emotion regulation abilities, and if it moderated the relations between risk and parenting history and emotion regulation abilities. Another aim of the present study was to explore the concept of resilience as an outcome and process through narratives of redemption sequence. Participants consisted of 234 undergraduate students (age ranged from 17-30 years, $M = 20.12$, $SD = 2.17$, 79.1% women, 71.37% White) who have experienced a major stressful or traumatic event. Participants completed an online survey, including self-report measures and qualitative items requiring written responses. Results indicated that trait resilience significantly predicted cognitive reappraisal. In addition, more than half of participants reported a redemption sequence despite negative experiences. Additional findings and study implications are discussed.

ACKNOWLEDGEMENTS

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CHAPTER I

Introduction

There is a robust relation between the quality of parenting that individuals have received and their adaptive functioning (Hakim-Larson, Parker, Lee, Goodwin, & Voelker, 2006; Narayan, Sapienza, Monn, Lingras, & Masten, 2015; Sroufe, Egeland, Carlson, & Collins, 2005). Nonetheless, not all adults who received poor parenting in their childhoods have maladaptive outcomes. In fact, the developmental psychopathology perspective suggests that there are many pathways that result from the interaction of risk and protective factors that allow for diversity in outcomes (Armstrong, Birnie-Lefcovitch, & Ungar, 2005; Cicchetti, 2013). According to Sroufe and Rutter (1984), developmental psychopathology can be defined as the study of the origins and pathways of behavioural maladaptation. The focus of developmental psychopathology is on course and deviations of development, and how these lead to later patterns of adaptation or maladaptation. Rutter and Sroufe (2000) provided three defining features of developmental psychopathology: understanding the causal processes, primarily involving genetics and environmental contributions; understanding the nature of the developmental process itself, which is also attributable to genetics and environmental factors; and continuities and discontinuities between normality and pathology. Consistent with this approach, there can be multiple contributors that interact to result in adaptive or maladaptive outcomes. One important outcome factor is individuals' ability to regulate their emotions. There is a considerable body of research that has identified emotion regulation competence as being associated with adaptive social and mental health functioning (Gross, 1998; Sundermann & DePrince, 2015; Suveg & Zeman, 2004).

The purpose of the present study is to examine the history of emotion-related parenting experiences, traumatic experiences over one's lifetime, including childhood maltreatment, and different forms of resilience in relation to current emotion regulation capacity in a sample of

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adults. The history of emotion-related parenting that individuals have received from their caregivers has implications for the development of their emotion regulation skills and adaptive psychosocial functioning (Shipman et al., 2007). Retrospective reports of experiences of traumatic events and child maltreatment have been found to be associated with increased risk for emotional problems (Klika & Herrenkohl, 2013; Shipman et al., 2007) and poor parenting (Zvara, Mills-Koonce, Carmody, & Cox, 2015). Furthermore, resilience has been shown to be related to positive parenting and is related to protective factors for individuals and families (Masten & Monn, 2015). The definition for resilience is inconsistent in the literature, with most definitions falling under one of three categories: trait, outcome, and process (Masten, 2014). Nonetheless, all definitions of resilience involve bouncing back from adversity. Resilience in this study is defined as a characteristic that helps individuals cope with and bounce back from adversity to achieve at least normal functioning.

Although there is extensive research on the relation between trauma and emotion-related parenting styles with individual outcomes, few studies have examined the additional contribution of *trait resilience* to these relations. Additionally, given the emotional aspect of adverse experiences and the importance of emotion regulation in adaptive functioning, investigating emotion regulation as an *outcome* may help to enhance our understanding of resilience. Furthermore, it is important to explore the concept of resilience qualitatively to provide new understanding about its nature and *process*. In the following sections, there is a review of the literature on emotion regulation, which has been operationalized as cognitive reappraisal and emotion suppression, emotion-related parenting styles, traumatic events, including child maltreatment, and resilience considered as either a trait, an outcome, or a process. In addition, a rationale for the current study is presented, followed by the proposed hypotheses.

CHAPTER II

Review of Literature

Emotion Regulation

Emotion serves an important function – it is a cue that people use to evaluate their environment and adjust their behaviours to increase their survival and/or productive success (Pollak, 2008). An emotion arises as a response to a triggering event, and involves a set of response tendencies with experiential, behavioural, and physiological components (Gross, 1998). Gross (1998) defined emotion regulation as the processes by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions. It refers to the general capacity to monitor, evaluate, and modulate one's experiences and expression of emotions (Gross & Thompson, 2007).

Parental influence on the development of emotion regulation. The ability to regulate emotions depends on both intrinsic characteristics of the individuals, such as their temperament, and extrinsic caregiver factors, such as maternal sensitivity (Thomas et al., 2017). At birth, infants rely solely on their caregivers to help them regulate their emotional distress. They use behavioural cues such as facial expression, crying, and gestures to communicate their emotional state, and they depend on their caregivers to respond to their cues in a timely, accurate, and emotionally warm manner (Thomas et al., 2017). As infants undergo rapid neural and cognitive development however, they develop the abilities that allow them to begin to regulate their own emotions, such as using attentional control to disengage from stressful stimuli and self-soothing behaviours (Thomas et al., 2017). Infants' temperaments and early development, as well as their parents' sensitivity interact during the early years to foster adaptive emotion regulation abilities. In a study using 254 mother-infant pairs (mothers' age ranged from 20 to 43 years, $M = 32$, infants' age = 6 months, 52% male infants and 48% female infants), Thomas and colleagues

(2017) found that infants with higher temperamental negativity and mothers with lower sensitivity used fewer attentional regulation strategies and more avoidance behaviour compared to infants with higher sensitivity mothers. Furthermore, this relation was moderated by maternal sensitivity such that maternal sensitivity reduced the effects of temperamental negativity on infant emotion regulation.

As infants progress through childhood, they are exposed to social cues that influence the ways in which they regulate their emotions, and emotion regulation abilities become more pronounced during this period (Morelen, Shaffer, & Suveg, 2016). During childhood, caregivers continue to exert influence on their children's emotion regulation abilities. For example, Morelen and colleagues (2016) recruited 64 mother-child pairs (children's age ranged from 8 to 11 years, 38 girls and 26 boys) to examine how mothers influence their children's emotion regulation. The mothers in the study completed measures of their own emotion regulation, their emotion-related parenting strategies, and their children's emotion regulation; children completed measures of their own emotion regulation; and the mother-child pairs engaged in a task that involved discussing a conflict. Results indicated that maternal emotion dysregulation was positively associated with child emotion dysregulation, and this relation was mediated by maternal unsupportive emotion parenting. Parental influence on emotion regulation in their children continues into the pre-adolescent and adolescent years as described next.

Adolescence is a period characterized by rapid changes and emotional instability that result from unstable peer and romantic relationships and a decrease in perceived support from caregivers (Zimmermann & Iwanski, 2014). However, emotion regulation abilities may be more flexible during this developmental stage as adolescents develop the cognitive abilities for perspective-taking and metacognition that allow them to have greater insight into their own

emotions, others' emotions, and their own emotion-related behaviours (Zimmermann & Iwanski, 2014). Although adolescents' lives become increasingly separated from that of their caregivers, caregivers continue to play a role in adolescents' abilities to regulate emotions. Criss, Morris, Ponce-Garcia, Cui, and Silk (2016) examined 206 parent-adolescent pairs (adolescents' age ranged from 10 to 18 years, 32% female adolescents and 68% male adolescents) and found that high levels of parental emotional coaching and mutual parent-adolescent emotional support were associated with higher levels of adolescent emotion regulation.

Similarly, there is evidence for the relation between parenting quality and emotion regulation capacity in adulthood. Young adulthood is a period in which individuals require less parental guidance. As young adults increasingly individuate from their caregivers, they develop and refine their own emotion regulation strategies (Manzeske & Stright, 2009). As such, caregivers may exert less influence in how their adult children regulate emotions. However, using a sample of 246 young adults (age ranged from 18 to 26 years, $M = 19.9$, $SD = 1.35$, 201 women and 45 men) and their mothers, Manzeske and Stright (2009) found that higher levels of maternal behavioural and psychological control were related to lower levels of young adults' emotion regulation. Furthermore, Magai, Consedine, Gillespie, O'Neal, and Vilker (2004) found that the quality of emotion socialization history is associated with trait emotions in adults, such that a history of socialization that incorporates positive rewards is associated with positive affect whereas a history of punitive socialization is associated with negative affect. It appears that the parenting styles of caregivers continue to play a role in how their adult children regulate emotions, and this finding may partially be due to the effects of parenting history in childhood rather than the parenting received in adulthood. Overall, researchers have found a general increase in emotion regulation abilities from adolescence and early adulthood to late adulthood,

primarily attributable to increasing cognitive abilities (e.g., Hagler, Grych, Banyard, & Hamby, 2016; Zimmermann & Iwanski, 2014)

Process model of emotion regulation: Cognitive reappraisal and expressive suppression. Gross (1998) proposed a process model of emotion regulation, which is based on the premise that an emotional experience unfolds along a timeline. An emotion-triggering event can initiate a set of response tendencies depending on how the situation is attended to and evaluated. Once the emotion-triggering event occurs, emotions can be modulated in various ways and at various points of the emotional experience. The five time points that Gross outlined are: 1) selection of the situation, 2) modification of the situation, 3) deployment of attention, 4) change of cognitive thoughts and processes, and 5) modulation of experiential, behavioural or physiological responses (Gross, 1998; Gross & John, 2003). Gross distinguished between antecedent-focused and response-focused emotion regulation strategies. Antecedent-focused strategies refer to what individuals do before the emotion-related response tendencies are actualized and can occur at any point during the first four time points of an emotional experience; whereas response-focused strategies refer to what individuals do after the response tendencies have transpired and occur during the last time point (Gross, 1998; Gross & John, 2003).

Gross and his colleagues focused on two strategies of emotion regulation because of their emphasis in the research literature: cognitive reappraisal and expressive suppression (Gross & John, 2003). Cognitive reappraisal is a form of cognitive change that involves construing a potentially emotion-triggering event in a way that changes the emotional impact. As such, reappraisal can alter the trajectory of an emotional experience. Expressive suppression is a form of response modulation that involves modifying the behavioural aspect of the emotional response

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tendencies such as to inhibit emotion expression and behaviour. Since suppression happens after the emotional response tendencies have occurred, individuals can only modify their behavioural responses (Gross, 1998; Gross & John, 2003). Previous studies found that compared to individuals who engaged in less cognitive reappraisal, those who engaged in more reappraisal rated themselves higher in experiencing and expressing positive emotions and lower in negative emotions (Gross & John, 2003). These individuals had closer relationships with friends, were more likely to share both positive and negative emotions with others, and had greater self-esteem, life satisfaction, and general well-being, as well as fewer depressive symptoms. In contrast, compared to individuals who engaged in less expressive suppression, those who engaged in more suppression rated themselves lower in experiencing positive emotions and higher in negative emotions, including feelings of inauthenticity (Gross & John, 2003). These individuals avoided and had less close relationships, were reluctant to share both their positive and negative emotions with others, and had lower levels of self-esteem and life satisfaction and more depressive symptoms.

Over the course of their lives, individuals' capacity to effectively and adaptively regulate emotions is influenced by numerous risk and protective factors that have significant implications for their mental health functioning (e.g., Sundermann & DePrince, 2015). One of such factors is parental socialization of emotions.

Risk and Protector Factors: Parental Socialization of Emotions

The family environment is crucial for early learning as it provides opportunities for countless interactions that help to shape the development of neurocognitive systems and the foundation to which future learning occurs (Masten & Monn, 2015). It is the setting in which most children first learn and develop emotional capacities. Parents and other primary caregivers

are considered to be the most important socializer of emotions and emotional competence in children (Hakim-Larson et al., 2006; Saarni, 1999). As such, the processes by which parents socialize emotions in their children can serve as either risk or protective factors.

The parenting style that parents adopt can depend on a number of factors. One perspective stems from attachment theory, which proposes that parents' emotion socialization practices are the result of their own attachment experiences with close relationships (Cassidy, 1994). Based on attachment theory, these parents' interactions with their own caregivers in the early developmental phase strongly influenced their attachment style and relatedly, their internal working model that guides their expectations, thinking, feelings, and behaviour (Magai et al., 2004). The manner in which the parents' caregivers responded to their emotional cues can influence their beliefs and attitudes about emotions and emotion regulation, which later contributes to their level of tolerance for their children's emotional expression (Magai et al., 2004). This perspective suggests that parents interact with their children in a similar way to the way that their caregivers interacted with them, leading to a transmission of attachment patterns (Siegel & Hartzell, 2003).

Related to attachment theory and the internal working model, another factor that influences parents' emotion-related parenting is known as parental meta-emotion philosophy – parents' feelings and thoughts about their own emotions and their children's emotions (Gottman, Katz, & Hooven, 1996, 1997). Gottman and colleagues (1996, 1997) proposed that parents' meta-emotion philosophy influences the ways in which parents teach their children how to express, label, and regulate emotions. In order to investigate parental meta-emotion philosophy, Gottman and colleagues interviewed mothers and fathers individually about their feelings, attitudes, and behaviour about their children's emotions and coded the interview content for

parental awareness, parental acceptance, and parental coaching. There is increasing evidence that the underlying components of parental meta-emotion philosophy (i.e., parental awareness of emotion in self and in child, parental acceptance of emotion in self and child, and parental coaching of child's emotions) are associated with a number of child outcomes. For example, in a longitudinal study of children from 4-5 years old to 7-8 years old, Gottman and his colleagues (1996) found that parental meta-emotion philosophy predicted better inhibitory control, academic achievement, and physical health, as well as lower levels of behavioural problems. The study consisted of 56 families at time 1 (24 of the families with a male child and 32 of the families with a female child) and included a combination of naturalistic interaction, semi-structured interviews, and highly structured tasks. Specifically, parents were separately interviewed about their own and their children's experiences of sadness and anger, as well as their philosophy of emotional expression and control. Parents and children participated in two interaction tasks. Children watched segments of emotion-eliciting films and completed subtests of the Wechsler Preschool Scales of Intelligence, and their physiological activities were indexed (e.g., cardiac interbeat interval, pulse transmission time to the finger, skin conductance level). Families were re-contacted three years later for a second time, and 53 of the 56 families completed follow-up assessments of child and marital outcomes. Furthermore, Katz, Maliken, and Stettler (2012) reviewed the literature on the relations between parental meta-emotion philosophy and child socioemotional adjustment, including any mediating and moderating factors. In their review, the authors only included studies that used Katz and Gottman's parental meta-emotion interview. Katz and colleagues (2012) found that parental meta-emotion philosophy characterized by emotion acceptance and coaching was associated with better

psychosocial adjustment and peer relations in children across ages from pre-school to adolescence.

Parental meta-emotion philosophy further suggests four parenting styles that parents use to socialize emotions in their children: emotion coaching, laissez-faire, dismissing, and disapproving (Gottman et al., 1996). According to Gottman and his colleagues (1996), parents who primarily adopt an emotion coaching parenting style accept their children's emotional expressions and use these as opportunities to teach their children about emotions and emotion regulation. Parents who primarily adopt a laissez-faire parenting style also accept their children's emotions but do not teach their children about emotion expression and regulation. In contrast, dismissing and disapproving parenting styles are characterized by rejection of children's emotions. Specifically, parents who primarily adopt a dismissing parenting style disregard, ignore, and trivialize their children's emotions; and parents who primarily adopt a disapproving parenting style criticize, reprimand, or punish their children for emotional expressions (Gottman et al., 1996). Hakim-Larson and colleagues (2006) found that the emotion coaching parenting style correlated positively with expressive encouragement and negatively with minimization reactions, whereas the laissez-faire parenting style correlated positively with expressive encouragement. Both dismissing and disapproving parenting styles correlated positively with distress, punitive, and minimization reactions, whereas the dismissing parenting style correlated negatively with expressive encouragement. The Emotion-Related Parenting Style Self-Test was developed to assess the four parenting styles (Gottman & DeClaire, 1997), and this was later modified into a Likert scale (Emotion-Related Parenting Style Self-Test – Likert; Hakim-Larson et al., 2006) and two short forms (Emotion-Related Parenting Style (Paterson et al., 2012) and Maternal Emotion Styles Questionnaire (Lagacé-Séguin & Coplan, 2005)).

Emotion-related parenting can be viewed from the perspective of the individuals receiving such parenting and represents their retrospective report of how they were emotionally socialized by their own parents. Using meta-emotion theory and participant data gathered from meta-emotion interviews, Hakim-Larson and Scott (2013) developed the History of Parenting Emotion Socialization (HOPES) scale, a measure of individuals' retrospective report of the emotion-related parenting they received from their caregivers (e.g., Johnson & Hakim-Larson, 2015). The HOPES scale captures three dimensions of parenting styles that are based on the underlying dimensions of the meta-emotion construct: parental emotion awareness versus lack of insight, parental acceptance versus rejection of emotion, and parental coaching versus uncertainty (Gottman & DeClaire, 1998; Hakim-Larson & Scott, 2013). Adults may retrospectively report that their parents showed relatively more emotion awareness or lack of insight into emotions. Parents identified as having more awareness are likely more attuned to emotions and are better able to easily identify their children's emotions (Katz & Hunter, 2007). Adults may also report that their parents were either relatively more accepting or more rejecting of emotions. Finally, adults may report retrospectively that their parents were either emotion coaching by providing guidance or that their parents were uncertain of how to interact with them about their emotions. Adults who are parents themselves and who are identified as using an emotion coaching style provide more validation of their children's emotion expression and use relevant situations as opportunities to teach emotions and guide problem-solving (Katz & Hunter, 2007).

The styles that parents endorse are associated with their children's outcomes. For example, parents identified as having more awareness, acceptance, and coaching of emotions have children who are better adjusted, have better emotion regulation capacity, and engage in

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more positive and less aggressive play with their peers (Gottman et al., 1997; Katz & Gottman, 1997; Katz & Windecker-Nelson, 2004; Katz & Windecker-Nelson, 2006; Lagacé-Séguin & Coplan, 2005). In fact, using a sample of 130 families with a 4- or 5-year-old child, Katz and Windecker-Nelson (2006) found that a family environment characterized by domestic violence perpetrated by either parent was associated with higher levels of child aggression and withdrawal symptoms. However, high maternal emotion coaching mitigated the effect of domestic violence on these indicators of child adjustment, and high paternal emotion coaching mitigated the effect of domestic violence on child withdrawal symptoms.

Better parenting quality is generally associated with many aspects of future competence in children (Masten & Coatsworth, 1998; Masten & Monn, 2015; Sandler, Ingram, Wolchik, Tein, & Winslow, 2015; Sroufe et al., 2005). In contrast, individuals who received poor parenting and experienced traumatic events are at risk for a host of negative outcomes (Bailey, DeOliveira, Wolfe, Evans, & Hartwick, 2012), as discussed further below.

Traumatic Events as Risk Factors

Traumatic experiences include a range of situations, from crime-related events, to general disaster, to physical injuries and unwanted sexual experiences. It is not uncommon for individuals to have experienced a traumatic event at some point in their past. It has been found that more than half of the general population has experienced at least one violent or life-threatening event during the course of their lives (Ozer, Best, Lipsey, & Weiss, 2003). These traumatic experiences can range from one incident in childhood to a series of events throughout one's life course. The responses to these events are different from person to person, and individuals can be impacted psychologically and/or physiologically in a variety of ways across the different life stages (Maschi, Baer, Morrissey, & Moreno, 2012). While the majority of

individuals who have experienced one or more of these events are not diagnosed with

posttraumatic stress disorder (Ozer et al., 2003), these experiences can contribute to maladaptive

outcomes. For example, exposure to traumatic events has been associated with subsequent

psychological outcomes such as anxiety, depression, substance use, suicide, and interpersonal

difficulties (Breslau, 2002).

There is evidence to suggest that experiences of stressful events are related to poor

emotion regulation outcome, such as higher levels of self-reported emotional reactivity

(McLaughlin & Hatzenbuehler, 2009) and problematic cognitive or behavioural regulation

responses such as rumination (Compas, Connor-Smith, Saltzman, Harding, & Wadsworth, 2001;

Michl, McLaughlin, Shepherd, & Nolen-Hoeksema, 2013). Michl and colleagues (2013)

investigated whether stressful life events predicted rumination in two longitudinal samples, an

early adolescent sample (baseline $N = 1,065$, grades 6 to 8, 51.2% boys and 48.8% girls)

assessed at three time points over a seven-month period and an adult sample ($N = 1,132$, $M =$

47.0, $SD = 15.2$, 45.5% women and 54.5% men) assessed at two time points over a 12-month

period. The authors found that exposure to stressful life events was associated longitudinally

with increased rumination. Michl and colleagues (2013) argued that stress may induce

rumination by reducing individuals' ability to self-regulate, which further impairs their ability to

engage in problem solving or adaptive regulation. Although the authors used measures of

stressful life events for both the adolescent (e.g., "Your parents got divorced"; "You got

suspended from school") and adult (e.g., "Divorce"; "Serious illness or injury of a family

member") samples in their study, it is likely that experiences of traumatic events, which are more

intense in nature, are associated with similar or possibly worse emotion regulation outcomes.

Although stressful events can be traumatic, not all are considered so and individuals can cope

well with some stresses. In contrast, trauma, by definition, catches individuals off-guard in the moment and strains their ability to cope.

Using a sample of 69 firefighters ($M = 36.66$, $SD = 9.06$) who had been exposed to duty-related trauma, Levy-Gigi and colleagues (2016) found that trauma exposure was only associated with posttraumatic stress disorder (PTSD) symptoms for the firefighters who had low regulatory choice flexibility. Firefighters who demonstrated low regulatory choice flexibility had more difficulty with choosing emotion regulation options that fit the demands of the situation (i.e., distraction for high intensity situations and reappraisal for low intensity situations). Furthermore, emotion dysregulation has been found to mediate the relation between cumulative stress and depressive symptomology (Abravanel & Sinha, 2015). Given the maladaptive regulation responses, it is possible that experiences of major stressful and traumatic events could impair individuals' abilities to engage in effective cognitive reappraisal and modulation of behaviour in response to emotion-triggering events.

Child maltreatment. Child maltreatment, often considered a form of traumatic event occurring in childhood, is a major risk factor for children and is considered to be one of the greatest threats to child development in the family context (Cicchetti, 2013). This is understandably so since infants and young children are fully dependent on their caregivers to meet their physical and emotional needs. Child maltreatment includes physical, emotional (i.e., psychological), and sexual abuse and neglect. Physical abuse is defined as physical contact, constraint, or confinement that is carried out to hurt or injure; emotional abuse is defined as verbal communication with the intent to humiliate or degrade; sexual abuse is defined as unwanted sexual contact; and neglect is defined as the failure of caretakers to provide basic physical and emotional needs (Bremner, Bolus, & Mayer, 2007). Although child maltreatment is

often understood as a childhood trauma, some of its subtypes do not fall under the Diagnostic

and Statistical Manual of Mental Disorders, fifth edition (DSM-5) definition of trauma or

traumatic event. Specifically, emotional/psychological abuse involving humiliation or

degradation and instances of neglect are not necessarily consistent with the criteria for trauma as

outlined in the DSM-5, such as exposure to actual or threatened death, serious injury, or sexual

violence, although such threats are possible co-occurrences with various forms of abuse and

neglect (e.g., American Psychiatric Association, 2013). Furthermore, child maltreatment and

trauma are differentiated from PTSD in that the former refers to the event or injury itself whereas

the latter pertains to the event and the negative psychological consequences that follow the event.

The DSM-5 criteria of PTSD include the experience of trauma itself, as well as intrusion

symptoms, avoidance behaviour, negative alterations in cognitions and mood, and marked

alterations in arousal and reactivity associated with the trauma (American Psychiatric

Association, 2013).

There is extensive evidence to indicate that child maltreatment is associated with various

adverse physical and mental health consequences, such as increased risks for depression, anxiety,

suicide attempts, developmental disabilities, substance abuse, criminal behaviour, and chronic

health problems (e.g., Fallon et al., 2010; Irish, Kobayashi, & Delahanty, 2010; Klika &

Herrenkohl, 2013; Min, Farkas, Minnes, & Singer, 2007). A review of 23 studies published

between 1996 and 2011 that examined childhood trauma and subsequent physical and mental

health impact in adults aged 50 and older revealed that trauma occurring in childhood is

significantly associated with mental health problems, physical health problems, and increased

rates of re-victimization later in life (Maschi et al., 2012). Several researchers have suggested

that different characteristics of maltreatment may have different effects on child development,

including age of first report, frequency and severity, chronicity or duration, and subtype of maltreatment (English, Graham, Litrownik, Everson, & Bangdiwala, 2005). Specifically, English and colleagues (2005) found that the number or frequency of maltreatment incidents predicted behavioural problems, chronicity of maltreatment predicted impairments in social functioning, and age at first report predicted poorer daily living skills. Kaufman and Cicchetti (1989) found that children exposed to physical maltreatment were considered more aggressive by their peers than those exposed to emotional abuse or neglect. Furthermore, there is evidence that chronicity of maltreatment and exposure to multiple forms of maltreatment are associated with poorer developmental competence and mental health overall (English et al., 2005; Kaufman & Cicchetti, 1989; Witt et al., 2016). The experience of child maltreatment initiates a cascade of maladaptive developmental outcomes in that its symptoms contribute to problems navigating developmental tasks across neurobiological, socioemotional, and cognitive domains (Cicchetti, 2013). Unfortunately, child maltreatment is not uncommon. The 2008 Canadian Incident Study of Reported Child Abuse and Neglect reported the rate of substantiated maltreatment of 14.19 per 1000 children (Fallon et al., 2010). In the United States, nearly one million children are confirmed victims of child maltreatment each year (Wang & Holton, 2007).

One pathway in which experiences of child maltreatment can lead to poor outcome is accounted for by attachment theory. Previous studies have found that experiences of child maltreatment are associated with poor attachment relationships with parents (Ammerman et al., 2012; Cicchetti, 2013). Whereas secure attachment relationships with parents serve to regulate arousal and stress (Masten & Monn, 2015), insecure attachment relationships are associated with feelings of insecurity and mistrust towards other people (Cicchetti, 2013). The attachment process is significant as it affects individuals' ability to regulate emotions, cope with stress,

benefit from social supports, and form nurturing and affectionate relationships. This process,

however, is likely disrupted for maltreated children and these abilities become impaired or

undeveloped (Lowenthal, 1998). As a consequence, individuals' developmental outcomes are

likely influenced in ways that impede their adaptive functioning.

Child maltreatment has been found to be associated with emotion regulation problems

(Alink, Cicchetti, Kim, & Rogosch, 2009; Bailey et al., 2012). Previous studies found that

children who have experienced maltreatment demonstrate greater emotional lability and

dysregulation and fewer constructive strategies for managing emotional arousal than their non-

maltreated peers (e.g., Shipman, Schneider, & Brown, 2004; Shipman et al., 2007). It is possible

that maltreated children use maladaptive emotion regulation strategies, such as ruminative

cognitive responses and emotional suppression to manage intense and intrusive memories

associated with the maltreatment or traumatic experiences (Heleniak, Jenness, Stoep, McCauley,

& McLaughlin, 2015; Lowenthal, 1998). Furthermore, it has been argued that individuals who

have experienced maltreatment may have their cognitive, emotional, and behavioural capacities

disrupted (Ammerman et al., 2012); this disruption may affect their ability to engage in adaptive

cognitive reappraisal and effectively modulate their emotional responses during emotion-

triggering events. Heleniak and colleagues (2015) used both cross-sectional and longitudinal data

from two studies of adolescent development to investigate whether child maltreatment was

associated with emotional reactivity and maladaptive cognitive and behavioural regulation

responses. The first study consisted of a community-based sample of 169 adolescents aged 13 to

17 years who completed measures of child maltreatment, emotional reactivity, cognitive and

behavioural responses to distress, and psychopathology; and the second study consisted of a

different sample of 439 adolescents who completed the same measures in Grade 6 and again at

each of the six follow-up interviews between Grade 6 and Grade 12. In both samples, experiences of child maltreatment were associated with greater emotional reactivity, engagement in a ruminative cognitive response style, and dysregulated behavioural responses to distress. Moreover, in study 2, the authors found that exposure to child maltreatment was associated with greater growth in emotional reactivity across the follow-up periods.

Vettese, Dyer, Li, and Wekerle (2011) argued that the symptoms associated with child maltreatment can be understood as relating to emotional regulation difficulties, either in response to overwhelming stress or coping demands, or to the burden of intense emotions. In fact, studies have found that emotion regulation mediated the relations between experiences of maltreatment and internalizing and externalizing symptoms (Alink et al., 2009; Heleniak et al., 2015). The ability to regulate emotions appears to play a crucial role in adaptive functioning, especially for individuals with a history of maltreatment such that it may alter the trajectory of their outcomes.

Cumulative traumatic events. Children who have experienced maltreatment are likely raised in stressful environments, both at the family and neighbourhood levels (Heleniak et al., 2015). These children have an increased risk for exposure to multiple stressors, such as poverty, exposure to parental violence, parental mental illness and substance use, criminality, and dangerous neighbourhood conditions (Jaffee, Caspi, Moffitt, Polo-Tomás, & Taylor, 2007). Risks factors have been found to pile up in individuals' lives, and they are established predictors of undesirable outcomes and future problems (Briere, Agee, & Dietrich, 2016; Masten, 2014). According to Masten (2014), risk factors are often related to and predict one another; risk factors may reflect underlying fundamental processes that undermine more than one aspect of adaptation and development; and one problem could lead to another resulting in snowballing effects.

Numerous studies have found that multiple exposures to traumatic events are a better predictor of negative outcomes than fewer exposures (Briere et al., 2016; Jaffee et al., 2007; Masten, 2014; Vinkers et al., 2014; Willard, Long, & Phipps, 2016). Using two samples of adults, Vinkers and colleagues (2014) found that cumulative stress experiences, including child maltreatment, traumatic events, and daily hassles, were associated with depressive symptoms and major depressive disorder; the first sample consisted of 563 young adults from age 18 to 25 years and the second sample consisted of 2,274 participants from age 18 to 65 years. Cumulative stress can also lead to allostatic overload, which refers to the chronic, cumulative impact of stressful experiences that exceed individuals' ability to cope effectively (Ruini, Offidani, & Vescovelli, 2015). At the neurobiological level, allostatic overload can impair the nervous and hormonal systems in individuals' response to stress (Bailey et al., 2012). Although evidence suggests the deleterious effects of traumatic events, these outcomes are not inevitable as some of these individuals function resiliently even after experiencing such adversity (Cicchetti, 2013).

Resilience and Protective Factors

Resilience can be defined as reduced vulnerability to environmental risk experiences, the overcoming of stress or adversity, or a relatively positive outcome despite risk experiences (Rutter, 2006). Research on resilience arose from risk factor studies when researchers discovered that some children flourish in the midst of adversity (Masten & Coatsworth, 1998). Particularly in the last three decades, there has been a shift in focus from risk to resilience, maladaptive to adaptive factors (Rutter, 2012). Michael Rutter is one of the lead figures in resilience research. His research project, the Isle and Wight study, examined children from underprivileged areas in London, England between 1964 and 1965 (Rutter, 1979). Participants included 571 adolescents and their parents; information was collected on socio-demographic data, adolescent and parental

psychopathology, adolescent peer relationships, and family functioning. In the study, risk factors were defined as severe marital discord, low socioeconomic status, large family size, parental criminality, and mental illness of mothers. Rutter found that the more risk factors children experienced, the more likely it was that they would develop a psychiatric disorder. Specifically, 1% of the children who had no risk or one risk factor compared to 21% of the children who had four or more risk factors experienced a psychiatric disorder. Within the sample, Rutter (1979) also examined twins whose mother was affected by schizophrenia and found that a positive parent-child relationship had a significant effect on child outcomes. Whereas 25% of the twins who were exposed to parental affection or had a good relationship with at least one parent had a psychiatric disorder, 75% of the twins who did not have a positive relationship with either parent had a psychiatric disorder.

Norman Garmezy is also considered one of the pioneers of resilience research. The research project that he led, Project Competence, examined three groups of similarly-aged children: one group whose biological mothers had schizophrenia, another group whose mothers did not have schizophrenia, and a third group that was referred by school personnel for internalizing and/or externalizing problems (e.g., conduct disorder, hyperactivity) (Garmezy, 1987). Garmezy examined the three groups of children for attentional functioning and social and motivational competence as indicated by peers and teachers. He found that except for children with conduct disorder, most of the children did not have deficits, suggesting the existence of unknown protective factors. As a follow-up, Garmezy (1987) examined three cohorts of children: a community-based sample ($n = 200$), children with life-threatening congenital heart defects ($n = 32$), and children with severe disabilities ($n = 29$). He collected socio-demographic and family information and administered measures of child competence, including cognitive assessments

using intelligence and achievement tests, school records, and peer- and teacher-measures. Garmezy found that competence was associated with a lower number of risk factors and a higher number of protective factors (e.g., higher intelligence, higher socioeconomic status, family cohesion and stability).

Emmy Werner is another lead figure in the research on resilience. In the Kauai Longitudinal Study, Werner and her colleagues examined the impact of a variety of biological and psychosocial risk factors, stressful life events, and protective factors in a sample of 698 infants born in 1955 on the island of Kauai in Hawaii (Werner, 1989; Werner & Smith, 1982). Werner and her multidisciplinary team monitored the development of the children at ages 1, 2, 10, 18, 32, and 40 years, and they assessed all areas of development, including physical, intellectual, and social development, and learning and behavioural problems. The team examined academic progress, classroom behaviour, aptitude, achievement, and personality. They documented families' experiences of stressful life events and different aspects of the family environment and collected records from public heath, educational and social service agencies, local police, and family court. The findings revealed that 30% of the children were considered at-risk, defined in the study as being born and raised in poverty, having experienced pre- or perinatal complications, living in families troubled by chronic discord, divorce, or parental psychopathology, and being reared by mothers with less than Grade 8 education. Two-thirds of the children who experienced four or more risk factors developed learning, behavioural, and mental health problems, but one-third of them (30 males and 42 females) developed into competent, confident, and caring adults. Werner identified protective factors at the individual, family, and community levels. Factors at the individual level include having: (1) few eating and sleeping problems and easy and warm temperaments during infancy, (2) greater autonomy, more

positive social orientation, and advanced communication skills in early childhood, and (3) high social and academic skills and a positive self-concept during school-age. Factors at the family level include having less separation from parents and structure and rules in the home. Finally, factors at the community level include having a favourite teacher and informal networks of support.

Resilience: Trait, outcome, and process. Since the time of the aforementioned studies, research on resilience has become increasingly popular, especially during difficult times (Masten, 2014). Other prominent studies have emerged to shed light on the concept of resilience, including Luthar (1991), Masten et al. (1999), and Ungar et al. (2007). One controversy in the literature is how resilience is defined and operationalized, generally falling under one of three categories: trait, process, and outcome. As a personality trait, resilience helps individuals cope with adversity and achieve good adjustment (Connor & Davidson, 2003; Smith-Osborne & Bolton, 2013). Trait resilience is a latent construct often measured using a scale that reflects protective mechanisms such as hardiness (e.g., ability to cope with change, unexpected events, and stress), persistence (e.g., ability to achieve goals despite obstacles), commitment to finding meaningful purpose in life, internal locus of control, and believing one can learn and grow from both positive and negative life experiences (Bonanno, 2004; Campbell-Sills & Stein, 2007; Smith-Osborne & Bolton, 2013).

As an outcome, resilience is characterized by successful adaptation despite adversity (Liu, Wang, Zhou, & Li, 2014). This is often measured by good functioning or development in combination with exposure to adversity. However, the outcome measures used to denote resilience are not consistent in the literature. For example, resilience has been inferred using criteria such as the interaction between levels of adversity and competence (e.g., Shiner &

Masten, 2012), a lack of psychopathology (e.g., Collishaw et al., 2007), self-regulation (e.g., Buckner, Mezzacappa, & Beardslee, 2003), and different combinations of domains of successful functioning (e.g., Collishaw et al., 2007; DuMont, Widom, & Czaja, 2007; Walsh, Dawson, & Mattingly, 2010).

Finally, as a process, resilience is defined as a dynamic process of adaptation to adversity that involves the interaction between risk factors and protective resources (Klika & Herrenkohl, 2013; Liu et al., 2014; Shiner & Masten, 2012). Based on this perspective, factors at different levels interact to buffer individuals from the effects of adverse experiences (Jaffee et al., 2007). One possible way to conceptualize resilience as a process is based on Dan McAdam's work on redemption sequence via the narrative approach. The narratives or life stories approach is a way in which individuals understand or present themselves by actively making sense of their past experiences to make it more meaningful (McAdams, Reynolds, Lewis, Patten, & Bowman, 2001). These stories are psychosocial constructions by the individuals and are influenced by the cultural context in which they are embedded. The process of having coherence within individuals' narrative identity is central to personality functioning and well-being (McAdams, 2001). A redemption sequence is characterized by a transformation from negative life event to a positive outcome, and this process is related to life satisfaction, self-esteem, and a sense of coherence (McAdams et al., 2001). In contrast, McAdams and colleagues (2001) conceptualized a contamination sequence as the move from a good, affectively positive life scene to a negative life scene. As the definition of resilience requires the present of a negative life event, it is more consistent with the concept of redemption. A narrative with a redemption sequence likely encompasses individuals' past experiences and personal resources, as well as the cultural context in which they live, and thus, may capture the process of achieving resilience.

The different ways in which resilience is operationalized in the literature likely contributed to the mixed findings of its prevalence. As noted above, some studies used a direct measure of resilience whereas still others inferred resilience based on individuals' experiences of adversity and the level of subsequent adaptive functioning. In a meta-analysis of 21 studies, Walsh and colleagues (2010) reported that approximately 10 to 25 percent of maltreated children achieve resilient functioning. On the other hand, using the findings of four studies on resilience, Rutter (2007) reported that approximately 50 percent of all individuals suffering physical or sexual abuse in childhood show positive psychosocial functioning. Despite the inconsistent definition, resilience is generally seen as the capacity to adapt successfully in the context of adversity, which can be both acute (e.g., car accident) or chronic (e.g., child maltreatment) (Connor & Davidson; 2003; Masten & Coatsworth, 1998; Shiner & Masten, 2012). Rather than an absence of adversity or superior functioning compared to the general population, the emphasis is on bouncing back and achieving relatively normal functioning after adverse experiences. There are protective factors at different levels (i.e., individual, family, and societal) that promote resilience (Jaffee et al., 2007; Masten, 2014).

Protective factors: Individual, family, societal. The importance of protective factors for reducing the negative effects of risk factors and promoting resilience is highlighted in the landmark studies noted above (Garmezy, 1987; Rutter, 1979; Werner, 1989; Werner & Smith, 1982). At the individual level, the factors that have been identified include intelligence, problem-solving skills, self-control, emotion regulation, self-esteem, self-efficacy, planfulness, positive attitude or optimism, motivation to succeed, sense of safety, forgiveness, and spirituality, faith, hope, or belief that life has meaning (Jaffee et al., 2007; Maschi et al., 2012; Masten, 2014; Shiner & Masten, 2012). Although numerous studies have found that high intelligence is

associated with more favourable mental health outcomes, it does not seem to be an important

predictor of resilience (Rutter, 2007). Using a sample of 1,116 young children, Jaffee and

colleagues (2007) found that parental mental illness and high neuroticism differentiated

resilience from non-resilience in maltreated children, with resilience being defined as relatively

lower levels of antisocial behaviour; however, gender, intelligence, and well-adjusted

temperament did not differentiate resilience from non-resilience in the maltreated children. In

their study that investigated the Big Five personality traits and resilience, Shiner and Masten

(2012) found that the resilient group characterized by high competence and high adversity

showed higher conscientiousness, agreeableness, and openness and lower neuroticism in

childhood than the maladaptive group characterized by low competence and high adversity.

Individuals' personality traits can have an impact on resilience by shaping their capacity for

overcoming struggles and achieving competent functioning. These traits also indirectly influence

resilience in its contribution to how individuals interpret their experiences, interact with others,

evoke support from others, and apply adaptive regulation skills (Shiner & Masten, 2012).

There is considerable evidence demonstrating that individuals' relationships with parents,

friends, and partners are predictors of adult resilience (Collishaw et al., 2007; DuMont et al,

2007). Resilience, in this case, was defined as an outcome characterized by a lack of

psychopathology (Collishaw et al., 2007) and successful functioning across six of eight domains,

including education, psychiatric disorder, substance abuse, crime, violent behaviour,

employment, homelessness, and social activity (DuMont et al, 2007), despite experiences of

child maltreatment. In fact, Collishaw and colleagues (2007) used the data from the Isle of Wight

study ($N = 571$ adolescents) and its follow-up study ($N = 378$, age ranged from 42 to 46 years)

and found that good interpersonal relations were significantly associated with resilience across

childhood, adolescence, and adulthood. The Isle of Wight researchers collected data on psychopathology, peer relationships, and family functioning in adolescence and data on childhood abuse, parental care, personality, psychopathology, crime, self-rated health, and history and quality of relationships in adulthood. Furthermore, using a sample of 16,916 children (49% girls and 51% boys) followed at ages 3, 5, and 7 years, Flouri, Midouhas, Joshi, and Tzavidis (2015) found that adverse life events and neighbourhood disadvantage were significantly associated with higher child internalizing and externalizing problems. These relations were stronger for children with less close relationship with their parents, and children with closer relationship with their parents had fewer internalizing and externalizing problems. Relationships with parents appear to be important adaptive systems for children, especially in times of stress and trauma. In general, positive childhood family environments, effective caregiving and parenting quality, and close relationships with families, friends, and romantic partners have been found to promote resilience (Bradley, Davis, Wingo, Mercer, & Ressler, 2013; Masten, 2014; Southwick, Bonanno, Masten, Panter-Brick, & Yehuda, 2014).

Individuals are nested in families, and families are nested in the societies in which they reside. As such, societal factors also contribute to individuals' resilience. According to Ungar (2013), individuals and families interact with multiple systems to nurture and sustain resilience. For example, if meaningful resources are available and accessible, then individuals are more likely to engage with them and show resilience. Some of the factors that have been identified at the societal level to promote resilience include informal networks of support, such as well-caring teachers, neighbours, parents of friends, and ministers, effective schools, effective neighbourhoods, and community cohesion (Flouri et al., 2015; Masten, 2014; Ungar, 2013; Werner, 1989; Werner & Smith, 1982).

Resilience has been found to be associated with positive outcomes. Specifically, resilience measured as a personality trait is positively correlated with positive indicators of mental health and negatively correlated with negative indicators of mental health with a medium effect size (Hu, Zhang, & Wang, 2015). Resilience also moderates the relation between child maltreatment and psychological symptoms (Campbell-Sills & Stein, 2007; Edwards, Probst, Rodenhizer-Stämpfli, Gidycz, & Tansill, 2014). Using a sample of 131 university students ($M =$ 18.9, 72.0% women), Campbell-Sills and Stein (2007) found that having a history of child maltreatment significantly predicted having more psychological symptoms; however, trait resilience reduced the strength of this relation. Similarly, using a sample of 765 college women (age ranged from 18 to 25 years, $M = 18.74$, $SD = 1.01$), Edwards and colleagues (2014) found that child maltreatment was significantly associated with higher psychological distress, and this relation was weaker with increasing scores of trait resilience. In fact, the authors of both studies found that participants with high trait resilience, defined as one standard deviation above the mean, had significantly fewer psychological symptoms and were comparable to that of individuals with low scores of child maltreatment. Protective factors appear to be important in fostering resilience, which in turn is associated with a host of positive outcomes. As discussed next, two aspects of emotional development that seem to have a protective influence have been linked to resilience: the tendency to experience positive emotions and emotion regulation skills.

Positive emotions generally have been found to underlie characteristics such as self-esteem, positive reappraisal of oneself, positive interactions with others, and problem solving skills (Curtis & Cicchetti, 2007). Positive emotions have been proposed to contribute to a wide range of potential emotion regulation strategies, thus enhancing individuals' ability to resiliently cope with adverse experiences (Fredrickson, Tugade, Waugh, & Larkin, 2003; Gloria &

Steinhardt, 2016). Gloria and Steinhardt (2016) investigated the relations between positive

emotions, coping strategies, trait resilience, and mental health in a sample of 200 postdoctoral

research fellows. The authors found that positive emotions were positively associated with trait

resilience, and coping strategies partially mediated the relation between positive emotions and

resilience. In another study, Fredrickson and colleagues (2003) examined a sample of 46

undergraduate students (18 men and 28 women) before and after the 9/11 attacks in the United

States, and their findings indicated that positive emotions measured after the incident buffered

resilient individuals from post-incident depression and enhanced their psychological resources.

Furthermore, the ability to regulate emotions has been identified as a protective factor in

resilience studies. Previous studies suggested that good emotion regulation capacity allows

individuals to employ regulation strategies against potential stressors before these stressors

evoke negative emotions, as well as managing the negative emotional arousal after the response

tendencies have resulted (Buckner et al., 2003). Specifically, Troy and Mauss (2011) argued that

individuals with high emotion regulation abilities, such as better use of attentional control and

cognitive reappraisal, are more likely to have adaptive emotional responses, which then

contributes to their resilience.

Rationale and Purpose of the Present Study

Consistent with the developmental psychopathology framework, the purpose of the

present study was to examine both risk and protective factors as predictors of emotion regulation

(cognitive reappraisal and expressive suppression) in adults who vary in their childhood

histories. This study consisted of two parts. There were two goals to the first part of this study.

The first goal was to investigate if trait resilience predicts current emotion regulation outcomes

above and beyond the contribution of demographic variables such as age, gender, and ethnicity,

as well as past experiences of child maltreatment, traumatic events, and history of emotion socialization by parents during childhood. The second goal was to examine if trait resilience moderates the relations between past history of child maltreatment, traumatic events, and history of emotion socialization by parents and current emotion regulation. For these questions, a quantitative approach was employed to test the relations between the proposed variables. In addition, this study included a second part that employed a qualitative approach to shed light on resilience as a process or outcome. The addition of the qualitative component will allow for the exploration of the concept of resilience and other relevant factors that were not considered in the first part of the study.

Research Questions and Hypotheses

Based on the literature presented above, the current study addresses the following research questions and hypotheses:

Research Question #1: Does trait resilience predict emotion regulation capacities (i.e., cognitive reappraisal and expressive suppression) above and beyond the contribution of age, gender, ethnicity, history of child maltreatment, traumatic events, and history of emotion socialization by parents (i.e., emotion awareness versus lack of insight, acceptance versus rejection of emotions, and emotion coaching versus parenting uncertainty)?

While there are many studies on the effect of trauma and resilience on parenting practices, no studies to the author's knowledge have examined these variables together with emotion socialization styles, and how these variables when taken together contribute to emotion regulation capacities. There is robust evidence that experiences of child maltreatment and other traumatic events are associated with numerous physical and mental health problems in adulthood, including emotion regulation problems such as being less flexible with regulation

strategies and using maladaptive strategies such as rumination (e.g., Ammerman et al., 2012; Bailey et al., 2012; Breslau, 2002; Irish et al., 2010; Levy-Gigi et al., 2016; Michl et al., 2013; Min et al., 2007). Similarly, there is robust evidence suggesting a relation between the quality of emotion-related parenting received and emotion regulation capacities (e.g., Dunsmore, Her, Halberstadt, & Perez-Rivera, 2009; Lagacé-Séguin & Coplan, 2005; Magai et al., 2004; Shipman et al., 2007). Additionally, age, gender, and ethnicity have been found to play a role in coping and regulation in adults (Blanchard-Fields, 2009; Diehl, Coyle, & Labouvie-Vief, 1996; Gross & John, 2003). Resilience, on the other hand, captures individuals' ability to achieve normal functioning despite adverse experiences (e.g., Masten & Coatsworth, 1998). It is possible that trait resilience serves a protective function and contributes to individuals' emotion regulation capacities that are above and beyond variables such as their age, gender, and ethnicity, as well as their experiences of trauma and history of emotion socialization.

Hypothesis 1a: Greater trait resilience will predict greater cognitive reappraisal above and beyond the contributions of age, gender, ethnicity, child maltreatment, traumatic events, parental awareness (awareness of emotions versus lack of insight of emotions), parental acceptance (acceptance of emotions versus rejection of emotions), and parental emotion coaching (emotion coaching versus parental uncertainty).

Hypothesis 1b: Greater trait resilience will predict less expressive suppression above and beyond the contribution of age, gender, ethnicity, child maltreatment, traumatic events, parental awareness (awareness of emotions versus lack of insight of emotions), parental acceptance (acceptance of emotions versus rejection of emotions), and parental emotion coaching (emotion coaching versus parental uncertainty).

Research Question #2: Does trait resilience moderate the relations between risk factors (i.e., child maltreatment, traumatic events, and history of poor emotion socialization) and emotion regulation (i.e., cognitive reappraisal or expressive suppression)?

As noted above, there is considerable evidence that traumatic experiences and being a recipient of poor emotion socialization impair individuals' ability to adaptively regulate emotions, possibly increasing their likelihood of engaging in maladaptive emotion regulation strategies such as rumination and expressive suppression (e.g., Bailey et al., 2012; Dunsmore et al., 2009; Levy-Gigi et al., 2016; Lowenthal, 1998; Michl et al., 2013; Sundermann & DePrince, 2015). Trait resilience was studied as a moderating variable in previous studies and found to have buffered the effect of child maltreatment on psychological symptoms in young adults (e.g., Campbell-Sills & Stein, 2007; Edwards et al., 2014). Thus, it may be valuable to investigate if the additional role of trait resilience modifies the impact of trauma and history of emotion socialization styles on emotion regulation characterized by either cognitive reappraisal or expressive suppression.

Hypothesis 2a: Trait resilience will moderate the relations between child maltreatment, traumatic events, history of poor emotion socialization, and cognitive reappraisal.

Hypothesis 2b: Trait resilience will moderate the relations between child maltreatment, traumatic events, history of poor emotion socialization, and expressive suppression.

Research Question #3: What are the themes related to resilience during emerging and early adulthood?

The present study also includes qualitative items to explore individuals' narratives for themes related to their experience of stressful or traumatic situations and resilience as an outcome or process. Investigating the presence of a redemption sequence is one way to examine

the process that underlies the overcoming of traumatic events (e.g., McAdams et al., 2001).

Overall, examining the narratives for emerging themes, emotional growth, and redemption

sequence allows for the exploration of resilience in a variety of contexts.

CHAPTER III

Method

Study Design

To identify the relations between adults' risk history, trait resilience, and current emotion regulation capacity, both quantitative and qualitative methods were employed. Specifically, the quantitative portion of this study was designed to test the hypotheses examining resilience as a trait, while the qualitative portion was designed to address resilience as an outcome and process. All participants completed a series of online questionnaires relating to background information, past and recent experiences of traumatic events, trait resilience, quality of parenting received during childhood, and current emotion regulation capacity. As such, this study used a cross-sectional design in which participants reported retrospectively their risk history and current functioning. In addition, qualitative methods were used to gain a more comprehensive understanding of the relations between risk history and the processes related to positive outcomes. All participants were asked to write narrative responses online to a number of questions about their experience of stressful or traumatic events and their impact, including the effect on their emotion regulation. These responses were coded and analyzed for the purpose of exploring the themes related to trauma and resilience.

Participants

Participants consisted of 234 undergraduate students between the ages of 17 and 30 years ($M = 20.12$, $SD = 2.17$). This sample size is consistent with the result of a power calculation using the software G*Power 3.1 assuming 95% power, a medium effect size, and an alpha of .05. Of participants, 79.1% identified as women and 20.9% identified as men. The majority of participants identified as White and never married. Participants were nearly evenly

dispersed across year 1 to 4 of university enrolment, with some in year 5. The majority of participants reported being either unemployed or employed part-time. Of participants who reported on their family income, approximately 50% reported an annual household income of more than $70,000. See Table 1 for more demographic information. The criteria to participate in the study was having experienced a traumatic event, such as a natural disaster, crime-related event, serious accident, physical injuries, unwanted sexual experiences, or serious injury or death of someone close.

Measures

All measures used in this study were completed by participants online, including a demographic information form, self-report questionnaires on participants' history of risk experiences, emotion-related parenting received, trait resilience, and emotion regulation, and qualitative questions. See Appendix A for permissions to use the measures. With the exception of the consent form, demographic information questionnaire, and qualitative questions, the order of the questionnaires was randomized to control for possible order effects. A questionnaire on social desirability was also included to control for possible social desirability effects; the questions on this measure were distributed at the end of four questionnaires. The specific measures are described below.

Demographic information questionnaire. Participants completed a demographic information questionnaire, including questions about their age, gender, ethnicity, marital status, number of children, program and year of enrolment, highest education level completed, employment status, family annual income, and treatment history (see Appendix B).

Table 1

Participant Characteristics

	N	%
Ethnic Background		
White	167	71.37
Asian/Pacific	26	11.11
Arab/Middle Eastern	22	9.40
Black	12	5.13
Native/Aboriginal	2	0.85
Hispanic	1	0.43
Mixed ethnicity	3	1.28
Other ethnicity	1	0.43
Marital Status		
Never legally married	231	98.72
Married	2	0.85
Separated/Divorced	1	0.43
Employment Status		
Employed Full-time	49	20.94
Employed Part-time	93	39.74
Unemployed	92	39.32
Household Income		
Less than $30,000	18	7.69
$30,000 to $39,999	7	2.99
$40,000 to $49,999	14	5.98
$50,000 to $59,999	25	10.68
$60,000 to $69,999	10	4.27
More than $70,000	75	32.05
No response	85	36.32
Past or Current Psychological Treatment		
Yes	67	28.63
No	167	71.37

Marlowe-Crowne Social Desirability Scale – Short Form (Reynolds, 1982).

Participants completed the Marlowe-Crowne Social Desirability Scale – Short Form to examine

and control for the effect of social desirability, or the tendency to respond in a socially desirable

manner. This measure was created from the original 33-item measure, which was developed

based on data collected on 1095 individuals who completed forensic evaluations (Andrew &

Meyer, 2003). This short form was validated on 608 undergraduate students, and comparisons

between this and the original version suggested that the short form is a viable substitution

(Reynolds, 1982).

This short form is comprised of 13 items, and participants respond *True* or *False* to each

statement. Items 1, 2, 3, 4, 6, 8, 11, and 12 are reverse scored, and each *True* response is given

one point. This measure has a reliability coefficient of $\alpha = .76$ and concurrent validity with the

original version ($r = .93$) and Edwards Social Desirability Scale ($r = .41$) (Reynolds, 1982).

Although there is a relatively low correlation with the Edwards Social Desirability Scale, it is

consistent with the correlation between the original version and Edwards Social Desirability

Scale (Reynolds, 1982). In the present sample, Cronbach's alpha for the measure was found to be

$\alpha = .73$, which is consistent with the original sample.

Child maltreatment: Early Trauma Inventory Self-Report – Short Form (ETISR-SF;

Bremner et al., 2007). Participants' experiences of child maltreatment (e.g., physical, emotional,

and sexual abuse) were measured by the ETISR-SF, a retrospective self-report measure on

childhood trauma. It was created from the original 62-item self-report inventory that assesses a

broad range of traumatic experiences that occurred before the age of 18 (Bremner et al., 2007).

The ETISR-SF assesses four types of childhood traumas: general trauma, physical punishment,

emotional abuse, and sexual events. The measure was validated with data from a sample of 288 respondents with and without trauma and psychiatric disorders.

The ETISR-SF is comprised of 27 items and two additional questions on the emotional impact of the traumatic events. Participants respond *Yes* or *No* to each of the items and provide information about the frequency and age of onset for each of the *Yes* responses. The four subscales are represented by a different number of items: 11 items for general trauma (e.g., were you involved in a serious accident?), five items for physical punishment (e.g., were you ever punched or kicked?), five items for emotional abuse (e.g., were you often told you were no good?), and six items for sexual events (e.g., were you ever touched in an intimate or private part of your body (e.g., breast, thighs, genitals) in a way that surprised you or made you feel uncomfortable?). For the purpose of this study, only the physical punishment, emotional abuse, and sexual events subscales were used to measure child maltreatment, and a total score was created by summing the number of items endorsed. According to Bremner et al. (2007), of the different scoring methods (e.g., incorporating frequency, age of onset, and/or emotional impact of the events), the best method of scoring is simply to add up the number of items endorsed as having ever occurred.

The ETISR-SF has been found to have good validity and internal consistency. The subscales on the ETISR-SF correlated highly with the original measure for general trauma ($r =$ .91), and physical ($r = $.94), emotional ($r = $.97), and sexual abuse ($r = $.97). The individual subscales have good internal consistency, as measured by Cronbach's alpha values: general trauma ($\alpha = $.70), and physical ($\alpha = $.75), emotional ($\alpha = $.86), and sexual ($\alpha = $.87) abuse. The measure also has good convergent and discriminant validity (Bremner et al., 2007). Cronbach's alpha values for the present sample were found to be $\alpha = $.75, .81, and .82, respectively, for

physical, emotional, and sexual abuse, and α = .81 for all three forms of child abuse combined. The combination of physical, emotional, and sexual abuse was used as the child maltreatment variable in the present study. Although child maltreatment also includes experiences of physical and emotional neglect, these were not assessed in the present study.

Traumatic events: Trauma History Questionnaire (THQ; Hooper et al., 2011). Participants' traumatic events were measured by the THQ, a self-report measure designed to gather information about lifetime exposure to a range of potentially traumatic events. The THQ measures a range of traumatic events in three unique areas: crime-related events, general disaster and trauma, and unwanted physical and sexual experiences (Hooper et al., 2011). According to Hooper et al. (2011), the initial THQ data were collected as part of a survey study composed of a convenience sample of 423 college students.

The THQ is comprised of 24 items. The category of crime-related events is represented by four items (e.g., has anyone ever attempted to rob you or actually robbed you, i.e., stolen your personal belongings?). Participants indicate if they have experienced the events reflected by the items, and if so, the frequency and approximate age(s) of occurrence. The category of general disaster and trauma is represented by 13 items (e.g., have you ever had a serious accident at work, in a car, or somewhere else?). Similarly, participants indicate whether they have experienced the events, and if so, the frequency and approximate age(s) of occurrence. For many of the items in this category, participants are asked to provide specifics to the events, such as who was involved. The category of physical and sexual experiences is represented by six items (has anyone, including family members or friends, ever attacked you with a gun, knife, or some other weapon?). Participants indicate whether they have experienced the events, and if so,

whether the experience was repeated and approximately how often and at what age. The last item

on the measure assesses 'other' potentially traumatic events not already captured by the 23 items.

The test-retest reliability across two to three months for the THQ is fair to excellent, with

a stability coefficient ranging from .51 to .91. The measure has good construct, predictive,

convergent, and discriminant validity (Hooper et al., 2011). The THQ has been used in multiple

clinical and nonclinical studies in the United States and in non-English speaking countries.

Hooper and colleagues (2011) argued that this measure has cultural validity.

According to Hooper and colleagues (2011), there is no standard scoring method for this

questionnaire, and researchers adapt the scoring to meet the need of their research projects.

However, the most common method of scoring is to count the number of types of events

endorsed. For the purpose of this study, all of the items endorsed by participants were added to

create a total score for traumatic events. Cronbach's alpha for the present study was $\alpha = .62$,

which is consistent with a previous study ($\alpha = .68$; Shaw, Witcraft, & Timpano, 2016). It is

possible that the internal consistency of the measure was low since the THQ captures multiple

types of traumatic events.

Trait resilience: Connor-Davidson Resilience Scale 10-Item (CD-RISC-10;

Campbell-Sills & Stein, 2007). The CD-RISC-10 was used to measure the degree of trait

resilience endorsed by participants. The CD-RISC-10 was developed from the original CD-

RISC, a 25-item self-report scale that measures resilience (Connor & Davidson, 2003). The CD-

RISC-10 was validated on the data with 1,743 undergraduate students of diverse ethnic

backgrounds. Consistent with recent research, Connor and Davidson (2003) conceptualized

resilience as a multidimensional characteristic that varies depending on individual characteristics

and life circumstances. The authors proposed that internal and external stressors are always

present, and resilience could be viewed as the ability to successfully cope with stress. Connor and Davidson (2003) drew from a number of sources in developing the 25-item CD-RISC scale, including the work of Kobasa (1979), Rutter (1985), and Lyons (1991). The scale captures a number of constructs related to resilience, such as hardiness or ability to cope with change (e.g., can deal with whatever comes), social support/purpose (e.g., close and secure relationships), faith (e.g., sometimes fate or God can help), and persistence (e.g., can achieve goals despite obstacles) (Campbell-Sills & Stein, 2007; Connor & Davidson, 2003).

The CD-RISC-10 was developed from factor analyses of the original 25-Item CD-RISC, resulting in two factors: hardiness and persistence. However, Campbell-Sills and Stein (2007) found that the two factors were highly correlated ($r > .80$) and raised concerns about their discriminant validity. Further analysis of the scale resulted in a single factor that provided a better fit than the two-factor model. The revised scale resulted in 10 items that reflected the ability to tolerate experiences such as change, personal problems, illness, pressure, failure, and painful feelings (e.g., I am able to adapt when changes occur). Campbell-Sills and Stein (2007) argued that endorsement of these items indicates an ability to bounce back from challenges and adversities. Each of the items on the CD-RISC-10 is rated on a five-point Likert scale (0 = *Not True At All,* 4 = *True Nearly All the Time*). Participants' responses were summed to yield a total score with higher scores indicating greater resilience. The CD-RISC-10 is highly correlated with the original CD-RISC, with a correlation coefficient of $r = .92$. The CD-RISC-10 has good internal consistency with Cronbach's alpha value of $\alpha = .85$ and good construct validity (Campbell-Sills & Stein, 2007). Cronbach's alpha for the present study was found to be $\alpha = .89$.

History of emotion socialization: History of Parenting Emotion Socialization –

Mother Version and Father Version (HOPES-MV and HOPES-FV; Hakim-Larson & Scott,

2013). The emotion socialization that participants received from their parents was measured by the mother and father versions of the HOPES measure. HOPES was designed to determine the level of parental involvement in teaching emotions and emotional regulation, as retrospectively reported by the individuals (Hakim-Larson & Scott, 2013; Johnson & Hakim-Larson, 2015). Hakim-Larson and Scott (2013) developed the two versions of this measure based on Gottman's parental meta-emotion theory and through data collected from parental interviews conducted on meta-emotion. HOPES captures three dimensions of history of emotion socialization styles: parental emotion awareness versus lack of insight, parental acceptance versus rejection of emotions, and parental emotion coaching versus uncertainty.

Both the mother and father versions of the HOPES measure are comprised of 36 items. Participants respond to each of the items on a five-point Likert scale (1 = *Strongly Disagree,* 5 = *Strongly Agree*). The dimension of parental awareness versus lack of insight is represented by five questions (e.g., my mother/father seemed to know just what I was feeling inside); the dimension of parental acceptance versus rejection is represented by 14 questions (e.g., my mother/father punished me if I expressed my anger); and the dimension of parental emotion coaching versus uncertainty is represented by 13 questions (e.g., when I was angry, my mom/dad wasn't sure what to do). For the purpose of this study, both the total scores on the two measures and the total scores on each of the subscales of the two measures were used in the analyses.

HOPES has high internal consistency: Cronbach's alpha values of $\alpha = .89$ for awareness of emotions, .91 for acceptance of emotions, and .85 for emotion coaching for the mothers; and Cronbach's alpha values of $\alpha = .91$ for awareness of emotions, .92 for acceptance of emotions, and .87 for emotion coaching for the fathers (Johnson & Hakim-Larson, 2015). For the present study, Cronbach's alphas for HOPES-MV awareness of emotions, acceptance of emotions, and

emotion coaching were α = .87, .91, and .88, respectively. For HOPES-FV awareness of emotions, acceptance of emotions, and emotion coaching, Cronbach's alphas were α = .90, .93, and .87, respectively. Cronbach's alphas were found to be α = .96 for both total HOPES-MV and total HOPES-FV.

Emotion regulation: Emotion Regulation Questionnaire (ERQ; Gross & John, 2003). Participants' emotion regulation was measured by the ERQ, a self-report measure designed to assess individuals' tendency to use two emotion regulation strategies: cognitive reappraisal and expressive suppression. The measure was validated with data from four samples of undergraduate students, with a total of 1483 respondents.

The ERQ is comprised of 10 items. Participants respond to each of the items on a seven-point Likert scale (1 = *Strongly Disagree,* 7 = *Strongly Agree*). The cognitive reappraisal subscale is represented by six questions (e.g., I control my emotions by changing the way I think about the situation I'm in), whereas the expressive suppression subscale is represented by four questions (e.g., when I am feeling negative emotions, I make sure not to express them). For the purpose of this study, participants' responses for the items on the respective subscales were summed to yield a total score for each of the two subscales.

The ERQ has good reliabilities, with an average of α = .79 for cognitive reappraisal and .73 for expressive suppression. The test-retest reliability across three months is .69 for both subscales. The ERQ also has good convergent validity with regulation success, inauthenticity, coping, and mood regulation; and good discriminant validity with personality traits, impulse control, cognitive ability, and social desirability (Gross & John, 2003). In the present sample, Cronbach's alphas for cognitive reappraisal and expressive suppression were α = .81 and .74, respectively; these values are consistent with the alpha values for the original sample.

Qualitative questions. In addition to the measures noted above, participants provided qualitative information on stressful or traumatic events, emotion regulation, and resilience. Specifically, they responded to questions about their experience of stressful or traumatic events, including a description of the events and the age at which the events occurred, how the events contributed to identity (prompt #1), what was learned from the events (prompt #2), and how the events influenced emotion regulation capacity (prompt #3). These questions were followed by a question about their most proud moment in the last year, which was intended to be a mood neutralizer at the end of their participation (prompt #4; see Table 2 below). Participant responses to the first and fourth prompts were not analyzed in the present study and will be used in a separate study. The qualitative questions were adapted from Dan McAdams (McAdams et al., 2001) and Jennifer Pals' (Pals, 2006) narrative work and in consultation with Dr. Kendall Soucie, the qualitative consultant in the Department of Psychology at the University of Windsor.

The qualitative responses were coded for emerging themes, emotional growth, and redemption using thematic analysis (Braun & Clarke, 2006). Emerging or prominent themes were coded by examining the narratives globally and identifying one to three words that capture the main themes of the narratives. Specifically, ideas were first generated after reading and re-reading the narratives, and these ideas were categorized into different themes. The themes were then collapsed due to its similarity and further refined. Finally, the existing themes were checked against the narratives for coherence. As some narratives revealed more than one theme, each narrative was coded for up to three different themes to capture its complexity. Emotional growth was coded if participant responses alluded to better ability to cope with emotions. This was primarily based on prompt #3 of the follow-up questions that specifically elicited information about participants' ability to manage emotions. Finally, a redemption sequence was coded if the

Table 2

Qualitative Questions

All of us have times of personal difficulty. Please think about the stressful events in your life that you feel have had the most impact on how you view yourself. Please describe the events in detail below and indicate how old you were at the time of the events.

Now that you have written your description of the events, please respond to the following questions:

    a) What do the stories say about who you are as a person?

    b) Did you learn anything about yourself from the events that you did not know before?

    c) How have the events influenced your ability to manage your emotions?

    d) Please describe your most proud moment in the last year?

recalled negative events either changed into a positive situation or produced some positive outcomes (McAdams et al., 2001). This was coded based primarily on prompt #2 of the follow-up questions that asked participants if they learned anything about themselves from the negative events that they did not know before. The coding of redemption provides insights into individuals' experiences of overcoming stressful or traumatic events and the process by which they arrive at a more positive outcome.

Trustworthiness for this qualitative section was established through various methods: carefully selecting participants using inclusion criteria; using question prompts that are consistent with previous studies; ensuring researcher objectivity by coding the narratives while blind to participant information; and having two independent raters to ensure reliable coding (K. Soucie, personal communication, August 6, 2016; Morrow, 2005). The first rater, the primary investigator, coded 100% of the narratives and the second rater, a female research assistant who had just completed her Bachelor's degree in Psychology in 2017, coded 25% of the data to check for coding reliability. The narratives were organized by the date in which they were completed by participants, and the second rater coded every fourth narrative. The interrater reliabilities for the coding of emerging themes, emotional growth, and redemption sequence were Kappa = .67, .80, and .65, respectively. Given the adequate Kappa value (i.e., above .6), only the investigator's coding was used for analyses.

Procedure

After obtaining ethics clearance from the university Research Ethics Board, the study became accessible online for eligible students via the University of Windsor Department of Psychology participant pool between September 2016 and January 2017 (see Appendix C for Participant Pool Advertisement). Although presenting the questionnaires online may have

psychometric implications as the questionnaires were validated in paper-and-pencil format (Granello & Wheaton, 2004), the benefits of online data collection seem to outweigh this risk. The benefits of conducting research online include lower cost, quicker response time, ease of data entry, and increased self-disclosure (Granello & Wheaton, 2004). The response rate for the study may also be higher as participants may prefer to complete the study at a time and location convenient to them rather than to present themselves at a laboratory at a given time. In addition, research has indicated that both methods of measurement, online and paper and pencil surveys, yield comparable results (Davidov & Depner, 2011). Furthermore, previous studies also found that narratives elicited through either a written or interview format is acceptable for use in studies with teenagers and young adults (Bohn & Berntsen, 2008)

Once eligible students chose to participate in the study, they were presented with the consent form and questionnaires noted above. The consent form provided information regarding the general procedure and length of the study (45-60 minutes), the risks and benefits of being involved, and the researcher's contact information should participants have any questions or concerns regarding the study (see Appendix D). Participants were required to read the form and provide consent by indicating that they understood the information and by proceeding to the next online questionnaire. The study also included five validity checks interspersed between the questionnaires to ensure that participants were not responding to the questions at random. These questions were placed either at the beginning or the end of the questionnaires to preserve the format of the measures as much as possible. The validity check questions were used to safeguard against careless, inattentive, or random responses as these can cause significant threat to the validity of the data (Curran, 2015). By adding validity check questions such as "Please select *Always Agrees* for this item" or "I have never used a computer" (correct response is negative)

during data collection, the pattern of the responses on these items can be used to make decisions regarding data quality (Curran, 2015). Curran (2015) suggested a conservative inaccuracy rate of 50 percent as an indication that the specific participants should be considered as careless/insufficient effort responders. At the end of the study, participants were compensated for their time by receiving one bonus point for 60 minutes of participation if they were 1) registered in the university participant pool, 2) enrolled in one or more eligible courses, and 3) achieved at least 60% correct (i.e., at least three out of five) on the items representing the validity checks.

CHAPTER IV

Results

Prior to conducting statistical analyses to examine the proposed research questions, the data set was cleaned and assumptions of multiple regression analyses were assessed. Multiple regression analyses were then conducted to test the study hypotheses, followed by additional exploratory analyses. All statistical analyses were conducted using IMB Statistical Package for the Social Sciences (SPSS) Version 22 software.

Preliminary Analyses

Data screening. Of the 415 students who responded to the participant pool advertisement, 22 did not meet the study inclusion criteria, that is, they did not endorse having experienced a traumatic event, and were discontinued. Twenty-five did not fully complete the online survey and 3 did not pass the validity checks; these responses were removed. Additionally, 120 did not complete the emotion regulation questionnaire (outcome variable) due to a technical error in the survey software, and these data were also moved. However, since the data on the HOPES measures were intact, it was used for a separate study on the psychometrics of the measures. In total, the data from 245 participants were used for analyses. Items were reverse-coded and composite scores were computed where appropriate.

Assumptions of regression analyses. Assumptions specific to regression analyses were tested prior to testing the study hypotheses. First, the assumption of large sample size was not violated as conducting a power analysis revealed a required sample size of 200; the total sample size for this study was 234 after data cleaning and the removal of outliers (discussed below). Second, the assumption of the absence of multicollinearity and singularity was not violated as the tolerance value for all but four predictor variables exceeded .20. The exceptions were

HOPES-MV Acceptance, HOPES-MV Emotion Coaching, HOPES-FV Acceptance, and

HOPES-FV Emotion Coaching: their tolerance values were .199, .172, .188, and .199,

respectively. However, these values are considered acceptable given the adequate sample size

and the closeness of the values to .20. Third, the assumption of homoscedasticity of errors was

not violated as the residual plots for both cognitive reappraisal and expressive suppression

revealed a random distribution of the residuals above and below zero or the horizontal line.

Fourth, the assumption of a linear relationship was also not violated as the residual plots

indicated random scatter around the horizontal line without specific patterns. Fifth, the

assumption of normality of residuals was not violated; the normal probability-probability plot of

the residuals revealed that the data set clustered around the diagonal line, and the histograms had

a normal curve for both cognitive reappraisal and expressive suppression. Sixth, the assumption

of absence of outliers was violated for 11 cases, as indicated by extreme standardized residuals

(outliers on Y) and Mahalanobis Distance values (outliers on X). To correct for this, six outliers

on Y (residuals less than -3 or greater than 3 standard deviations) and five outliers on X (values

exceeding the chi-square distribution cut-off using $p = .001$) were removed. There were no

influential observations as indicated by the Cook Distance values being less than 1.0. Finally, the

assumption of independence of residuals was not violated as participants likely have completed

the online survey at their own time and did not influence each others' responses.

Descriptive statistics. Descriptive statistics for the study measures across the full

sample are presented in Table 3 below. Based on participant responses on the traumatic events

questionnaire, the average number of traumatic events reported was 3.19 ($SD = 2.45$, ranges = 0-

13 events), with 82% ($n = 192$) reporting two or more traumatic events. These rates are higher

than the number of traumatic events reported by the university sample in the Wild and Paivio

Table 3

Descriptive Statistics for Quantitative Variables (N = 234)

Measure Name (Variable Name)	Items	Possible Score Ranges	Observed Score Ranges	*M* (*SD*)	Alpha Coefficient
Predictor Variables					
ETISR-SF (Child Maltreatment)	27	0 – 27	0 – 11	2.99 (3.07)	.81
Physical Abuse					.75
Emotional Abuse					.81
Sexual Abuse					.82
THQ (Traumatic Events)	24	0 – 24	0 – 13	3.19 (2.45)	.62
CD-RISC-10 (Trait Resilience)	10	0 – 40	0 – 40	25.35 (6.82)	.89
HOPES-MV (History of Emotion-Socialization – Mother)	36	36 – 180	55 – 176	132.33 (25.17)	.96
Maternal Awareness versus Lack of Insight of Emotions	9	9 – 45	15 – 45	32.79 (6.91)	.87
Maternal Acceptance versus Rejection of Emotions	14	14 – 70	22 – 70	53.17 (10.56)	.91
Maternal Emotion Coaching versus Parenting Uncertainty	13	13 – 65	16 – 62	46.38 (9.26)	.88
HOPES-FV (History of Emotion-Socialization – Father)	36	36 – 180	40 – 176	117.01 (28.02)	.96
Paternal Awareness versus Lack of Insight of Emotions	9	9 – 45	9 – 45	28.39 (8.07)	.90
Paternal Acceptance versus Rejection of Emotions	14	14 – 70	14 – 70	47.82 (12.10)	.93
Paternal Emotion Coaching versus Parenting Uncertainty	13	13 – 65	17 – 63	40.80 (9.62)	.87
Outcome Variables					
ERQ (Emotion Regulation)	10	10 – 70	17 – 70	44.82 (7.48)	
Cognitive Reappraisal	6	6 – 42	9 – 42	29.47 (5.78)	.81
Expressive Suppression	4	4 – 28	4 – 28	15.35 (4.79)	.74

Note. ETISR-SF = Early Trauma Inventory Self-Report – Short Form; THQ = Trauma History Questionnaire; CD-RISC-10 = Connor-Davidson Resilience Scale 10-Item; HOPES-MV = History of Parenting Emotion-Socialization – Mother Version; HOPES-FV = History of Parenting Emotion-Socialization – Father Version; ERQ = Emotion Regulation Questionnaire.

(2003) study ($M = 2.62$, ranges = 1-9 events, 66% reporting two or more traumatic events). Of the total participants in the current study ($N = 234$), 41.5% ($n = 97$) reported at least one crime-related event, 85.5% ($n = 200$) reported at least one general disaster or traumatic event, including serious injury, life-threatening illness, or unexpected death of someone close ($n = 142$, 60.7%), and 28.2% ($n = 66$) reported at least one physical or sexual experience. Of the total participants in the current study, 28% ($n = 67$) reported having received psychological intervention.

Prior to conducting the analyses, a correlation table (see Table 4 below) was computed to examine the correlations between the predictor and outcome variables. Age did not significantly correlate with either cognitive reappraisal or expressive suppression and was thus not included in further analyses.

Gender was dummy coded using "0" (female) and "1" (male), and ethnicity was dummy coded using "0" (White) and "1" (Other). Although coding ethnicity as White versus Other racial/ethnic groups results in a loss of information, this method of coding is appropriate for the present study given that the majority of participants is White (71.4%) and that race/ethnicity is not a primary variable of interest. There were no significant differences between men and women on either cognitive reappraisal, $t(232) = .70$, $p = .484$, or expressive suppression, $t(232) = -1.51$, $p = .133$. There was also no significant difference between White and Other racial/ethnic groups on cognitive reappraisal, $t(232) = .44$, $p = .657$. Expressive suppression, however, was significantly different between White ($M = 14.84$, $SD = 4.74$) and Other racial/ethnic groups ($M = 16.63$, $SD = 4.73$), $t(232) = -2.61$, $p = .01$. As there were no significant differences between gender on the outcome variables, gender was removed from further analyses.

Table 4

Correlation Table for Predictor Variables with Outcome Variables (*N* = 234)

	Cognitive Reappraisal	Expressive suppression
Social Desirability	.19**	-.13*
Age	-.06	-.12
HOPES-MV	.14*	-.40**
Maternal Awareness	.12	-.35**
Maternal Acceptance	.12	-.38**
Maternal Emotion Coaching	.17**	-.38**
HOPES-FV	.11	-.29**
Paternal Awareness	.10	-.22**
Paternal Acceptance	.11	-.30**
Paternal Emotion Coaching	.09	-.29**
Child Maltreatment	-.01	.16*
Physical Abuse	.08	.21**
Emotional Abuse	-.08	.11
Sexual Abuse	.00	.02
Traumatic Events	.07	.16*
Trait resilience	.57**	-.16*

Note. HOPES-MV = History of Parenting Emotion-Socialization – Mother Version; HOPES-FV = History of Parenting Emotion-Socialization – Father Version.
* *p* < .05 (2-tailed). ** *p* < .01 (2-tailed).

Quantitative Analyses

      Research question 1: Trait resilience predicting emotion regulation. The first

research question was to examine if trait resilience predicted more cognitive reappraisal and less

expressive suppression above and beyond risk factors of child maltreatment and traumatic events

and history of emotion socialization by mothers and fathers. Two hierarchical multiple

regression analyses were conducted, one for each emotion regulation outcome. For both

cognitive reappraisal and expressive suppression, the variables were entered in the regression

model in four steps. Social desirability and demographic variables found to be related to the

outcome variables (i.e., ethnicity) were entered in Step 1 to control for its effect on the findings.

At Step 2, domains of history of emotion socialization by both mothers and fathers (awareness

versus lack of insight of emotions, acceptance versus rejection of emotions, emotion coaching

versus parenting uncertainty of emotions) were entered. Step 3 includes risk factors of child

maltreatment and traumatic events. Finally, the primary predictor variable, trait resilience, was

entered in Step 4. This resulted in a total of 11 predictors per regression. After the regressions

were conducted, beta weights, *p*-values, and patterns of signs were observed.

      Hypothesis 1a: Trait resilience predicting cognitive reappraisal. A hierarchical

multiple regression analysis was conducted to determine if trait resilience predicted cognitive

reappraisal above and beyond the other parenting and risk factors. Covariates (i.e., social

desirability, ethnicity) were entered in Step 1, domains of emotion socialization by mothers and

fathers were entered in Step 2, risk factors of child maltreatment and traumatic events were

entered in step 3, trait resilience was entered in Step 4, and cognitive reappraisal was the

outcome variable (see Table 5 for results). The overall model was statistically significant,

adjusted $R^2 = .33$, $F(11, 222) = 11.42$, $p < .001$, with the variables explaining 33% of the

Table 5

Hierarchical Multiple Regression Analysis with Values Predicting Cognitive Reappraisal

Variables	Adj. R^2	R^2	ΔR^2	F	ΔF	B	SE	ß	95% CI for B	sr	sr^2
Step 1	.03	.04	.04	4.48*	4.48*						
Social Desirability						.38**	.13	.19**	[.13, .63]	.19	.04
Ethnicity[a]						-.69	.83	-.05	[-2.33, .95]	-.05	.00
Step 2	.03	.06	.03	1.94	1.09						
Social Desirability						.34*	.13	.17*	[.08, .60]	.17	.03
Ethnicity[a]						-.27	.87	-.02	[-1.99, 1.45]	-.02	.00
Maternal Awareness						-.03	.10	-.03	[-.23, .18]	-.02	.00
Maternal Acceptance						-.08	.08	-.15	[-.23, .07]	-.07	.00
Maternal Coaching						.18	.09	.28	[-.01, .36]	.12	.01
Paternal Awareness						.01	.09	.02	[-.17, .20]	.01	.00
Paternal Acceptance						.07	.07	.14	[-.07, .20]	.06	.00
Paternal Coaching						-.08	.08	-.14	[-.25, .09]	-.06	.00
Step 3	.04	.08	.02	2.05*	2.42						
Social Desirability						.41**	.14	.21**	[.14, .68]	.19	.04
Ethnicity[a]						-.47	.88	-.04	[-2.20, 1.27]	-.03	.00
Maternal Awareness						-.01	.10	-.01	[-.21, .20]	-.01	.00
Maternal Acceptance						-.11	.08	-.19	[-.26, .05]	-.09	.01
Maternal Coaching						.19*	.09	.30*	[.00, .37]	.13	.02
Paternal Awareness						-.01	.09	-.01	[-.19, .18]	-.01	.00
Paternal Acceptance						.11	.07	.23	[-.03, .24]	.10	.01
Paternal Coaching						-.09	.08	-.14	[-.25, .08]	-.07	.00
Child Maltreatment						.15	.14	.08	[-.13, .43]	.07	.00
Traumatic Events						.26	.17	.11	[-.07, .59]	.10	.01
Step 4	.33	.36	.28	11.42**	96.31**						
Social Desirability						.21	.12	.11	[-.02, .44]	.10	.01
Ethnicity[a]						-.76	.74	-.06	[-2.21, .69]	-.06	.00
Maternal Awareness						-.06	.09	-.07	[-.23, .11]	-.04	.00
Maternal Acceptance						-.08	.06	-.15	[-.21, .04]	-.07	.00

Maternal Coaching	.14	.08	.22	[-.02, .29]	.09	.01
Paternal Awareness	-.00	.08	-.00	[-.15, .15]	-.00	.00
Paternal Acceptance	.04	.06	.08	[-.08, .15]	.03	.00
Paternal Coaching	-.02	.07	-.03	[-.16, .12]	-.01	.00
Child Maltreatment	.24*	.12	.13*	[.01, .48]	.11	.01
Traumatic Events	.20	.14	.08	[-.08, .47]	.08	.01
Trait Resilience	.48**	.05	.56**	[.38, .57]	.53	.28

Note. [a]0 = White, 1= Other racial/ethnic groups.
* $p < .05$. ** $p < .01$.

variance in cognitive reappraisal. Domains of emotion socialization by mothers and fathers (Step 2; $\Delta R^2 = .03$, $\Delta F(6, 225) = 1.09$, $p = .370$) and risk factors of child maltreatment and traumatic events (Step 3; $\Delta R^2 = .02$, $\Delta F(2, 223) = 2.42$, $p = .091$) did not add to the predictive power of the regression model. However, For Step 4, the addition of trait resilience in the model was significant, $\Delta R^2 = .28$, $\Delta F(1, 222) = 96.31$, $p = <.001$, uniquely contributing to 28% of the variance in cognitive reappraisal. Based on the examination of the beta-weights, only child maltreatment (ß = .13, $p = .041$) and trait resilience (ß = .56, $p < .001$) significantly predicted greater cognitive reappraisal, with a semi-partial correlation of .11 and .53, respectively (see Table 5).

To further investigate if the different types of child maltreatment (i.e., physical abuse, emotional abuse, sexual abuse) predicted cognitive reappraisal differently, the subscale scores of child maltreatment were entered in Step 3 of the hierarchical regression model instead of the total child maltreatment score. Results indicated a significant model, adjusted $R^2 = .33$, $F(13, 220) = 9.66$, $p < .001$, and a significant beta-weight value for trait resilience (ß = .55, $p < .001$), but non-significant beta-weight values for all of the subscales of child maltreatment: physical abuse (ß = .10), emotional abuse (ß = .02), and sexual abuse (ß = .06). This suggests that the subtypes of child maltreatment did not separately predict cognitive reappraisal. Overall, the results supported the first hypothesis of the study; trait resilience uniquely predicted cognitive reappraisal even when the specified parenting and risk factors were considered.

Hypothesis 1b: Trait resilience predicting expressive suppression. A hierarchical multiple regression analysis was conducted to determine if trait resilience predicted expressive suppression above the other parenting and risk factors. Similar to above, covariates (i.e., social desirability, ethnicity) were entered in Step 1, domains of emotion socialization by mothers and

fathers were entered in Step 2, risk factors of child maltreatment and traumatic events were entered in step 3, trait resilience was entered in Step 4, and expression suppression was the outcome variable (see Table 6 for results). The overall model was statistically significant, adjusted $R^2 = .18$, $F(11, 222) = 5.53$, $p < .001$, with the variables explaining 18% of the variance in. Step 2, which includes domains of emotion socialization by mothers and fathers added to the regression model, $\Delta R^2 = .15$, $\Delta F(6, 225) = 6.84$, $p < .001$; however, Step 3, which includes risk factors of child maltreatment and traumatic events did not, $\Delta R^2 = .01$, $\Delta F(2, 223) = 1.89$, $p = .154$. Contrary to the hypothesis, Step 4 with the addition of trait resilience did not significantly account for any variance beyond Step 3, $\Delta R^2 = .003$, $\Delta F(1, 222) = .82$, $p = .365$. Based on the examination of the beta-weights, none of the predictor variables contributed significantly to the model at Step 4 and did not predict lower expressive suppression. The results of this analysis did not support the second hypothesis of the research question; trait resilience did not predict lower expressive suppression.

Research question 2: Trait resilience as a moderator. To determine if trait resilience moderated the relations between a) the risk (i.e., child maltreatment, traumatic events) and parenting (i.e., history of emotion socialization by mothers and fathers) factors and cognitive reappraisal; and b) the risk and parenting factors and expressive suppression, moderations using multiple regression analyses were conducted. All predictor and moderator variables were centred prior to creating the interaction terms to prevent multicollinearity between the main effects and interaction terms. Four interaction terms were then created between each of the risk and parenting factors and trait resilience. Given the large number of moderation analyses, which is associated with a higher probability for Type I error or false positives, and the high correlation between the domains of history of emotion socialization ($r = .78$-$.86$ for subscales of HOPES-

Table 6

Hierarchical Multiple Regression Analysis with Values Predicting Expressive Suppression

Variables	Adj. R^2	R^2	ΔR^2	F	ΔF	B	SE	ß	95% CI for B	sr	sr^2
Step 1	.04	.05	.05	6.42**	6.42**						
Social Desirability						-.25*	.11	-.16*	[-.46, -.05]	-.16	.03
Ethnicity[a]						2.00**	.68	.19**	[.66, 3.35]	.19	.04
Step 2	.17	.20	.15	6.98**	6.84**						
Social Desirability						-.10	.10	-.06	[-.31, .10]	-.06	.00
Ethnicity[a]						1.03	.67	.10	[-.29, 2.35]	.09	.01
Maternal Awareness						-.07	.08	-.10	[-.23, .09]	-.05	.00
Maternal Acceptance						-.05	.06	-.11	[-.16, .07]	-.05	.00
Maternal Coaching						-.06	.07	-.12	[-.20, .08]	-.05	.00
Paternal Awareness						.10	.07	.17	[-.04, .24]	.09	.01
Paternal Acceptance						-.05	.05	-.12	[-.15, .05]	-.06	.00
Paternal Coaching						-.09	.07	-.18	[-.22, .04]	-.08	.01
Step 3	.18	.21	.01	6.00**	1.89						
Social Desirability						-.09	.10	-.05	[-.29, .12]	-.05	.00
Ethnicity[a]						1.06	.68	.10	[-.27, 2.39]	.09	.01
Maternal Awareness						-.07	.08	-.10	[-.23, .09]	-.05	.00
Maternal Acceptance						-.06	.06	-.14	[-.18, .05]	-.07	.00
Maternal Coaching						-.06	.07	-.11	[-.20, .08]	-.05	.00
Paternal Awareness						.09	.07	.15	[-.05, .23]	.07	.00
Paternal Acceptance						-.04	.05	-.09	[-.14, .07]	-.04	.00
Paternal Coaching						-.09	.07	-.18	[-.21, .04]	-.08	.01
Child Maltreatment						-.08	.11	-.05	[-.29, .14]	-.04	.00
Traumatic Events						.25	.13	.13	[-.01, .50]	.12	.01
Step 4	.18	.22	.00	5.53**	.82						
Social Desirability						-.07	.11	-.04	[-.28, .14]	-.04	.00
Ethnicity[a]						1.08	.68	.10	[-.25, 2.41]	.10	.01
Maternal Awareness						-.06	.08	-.09	[-.22, .10]	-.05	.00
Maternal Acceptance						-.07	.06	-.15	[-.18, .05]	-.07	.00

Maternal Coaching	-.05	.07	-.10	[-.20, .09]	-.05	.00
Paternal Awareness	.09	.07	.15	[-.05, .23]	.07	.00
Paternal Acceptance	-.03	.05	-.07	[-.14, .08]	-.03	.00
Paternal Coaching	-.09	.07	-.19	[-.22, .04]	-.09	.01
Child Maltreatment	-.09	.11	-.06	[-.30, .13]	-.05	.00
Traumatic Events	.25	.13	.13	[.00, .51]	.12	.01
Trait Resilience	-.04	.04	-.06	[-.13, .05]	-.05	.00

Note. [a]0 = White, 1= Other.
* $p < .05$. ** $p < .01$.

MV, $r = .80$-$.84$ for subscales of HOPES-FV), the total scores for HOPES-MV and HOPES-FV were used instead of the subscale scores. Cognitive reappraisal and expressive suppression were separately regressed on to each of the predictor variables (i.e., child maltreatment, traumatic events, history of emotion socialization by mothers, history of emotions socialization by fathers) and the interaction terms to assess if there is a moderating effect of trait resilience in the relations between the specific risk and parenting factors and each of the emotion regulation capacity. This totalled eight moderations, four for each emotion regulation outcome variable. Due to the large number of moderation analyses (i.e., eight), a significance value of $p < .01$ was used to control for the increased probability of Type I error.

Hypothesis 2a: Trait resilience moderating risk and parenting factors and cognitive reappraisal. Four moderation analyses were conducted to examine if trait resilience moderated the relations between the predictor variables (i.e., 1. child maltreatment, 2. traumatic events, 3. history of emotion socialization by mothers, 4. history of emotion socialization by fathers) and cognitive reappraisal. Results revealed that there was a significant main effect for trait resilience, but no significant interaction effects between trait resilience and the specified parenting and risk factors in predicting cognitive reappraisal (see Table 7 below). The results failed to support hypothesis 2a; trait resilience did not moderate the relations between each of the variables of child maltreatment, traumatic events, and history of emotion socialization by mothers and fathers and cognitive reappraisal.

Hypothesis 2b: Trait resilience moderating risk and parenting factors and expressive suppression. Similar to above, four moderation analyses were conducted to examine if trait resilience moderated the relations between the predictor variables and expressive suppression. Results revealed significant main effects for history of emotion socialization by mothers and

Table 7

Trait Resilience Moderating the Relations between Predictor Variables and Cognitive Reappraisal

	B	SE	ß	95% CI for B	t	p-value
Predictor 1:						
Child Maltreatment	.20	.10	.11	[-.01, .40]	1.91	.058
Trait Resilience	.50	.05	.59	[.40, .59]	10.46**	<.001
Child Maltreatment x Trait Resilience	.00	.01	.01	[-.03, .03]	.17	.868
Predictor 2:						
Traumatic Events	.20	.13	.09	[-.05, .45]	1.58	.115
Trait Resilience	.49	.05	.57	[.40, .58]	10.62**	<.001
Traumatic Events x Trait Resilience	-.01	.02	-.02	[-.04, .03]	-.43	.671
Predictor 3:						
HOPES-MV	.01	.01	.02	[-.02, .03]	.35	.725
Trait Resilience	.47	.05	.56	[.38, .57]	9.92**	<.001
HOPES-MV x Trait Resilience	-.00	.00	-.08	[-.01, .00]	-1.47	.143
Predictor: 4						
HOPES-FV	.00	.01	.02	[-.02, .03]	.39	.698
Trait Resilience	.46	.05	.54	[.36, .56]	9.45**	<.001
HOPES-FV x Trait Resilience	-.00	.00	-.09	[-.01, .00]	-1.54	.124

Note. HOPES-MV = History of Parenting Emotion-Socialization – Mother Version; HOPES-FV = History of Parenting Emotion-Socialization – Father Version.
* $p < .01$. ** $p < .001$.

fathers, but no significant interaction effects between trait resilience and the specified parenting

and risk factors in predicting expressive suppression (see Table 8 below). Similar to the results

for cognitive reappraisal, the findings did not support the second hypothesis of the second

research question; trait resilience did not moderate the relations between each of variables of

child maltreatment, traumatic events, and history of emotion socialization by mothers and fathers

and expression suppression.

   Summary of quantitative results. In summary, the hypotheses for the first research

question were partially supported; trait resilience predicted cognitive reappraisal, but not

expressive suppression, even when taking into consideration risk and parenting variables. The

hypotheses for the second research question were not supported; trait resilience did not moderate

the relations between each of the risk (i.e., child maltreatment, traumatic events) and parenting

(i.e., history of emotion socialization by mothers and fathers) factors and each of the emotion

regulation capacity (i.e., cognitive reappraisal, expressive suppression). A summary of results is

found in Table 9.

Qualitative Analyses

   The goal of research question #3, the qualitative portion of the study, was to use thematic

analysis (Braun & Clarke, 2006) to explore participant narratives for prominent or emerging

themes, emotional growth, and redemption sequence to further understand the construct of

resilience. As part of the online survey, participants were asked about the stressful or traumatic

events they experienced, followed by four questions on how the events contributed to their

identity, what was learned from the events, how the events influenced emotion regulation

capacity, and their most proud moment. Of 234 participants, 230 responded to the qualitative

questions. Four participants indicated "no" or that they did not feel comfortable responding to

Table 8

Trait Resilience Moderating the Relations between Predictor Variables and Expressive Suppression

	B	*SE*	ß	95% CI for *B*	*t*	*p*-value
Predictor 1:						
Child Maltreatment	.23	.10	.14	[.02, .43]	2.19	.030
Trait Resilience	-.10	.05	-.14	[-.19, -.00]	-2.07	.040
Child Maltreatment x Trait Resilience	.01	.01	.04	[-.02, .04]	.65	.518
Predictor 2:						
Traumatic Events	.30	.13	.16	[.06, .55]	2.41	.017
Trait Resilience	-.15	.05	-.15	[-.19, -.02]	-2.32	.021
Traumatic Events x Trait Resilience	.00	.02	.00	[-.03, .03]	-.01	.995
Predictor 3:						
HOPES-MV	-.070	.01	-.37	[-.09, -.05]	-5.89**	<.001
Trait Resilience	-.06	.04	-.08	[-.14, .03]	-1.25	.213
HOPES-MV x Trait Resilience	-.00	.00	-.10	[-.01, .00]	-1.56	.120
Predictor 4:						
HOPES-FV	-.05	.01	-.26	[-.07, -.02]	-4.07**	<.001
Trait Resilience	-.09	.05	-.12	[-.18, .01]	-1.83	.069
HOPES-FV x Trait Resilience	-.00	.00	-.05	[-.00, .00]	-.73	.463

Note. HOPES-MV = History of Parenting Emotion-Socialization – Mother Version; HOPES-FV = History of Parenting Emotion-Socialization – Father Version.
* $p < .01$. ** $p < .001$.

Table 9

Summary of Quantitative Findings

Study Hypotheses	Result
Hypothesis 1a: Greater trait resilience will predict greater cognitive reappraisal above and beyond the contributions of age, gender, ethnicity, child maltreatment, traumatic events, parental awareness (awareness of emotions versus lack of insight of emotions), parental acceptance (acceptance of emotions versus rejection of emotions), and parental emotion coaching (emotion coaching versus parental uncertainty).	Supported
Hypothesis 1b: Greater trait resilience will predict less expressive suppression above and beyond the contribution of age, gender, ethnicity, child maltreatment, traumatic events, parental awareness (awareness of emotions versus lack of insight of emotions), parental acceptance (acceptance of emotions versus rejection of emotions), and parental emotion coaching (emotion coaching versus parental uncertainty).	Not Supported
Hypothesis 2a: Trait resilience will moderate the relation between child maltreatment, traumatic events, history of poor emotion socialization, and cognitive reappraisal.	Not Supported
Hypothesis 2b: Trait resilience will moderate the relation between child maltreatment, traumatic events, history of poor emotion socialization, and expressive suppression.	Not Supported

the questions. The length of the responses ranged from 13 to 936 words ($M = 174$, $SD = 144$).

The total number of stressful/traumatic events reported by the 230 respondents was 312. Table 10 below lists the type and frequency of the events reported by participants. The most commonly identified event was the death of a loved one, primarily grandparents. Of the responses, 66 participants reported two to three events and 10 participants reported four or more events.

Emerging themes. Participant responses were coded for one to three prominent or emerging themes to capture the complexity of some narratives. Of the 230 narratives, 109 (47.4%) displayed one theme, 91 (39.6%) displayed two themes, 15 (6.5%) displayed three themes, and 15 (6.5%) did not have any apparent themes. In total, 351 themes were observed.

Figure 1 below depicts the nature and frequency of the emerging themes from participant narratives. *Strength, resilience, or growth* was coded if participants primarily described themselves as being strong, flourishing despite unfortunate experiences, or learning or growing from the experience; 50.4% of the participant narratives displayed this theme. *Inability to cope, damaged, or vulnerability* was coded if participants primarily described themselves as being weak, having physical or mental health problems, being overwhelmed by the events, or coping with the events maladaptively; 17.0% of the narratives displayed this theme. *Insecurity, fear, or others are dangerous* was coded if participants primarily described feeling fearful or unsafe, or that trusted others were responsible for perpetrating the traumatic events; 13.9% of the narratives displayed this theme. *Helplessness or lack of control* was coded if participants primarily described an inability to respond to the event or a general sense of a lack of control; 12.2% of the narratives displayed this theme. *Ability to cope* was coded if participants discussed the process of coping with the traumatic events; 10.4% of the narratives displayed this theme. *Unlovable or not good enough* was coded if participants primarily described a sense of not being
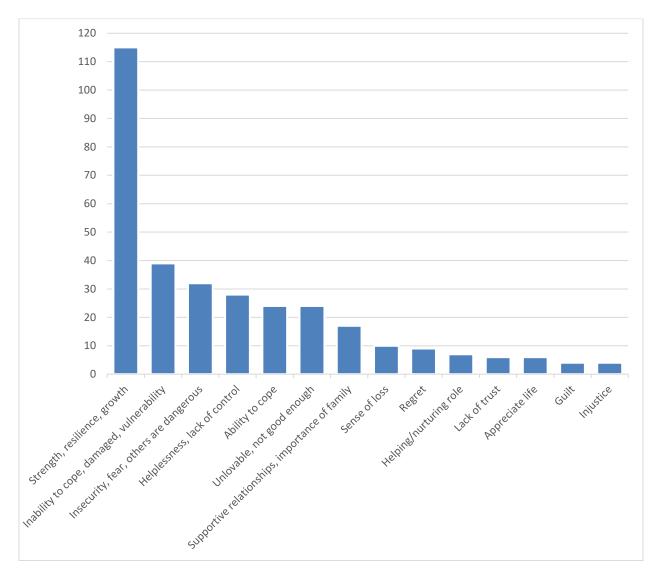
Table 10

Qualitative Responses: Type and Frequency of Traumatic Events (*N* =230)

Traumatic Events	Frequency of Events	Percentage
Death of a loved one	86	27.56
Unwanted sexual experience	23	7.37
Serious illness of a loved one	22	7.05
Serious health problem	17	5.45
Parental divorce or separation	16	5.13
Teasing or bullying	16	5.13
Physical injuries	15	4.81
Serious accident	14	4.49
Emotional abuse by family	13	4.17
Witnessed domestic violence	11	3.53
Poor relationship with family, friends, partners	11	3.53
Mental illness or addiction	10	3.21
Witnessed serious accident	8	2.56
Parental mental illness or addiction	7	2.24
Ending of relationship	7	2.24
Academic-related stress	6	1.92
Crime-related event	6	1.92
Poor family environment	4	1.28
Relocation	4	1.28
Abusive relationship	4	1.28
Physical assault	3	0.96
Natural disaster	3	0.96
War	2	0.64
Physical abuse by parents	2	0.64
Homelessness	1	0.32
Abortion	1	0.32
Total Number of Events Reported	312	100

Note. Of total participants, 66 reported two to three events and 10 reported four or more events.

Figure 1

Number of Responses by Themes from Narratives

loved or wanted, or not being good enough; 10.4% of the narratives displayed this theme.

Supportive relationships or importance of family was coded if participants primarily discussed

the importance of family or support of others; 7.4% of the narratives displayed this theme. *Sense*

of loss was coded if participants were preoccupied with the consequences of losing the loved

one; 4.3% of the narratives displayed this theme. *Helping/Nurturing role* was coded if

participants described needing to take care of others or assuming responsibilities that are beyond

their age or role; 3.0% of the narratives displayed this theme. *Appreciate life* was coded if

participants discussed the importance of valuing each moment and living life productively; 2.6%

of the narratives displayed this theme. Finally, *Regret, Lack of trust, Guilt,* and *Injustice* were

coded if these were prominent in the narratives, and 3.9%, 2.6%, 1.7%, and 1.7% of the

narratives displayed these themes, respectively.

　　　　Emotional growth. Emotional growth was analyzed by examining participant

responses to the third prompt of the qualitative questions: How have the events influenced your

ability to manage your emotions? It was coded if participants indicated an improvement in their

ability to recognize or manage emotions, such as greater awareness or acceptance of emotions;

greater recognition of emotional triggers; more or healthier expression of emotions; or better able

to manage or control emotions. In contrast, a deterioration of emotional coping was coded if

participants indicated avoidance or suppression of emotions; becoming more emotional;

difficulty with expressing emotions; or difficulty with or inability to manage emotions. Of the

230 narrative responses, 100 (43.5%) indicated emotional growth, 70 (30.4%) indicated a

deterioration in their ability to cope with emotions, and 60 (26.1%) did not indicate either

emotional growth or deterioration.

Redemption. Redemption was analyzed by examining participant responses to the second prompt of the qualitative questions: Did you learn anything about yourself from the events you did not know before? It was coded if participants indicated growth or something of a positive nature that resulted from the recalled stressful or traumatic events. Of the 230 responses, 119 (51.7%) indicated a redemption sequence (e.g., learning not to give up and to continue working toward goals after suffering severe sports injuries); 40 (17.4%) indicated that something of a negative nature resulted from the events (e.g., learning to mistrust others after the loss of a friend); and 71 (30.9%) did not indicate either.

Although there may be an overlap between emotional growth and redemption as both suggest something of positive nature, there are several differences between the two concepts. In the present study, emotional growth and redemption were coded separately. Whereas emotional growth was coded based on participant responses to the third prompt of the qualitative questions, redemption sequence was coded based on participant responses to the second prompt of the qualitative questions. While it is possible that participants indicated both emotional growth and a redemption sequence, this is not necessarily so. In fact, of 230 participants, 69 indicated both emotional growth and a redemption sequence. Of 100 participants who indicated emotional growth, 69% also indicated a redemption sequence. By comparison, of 119 participants who indicated a redemption sequence, 58% also indicated emotional growth. In addition, emotional growth was coded if participants indicated an improvement in their ability to recognize, express, or manage emotions, without considering the nature of the specific event identified. In contrast, redemption, as does resilience, requires that individuals have been exposed to a negative life event and reflects the transformation from a negative event to a good or positive event or outcome. Furthermore, emotional growth and redemption target different aspects. Whereas

emotional growth focuses on the emotional aspect, redemption can encompass emotional, cognitive, and/or behavioural aspects of growth.

Summary of qualitative results. Based on the qualitative responses, it appears that many participants reported something good or positive despite having experienced the negative events. The most common theme from the narratives is related to strength, resilience, or growth, and this was displayed in 50.4% of the narratives. More participants (43.5%) indicated an emotional growth than a deterioration in emotional coping. Furthermore, over half of participants (51.7%) indicated a redemption sequence. The redemption sequence specifically is one way to understand the resilience process as it captures individuals' narrative of their adverse experiences and how their perspectives of these experiences may have changed overtime to result in positive outcomes.

CHAPTER V

Discussion

Both quantitative and qualitative methods were used to examine the construct of resilience amongst individuals who have experienced adverse events. Specifically, the present study aimed to investigate if trait resilience predicted emotion regulation capacity above specific risk and parenting factors, and if trait resilience mitigated the consequences of risk and parenting experiences on their ability to regulate emotions. The present study further explored the process and outcome of resilience through qualitatively examining individual narratives for emerging themes, emotional growth, and redemption sequence. Examining resilience as a trait, outcome, and process helped to provide a more comprehensive understanding of the nature and process of overcoming adversity and achieving at least normal functioning.

Overview of Findings

Although there is robust evidence that experiences of traumatic events in childhood and adulthood and having received poor quality of parenting are associated with poor emotion regulation and psychological outcomes (e.g., Levy-Gigi et al., 2016; Magai et al., 2004; Manzeske & Stright, 2009; Michl et al., 2013; Min et al., 2007), limited studies have examined how trait resilience, or the ability to bounce back from adversity, contributes additionally to emotion regulation outcomes. It appears likely that trait resilience will enhance individuals' abilities to cognitively reappraise an emotion-evoking situation to alter its consequences and use less maladaptive regulation strategy such as suppressing the experience and expression of emotions. The main finding of the present study supported the first hypothesis of research question #1; that is, trait resilience predicted cognitive reappraisal while accounting for the parenting and risk factors. In fact, the findings revealed that trait resilience uniquely accounted

71

for 28% of the variance in participants' cognitive reappraisal ability. The significant relation between trait resilience and cognitive reappraisal is consistent with previous research (e.g., Johnson, Gooding, Wood, & Tarrier, 2010; Troy & Mauss, 2011). Although these authors conceptualized cognitive reappraisal as a moderating factor that contributes to resilience as an outcome, it is likely this relation is bidirectional, and resilience when measured as a trait contributes to individuals' ability to engage in more cognitive reappraisal. Furthermore, the significant relation between trait resilience and cognitive reappraisal can be partially explained by how trait resilience was measured in the present study. The questionnaire that was used to measure trait resilience primarily assessed individuals' self-perceived abilities to tolerate stress and adapt to change (Campbell-Sills & Stein, 2007). This process likely involves both behavioural strategies and cognitive processes, such as drawing from personal strengths or finding positive aspects within a given stressful situation. This is supported by the qualitative responses of the present study that demonstrated that more than half of the participant narratives discussed becoming stronger from their negative experiences. Cognitive reappraisal on the other hand, also relies on active cognitive processes to change how individuals perceive a stressful situation to alter the emotional impact (Gross & John, 2003). It seems reasonable that individuals' self-perceived abilities to cope with stress and change was related to and predicted their ability to use cognitive reappraisal as a strategy given a stressful situation. Furthermore, trait resilience, which reflects protective mechanisms such as hardiness, persistence, and positive attitudes or optimism about one's abilities (Bonanno, 2004; Campbell-Sills & Stein, 2007; Smith-Osborne & Bolton, 2013), may have served a protective function and contributed to individuals' ability to engage in cognitive reappraisal to cope with adverse experiences.

The finding that trait resilience did not significantly predict lower expressive suppression is less straight forward. It is reasonable to assume that individuals with high self-perceived abilities to tolerate stress and bounce back from adverse experiences would adopt less maladaptive regulation strategies. However, there is also some evidence to suggest that repressive coping can be an effective strategy for extremely adverse events and contribute to resilience (Coifman, Bonanno, Ray, & Gross, 2007). Repressive coping or repression is conceptualized as a defense mechanism that involves unconsciously directing attention away from the stressful stimuli (Boag, 2010; Coifman et al., 2007). Although this is different from expressive suppression in that repression is unconscious whereas suppression is conscious, both involve removing the experience from awareness (Boag, 2010). Thus, it is possible that some participants who are high in trait resilience may use any strategies available to them, consciously or unconsciously, to help them overcome their negative experiences, including the use of expressive suppression. Future research is needed to clarify the distinction between repression and suppression and the various reasons why individuals use expressive suppression and its connection to resilience.

The findings of the present study also failed to support the hypotheses of research question #2. Specifically, trait resilience did not buffer individuals from the effect of the experiences of child maltreatment, traumatic events, and history of emotion socialization received on emotion regulation. These findings are surprising given the positive function of trait resilience and previous findings that demonstrated its buffering role against psychological symptoms (e.g., Campbell-Sills & Stein, 2007; Edwards et al., 2014). Although there is prior evidence that trait resilience moderated the effect of risk experiences on psychological outcomes (e.g., Campbell-Sills & Stein, 2007), emotion regulation as an outcome is conceptually different

from psychological outcomes. While related, psychological outcomes are socio-emotional indicators of well-being, whereas emotion regulation represents individuals' abilities and styles of regulating the stressful experiences that ultimately contribute to individuals' level of well-being. As such, trait resilience may play different roles with respect to these two outcomes. Overall, as measured in the current study, trait resilience is associated with cognitive reappraisal, but not with expressive suppression and does not mitigate the effect of risk experiences and parenting factors on emotion regulation.

The third research question of the present study was to explore the themes related to the construct of resilience. Participants were asked to discuss the stressful or traumatic events that they have experienced and answer questions related to these events. Many of the narrative responses included something good or positive despite the recalled negative events, suggesting that the negative events are somehow redeemed or its consequences mitigated. For example, the results revealed that the most common theme endorsed by participants, which accounted for about 50% of the responses, were related to strength, resilience, and growth. Whereas about 30% of participants reported a deterioration in emotion regulation, about 44% of participants reported that their ability to manage emotions improved following the experience of the stressful or traumatic event. Furthermore, whereas about 17% of participants reported negative outcomes because of the recalled events, just over 50% of participants reported a redemption sequence in their narrative; that is, something of positive nature resulted after the negative experience. Participants tended to report learning from the experience, such as improving their coping capacity or realizing that they are stronger than they initially thought. Some participants also reported gaining new perspectives on life, such as recognizing the importance of family and cherishing life more. These findings suggest that the pathways between traumatic experiences

and individual functioning are not linear. Individuals who have experienced similar stressful or traumatic events do not necessarily have the same outcome. For example, participants reported reacting in different ways to the death of a loved one (e.g., learning to become a stronger person and that emotions are a normal part of life, or having more stress and needing to keep emotions bottled inside). Similarly, participants reported different outcomes as a result of having been abused or assaulted (e.g., feeling unsafe in social situations and experiencing more anxiety, or discovering an inner strength and the ability to keep on moving forward despite the negative experience). The fact that not all individuals who have experienced negative events have negative outcomes is consistent with previous findings that suggested that some individuals achieve resilient functioning despite adverse experiences (e.g., Cicchetti, 2013). It is likely that other factors such as individual characteristics and protective resources interact with the risk experience to produce varying outcomes.

An attempt was made in the current study to conceptualize resilience as a trait, process, or outcome. Given the inconsistency of its definition in the literature, examining resilience in such a way helps to provide a more comprehensive understanding of the construct. All participants in the current study had previously experienced an adverse event, a requirement for the definition of resilience. As a trait, the findings of the present study demonstrated that resilience is associated with an adaptive emotion regulation strategy and that it predicts individuals' ability to be more likely to reappraise a stressful situation to alter the negative emotional impact. As an outcome, the present study revealed that despite experiences of adverse events, more than 50% of the individuals reported strength, emotional growth, and a redemption sequence. As a process, the narratives provided insights into the adverse events individuals have experienced, the consequences of these events, and their perspectives on how they are able to

overcome the negative events to achieve redemption, such as learning better ways to cope, a realization of a personal strength they did not know exist, or the importance of supportive relationships.

The findings of the present study highlight the importance of fostering individuals' trait resilience, or the ability to cope with stress and change, to increase their use of cognitive reappraisal as an adaptive strategy to cope with stressful events. The findings also underlie the importance of exploring related factors and underlying processes for resilience, such as examining the presence or absence of a redemption sequence in narratives, to further understand how individuals achieve at least normal functioning following adverse experiences and to promote resilience. In addition, the findings of the present study suggest the importance of exploring individuals' cognition and narratives as areas of intervention in the clinical sample.

Strengths and Limitations

A strength of the present study is the use of both quantitative and qualitative methods to assess the construct of resilience, which provided a more comprehensive understanding of the construct. Using a qualitative approach allowed for exploring and identifying the processes that possibly underlie resilience. Another strength of the study is having established adequate inter-rater reliability for the qualitative responses; this helped to mitigate the effects of any researcher bias during the coding phase of the qualitative data. Finally, this study included a measure of social desirability to control for the effect of the desire to portray oneself in a socially desirable manner. This is especially important in the present study as social desirability may have influenced how participants reported their past experiences of trauma and parenting received.

There are a number of limitations for the present study, and all results must be considered within the context of these limitations. First, the present study used a cross-sectional

study design to assess the consequences of child maltreatment and traumatic events, as well as emotion-related parenting received in childhood. Using a cross-sectional design precluded the interpretation of a causal relation between each of the risk and parenting factors and resilience and emotion regulation abilities. Second, the present study relied on participants to self-report retrospectively their history of child maltreatment, traumatic experiences, and parenting received, and these are subject to potential biases or errors involving recall. Third, the way in which traumatic events were measured is a limitation. The most commonly reported traumatic event is the death of a loved one, and primarily the death of a grandparent. It is arguable that such an event is a normal part of life and does not necessarily constitute a traumatic event, although it may. Also, such family losses may not be comparable to traumatic events of a more intense nature. As such, there is a wide variability in the traumatic events that participants reported, and this may have partly contributed to some of the non-significant findings of the present study. Fourth, participants wrote responses to the qualitative questions online. This precluded the possibility of querying or following-up on their answers that could lead to more interpretable or enriched responses. Lastly, the results of the present study are of limited generalizability due to the characteristics of the participants (i.e., university students, predominately female, and predominately Caucasian). Specifically, parenting practices may be different for individuals of different ethnic or cultural backgrounds, and as such, cultural traditions and norms may contribute to different expectations for what is considered to be appropriate or desirable parenting. Given the different expectations, individuals may differentially perceive and recall their risk experiences and emotion socialization received in childhood.

Future Directions

Results from the present study suggest a number of directions for future research. First, further exploration of the construct of resilience using a qualitative approach is warranted. The qualitative component of the present study provided rich data on the factors associated with resilience. It may be valuable to use a qualitative approach to examine the concept of redemption via the life story as a potential measure of resilience. Second, it would be useful to examine the relations between trauma and resilience in a high risk sample, such as in children who are involved with the child protection services, or a clinical sample of children and/or adults receiving psychological intervention for trauma. In order to differentiate traumatic events from stressful events, a stricter measure of trauma may be needed, such as one that captures both the traumatic events itself and the symptoms of trauma consistent with the DSM-5, such as intrusion symptoms, avoidance behaviour, and negative alterations in cognitive and mood (American Psychiatric Association, 2013). Third, it would be valuable to examine how individuals' functioning and perspectives of their experiences change overtime using a longitudinal study design, comparing those who report high resilience versus low resilience. This allows for the assessment of causal relations between trauma and resilience. Fourth, future studies can examine the relations between ethnicity and other study variables such as emotion regulation and risk and parenting experiences. The present study found that White participants differed on expressive suppression when compared to participants of other ethnicities. It would be informative to explore this and how ethnic or cultural background may be related to individuals' risk and resilience. Lastly, the present study examined two types of emotion regulation, both of which involve some levels of cognitive control. Specifically, cognitive reappraisal involves changing how one interprets a situation and expressive suppression involves actively pushing away the

emotional experience. It would be interesting to explore the relations between other coping or

emotion regulation strategies and the study variables. It may also be worthwhile to examine

emotion regulation as a mediator in the relation between risk and resilience, given the its

contribution to adaptive mental health.

Conclusion

The goals of the present study were to examine if trait resilience predicted emotion

regulation characterized by cognitive reappraisal and expressive suppression above and beyond

risk (i.e., child maltreatment, traumatic events) and parenting (i.e., history of emotion

socialization by mothers and fathers) factors, and if trait resilience buffered the effects of the risk

and parenting factors on cognitive reappraisal and expressive suppression. Additionally, the

present study aimed to explore the concept of resilience as an outcome and a process via

qualitative analyses. Results indicated that trait resilience uniquely predicted cognitive

reappraisal, and over half of the individuals narrated growth or a redemption sequence in their

responses despite experiencing major stressful or traumatic events. This research adds to the

existing literature by offering a comprehensive view of resilience as a trait, outcome, and

process.

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APPENDICES

Appendix A

Permission for Study Measures

Measure	Permission Obtained From	Permission Obtained On
Early Trauma Inventory Self-Report – Short Form (ETISR-SF; Bremner, Bolus, & Mayer, 2007)	J. Douglas Bremner, M.D.	March 21, 2016 via email
Trauma History Questionnaire (THQ; Hooper, Stockton, Krupnick, & Green, 2011)	Bonnie L. Green, Ph.D.	March 21, 2016 via email
Connor-Davidson Resilience Scale 10-Item (CD-RISC-10; Campbell-Sills & Stein, 2007)	Jonathan Davidson, M.D.	April 5, 2016 via email
History of Parenting Emotion-Socialization – Mother Version and Father Version (HOPES-MV and HOPES-FV; Hakim-Larson & Scott, 2013)	Julie Hakim-Larson, Ph.D.	March 21, 2016 in person
Emotion Regulation Questionnaire (ERQ; Gross & John, 2003)	James J. Gross, Ph.D.	March 12, 2016 via email

Note. Permission obtained to use the questionnaires in an online format from all authors/ publishers.

Appendix B

Demographic Information Questionnaire

April 5, 2016

1. What is your date of birth? _____ Age ____

2. What gender do you identify with?

    a. Male

    b. Female

    c. Other, specify _____

3. What is your ethnicity?

    a. Arab/Middle Eastern

    b. Asian/Pacific

    c. Black

    d. Caucasian

    e. Hispanic

    f. Native/Aboriginal

    g. Other, specify _____

4. What is your current marital status?

    a. Single

    b. In a committed relationship

    c. Common-law

    d. Married

    e. Separated

    f. Divorced

g. Other, specify _____

5. Do you have any children? _____

    If so, how many? _____

        Please list each child's age and gender _____

6. What is your current program of enrolment? _____

7. What is your current year of enrolment? _____

8. What is the highest level of education you have <u>completed</u>? _____

9. What is your employment status? _____

    If employed, what is your occupation? _____

10. What is your family annual income?

    a. 70,000 or more

    b. 60,000 to 69,999

    c. 50,000 to 59,999

    d. 40,000 to 49,999

    e. 30,000 to 39,999

    f. Below 30,000

    g. I do not know or I do not wish to answer

11. Have you previously or currently receiving psychological treatment? Yes ___ No ___

    If Yes, please check all that applies

        ___ Individual psychotherapy

        ___ Couples or Family therapy

        ___ Group therapy

        ___ Medication

Appendix C

PARTICIPANT POOL ADVERTISEMENT

Title: Emotion Regulation: The Role of Trauma, Emotion-Related Parenting, and Resilience

Researchers: Na Zhu, Email: zhu13f@uwindsor.ca

Duration: 60 minutes

Credit: 1

Inclusion Criterion: In order to participate in the study, you will have experienced an event that has or had a significant impact on you (e.g., a natural disaster, crime-related event, serious accident, physical injuries, unwanted sexual experiences, or serious injury or death of a loved one).

Description: The purpose of this study is to examine the relations between resilience, traumatic events, history of parenting quality received, and emotional coping. For this study, you will be asked to complete a number of questionnaires on your background information, experiences of past and recent significantly difficult events, emotion-related parenting style, resilience, and emotion regulation. You will also be asked to answer a few short answer questions pertaining to the difficult events and their impact. This study will take no more than 60 minutes of your time, and is worth 1 bonus point if you are registered in the pool and you are registered in one or more eligible psychology courses.

Appendix D

CONSENT TO PARTICIPATE IN RESEARCH

Title of Study: Emotion Regulation: The Role of Trauma, Emotion-Related Parenting, and Resilience

You are asked to participate in a research study conducted by Na Zhu, supervised by Dr. Julie Hakim-Larson, from the department of Psychology at the University of Windsor. The results of this study will be used to fulfil the requirements of a Master's thesis.

If you have any questions or concerns about the research, please feel to contact the primary investigator Na Zhu at zhu13f@uwindsor.ca, or the faculty supervisor, Dr. Julie Hakim-Larson at 519-253-3000 ext. 2241.

PURPOSE OF THE STUDY

The purpose of this study is to examine stressful or traumatic life events, the quality of parenting received during childhood, and coping with emotions during adulthood.

PROCEDURES

If you volunteer to participate in this study, you will be asked to do the following. By agreeing to this consent form, you are indicating that you wish to participant in the present study. Following endorsement of this consent form, you will be directed to an online survey that includes several questionnaires. These include questionnaires on your background information, your experiences of past and recent stressful or traumatic events, the quality of parenting that you received during childhood, and how you cope with emotions. You will also be asked to answer several short-answer questions pertaining to stressful life events and their impact. Please complete the survey in a quiet place where you are able to concentrate. The survey will take approximately 45-60 minutes to complete.

After finishing the online survey, you will be directed to a form where you can fill in your personal information for the purpose of verifying your bonus credit.

POTENTIAL RISKS AND DISCOMFORTS

During the course of your participation you will be asked questions that are personal in nature. You may experience discomfort in response to these questions, particularly questions pertaining to your past and recent stressful or traumatic events and the quality of parenting that you received. A risk associated with this study is the possibility of thinking about personal issues that may cause emotional and psychological concerns for you. Should at any point you feel too overwhelmed or wish to terminate the study, you may do so by clicking on the "Discard responses and exit" icon. You can also contact the University of Windsor Student Counselling Centre at 519-253-3000 ext. 4616.

POTENTIAL BENEFITS TO PARTICIPANTS AND/OR TO SOCIETY

The benefit of participating in this research is the opportunity to learn about and contribute to psychological research. In addition, you may find that you learn more about yourself through participating in this research.

COMPENSATION FOR PARTICIPATION

You will receive 1.0 bonus point towards a psychological course for your effort and 60 minutes of participation, provided you are registered in a psychology participant pool and enrolled in one or more eligible courses. Failure to dedicate appropriate effort (e.g., random responding) will result in denial of credit.

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. Note that we must collect your name and student number at the end of the study in order for you to receive bonus credit for your participation. Your data will be kept separate from your name and student number. Both files will be encrypted and stored in the University of Windsor data servers. Your data will be retained for 10 years, at which point it will be securely deleted from the servers.

PARTICIPATION AND WITHDRAWAL

Your participation in this study is completely voluntary. If you decide to participate, you may withdraw at any time during the study by clicking on the "Discard responses and exit" button without any negative consequences. However, if you choose to withdraw before completing at least 50% of the survey, you will not receive the bonus credit. If you choose to withdraw after completing at least 50% but before fully completing the survey, you will receive half of the bonus point. Once all data has been collected, any participant contact information will be permanently and securely deleted. After this point, you will be unable to withdraw your data from the study. The investigator may withdraw you from this study if circumstances arise which warrant doing so (e.g., indication of careless or insufficient effort, very incomplete questionnaires).

FEEDBACK OF THE RESULTS OF THIS STUDY TO THE PARTICIPANTS

Research findings for this study will be available to participants, and will be posted on the University of Windsor REB website. In addition, a copy of the principal investigator's Master's thesis will be available to the public in both the Psychology graduate secretary's office and Leddy library.

Web address: www.uwindsor.ca/reb
Date when results are available: October 2017

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

SIGNATURE OF INVESTIGATOR

These are the terms under which I will conduct research.
Na Zhu, M.Ed.
Department of Psychology
University of Windsor

It is recommended that you print out a copy of this letter of information for you records. It is also recommended that you turn off your pop-up blockers before beginning the survey.

SIGNATURE OF RESEARCH PARTICIPANT/LEGAL REPRESENTATIVE

"I understand the information provided for the study "Emotion Regulation: The Role of Trauma, Emotion-Related Parenting, and Resilience" 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 form for my reference."

To acknowledge that you have read the letter of information, and that you are providing informed consent to participate in this study, please click "I agree" icon below.

I agree
No thank you

VITA AUCTORIS

NAME	Na Zhu
PLACE OF BIRTH	Fuzhou, China
YEAR OF BIRTH	1987
EDUCATION	Riverdale Collegiate Institute, Toronto, Ontario 2001-2005
	McMaster University, Hamilton, Ontario 2005-2009, B.A. Hons (Psychology)
	University of Toronto, Toronto, Ontario 2010-2012, M.Ed. (Counselling Psychology)
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