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## The Contribution of Adult Attachment Style on the Experience of Posttraumatic Growth Among Adult Survivors of Childhood Sexual Abuse

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THE CONTRIBUTION OF ADULT ATTACHMENT STYLE  
ON THE EXPERIENCE OF POSTTRAUMATIC GROWTH  
AMONG ADULT SURVIVORS OF CHILDHOOD SEXUAL ABUSE

by

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A dissertation submitted in fulfillment of the requirements  
for the degree of Doctor of Philosophy  
in the Department of Child, Family and Community Sciences  
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## ABSTRACT

The purpose of this research study was to investigate the directional relationship between adults' attachment styles and perceived impact of childhood sexual abuse (CSA) with their experience of posttraumatic growth. This investigation tested the theoretical model that adults' ( $N = 292$ ) attachment styles as measured by the *Experiences in Close Relationships-Short Form* ([ECR-S] Wei et al., 2007) and impact of childhood sexual abuse as measured by the *Impact of Event Scale-revised* ([IES-R] Weiss & Marmar, 1997) contributed to their experience of posttraumatic growth as measured by the *Posttraumatic Growth Inventory* ([PTGI] Tedeschi & Calhoun, 1996). Specifically, this investigation tested the hypothesized directional relationship that adult survivors of CSA scoring in the insecure attachment range (i.e., avoidant or anxious) with higher levels of trauma would have lower levels of posttraumatic growth. In addition, this investigation examined the differences in relationship between adults' attachment styles, perceived impact of CSA, and posttraumatic growth based on their reported demographic information (e.g., age, race, and gender).

The results of the structural equation model (SEM) analyses identified that trauma experienced by adult survivors of CSA contributed to 39% of the variance in the attachment style ( $p < .000$ ; standardized coefficient = .63), and the mediating effect of attachment style contributed to 8% of the variance in the presence of PTG ( $p < .05$ ; standardized coefficient -.31), while trauma showed to have no significant influence on the presence of PTG in this sample ( $p = .756$ ). Implications of the findings from the study include insight (a) for counselors to better understand the experiences of adult survivors

of CSA and areas to address in treatment; (b) for counselor educators to better prepare future counselors to work with adult survivors of CSA; and (c) insight into the instrument development of the ECR-S, IES-R, and PTGI.

This work is dedicated to my loving and supportive husband, Jon,  
and our three children, Gage, Briar, and Riggs.  
Your love and support have carried me through this whole process.

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## CHAPTER 1 THE PROBLEM AND ITS CLARIFYING COMPONENTS

### Introduction

Childhood sexual abuse (CSA) is a widespread problem that affects more than 40 million people in the United States (Centers for Disease Control and Prevention [CDC], 2013; Wurtele, 2009). Researchers have found that one in four girls and one in six boys will experience CSA by age 18 (Schober, Fawcett, Thingpen, Curtis & Wright, 2012; National Association of Adult Survivors of Child Abuse [NAASCA], 2015). It is important to note that the real prevalence of CSA is unknown, as statistics of CSA only account for cases that have been reported to law enforcement and child protection agencies (Tyler, 2002). Therefore, the real prevalence of CSA has been expected to be much higher because both male and female children under-report sexual abuse (Becker, 1988).

CSA has been identified as a traumatic event even if threatened or actual violence or injury is not involved (Briere, 2006). When a child experiences CSA, his or her cognitive and emotional orientation to the world is altered, while self-concept and affective capacities are distorted (Collin-Vézina, Daigneault, & Hébert, 2013). As such, the experience of CSA can cause profound short-term and long-term effects on mental health such as depression, anxiety, suicidality, and posttraumatic stress disorder ([PTSD] Paolucci, Genuis, & Violato, 2001). Additionally, such negative effects on mental health can lead to behavioral and academic problems at school, physical problems, and interpersonal difficulties, such as risky sexual promiscuity, sexual perpetration, academic performance difficulties, substance use, and gang involvement (Tyler, 2002).



Research conducted over the past two decades has shown that people who have experienced CSA are more prone to experience a wide range of psychological, behavioral, and social difficulties than those who have not experienced CSA (Berliner & Elliott, 2002; Paolucci et al., 2001; Tyler, 2002; Wurtele, 2009). Furthermore, people with a history of CSA have also been found to experience psychological, behavioral, and social difficulties into adulthood (Dube et al., 2005). Some of the long term effects of CSA found to occur into adulthood include: (a) depression, (b) anxiety, (c) anger, (d) substance abuse, (e) problems with sexuality, (f) poor self-esteem, (g) somatic complaints, (h) cognitive disturbances, (i) personality disorders, (j) marital and family problems, and (k) PTSD (Beitchman et al., 1992; Dube et al., 2005; Finkelhor, 1990; Molnar, Buka, & Kessler, 2001; Neumann, 1994; Neumann, Houskamp, Pollock, & Briere, 1996; Stein, Golding, Siegel, Burnam, & Sorenson, 1988; Tyler, 2002; Wurtele, 2009). Among the various negative impacts of CSA, an individual's assumptions about the safety and benevolence of the world are often shattered (Janoff-Bulman & McPherson Frantz, 1997). As a result, individuals who experience CSA may also experience a sense of loss of life's purpose and meaning (Wright, Crawford, & Sebastian, 2007).

Although the negative effects of CSA seem to be abundant, there is also the potential for positive adjustment following such a traumatic event (Himelein & McElrath, 1996; Liem, James, O'Toole, & Boudewyn, 1997; Wright, Fopma-Loy, & Fischer, 2005). Researchers have shown that individuals with a history of CSA are not a homogeneous group, and that many may demonstrate healthy adjustment years after the abuse (Farber & Egeland, 1987; Herman, Russell, & Trocki, 1986). However, what influences some

people to continue to suffer into adulthood, while others thrive in the aftermath is still under investigation. Researchers have identified personal perception (Coffey, Leitenberg, Henning, Turner, & Bennett, 1996) and social factors (Everson, Hunter, Runyan, Edelsohn, & Coulter, 1989) as being influential to individual adjustment; however, there is still much to learn regarding which factors specifically contribute to positive adjustment in the aftermath of CSA. This study was conducted to better understand the experience of growth in the aftermath of CSA, specifically, to identify factors that contributed to, and served as barriers for, such growth.

### Background of the Study

CSA is a violation of a young person's rights, and increases the risk for both physical and mental health challenges (Berliner & Elliott, 2002; Paolucci et al., 2001; Tyler, 2002; Wurtele, 2009). Although many people with a history of CSA experience significant impairment later in life, others seem to somehow thrive in the aftermath (Runtz & Schallow, 1997). Much of the literature surrounding CSA depicts survivors as individuals who are invariably damaged both psychologically and socially. However, it is important to recognize that there is a great deal of variability among survivors of CSA, with regard to the type and extent of their subsequent difficulties in functioning (Browne & Finkelhor, 1986; Farber & Egeland, 1987; Finkelhor, 1990; Herman, Russell, & Trocki, 1986; Wolfe, Wolfe, & Best, 1988). Runtz and Schallow (1997) noted that experiences of CSA occur within the broader context of the individual's life, and other life circumstances can often influence the presentation of symptoms and behavior problems in adulthood.

Individual adjustment following the experience of CSA has been found to be related to a variety of factors. For example, aspects of the abusive situation such as severity, use of force, relationship to the offender, and age of the victim (Browne & Finkelhor, 1986; Spaccarelli, 1994; Wyatt & Newcomb, 1990), has impacts on adjustment, with greater severity of abuse being associated with poorer adjustment in adulthood (Briere & Runtz, 1988). Additionally, such factors as (a) parental warmth (Wind & Silvern, 1994), (b) family functioning (Koverola, Proulx, Battle, & Hanna, 1996; Nash, Hulsey, Sexton, Harralson, & Lambert, 1993), (c) social support (Testa, Miller, Downs, & Panek, 1992), and (d) support and belief from the non-offending parent (Everson, et al. 1989; Spaccarelli & Kim, 1995) have been found to be influential to the long- term impact of CSA (Runtz & Schallow, 1997). Furthermore, individual cognitive processing of the event, which involves feelings of stigma and self-blame (Coffey et al. 1996; Wyatt & Newcomb, 1990), and the search to find meaning (Roth & Newman, 1993; Silver, Boon, & Stones, 1983) have been found to influence the recovery from CSA (Runtz & Schallow, 1997). Moreover, researchers have identified that cognitive, social, and environmental factors may be more important than the actual characteristics of the abuse itself in predicting the adjustment of people with a history of CSA (Runtz & Schallow, 1997).

Specifically in relation to positive adjustment, the factors that have been identified to be influential include: (a) support systems (Brand & Alexander 2003; Leitenberg, Grenwald, & Cado, 1992; Walsh, Fortier, & DiLillo, 2010), (b) coping strategies (Bal, van Oost, de Bourdeaudhuij, & Crombez, 2003; Brand & Alexander 2003; Coffey et al.,

1996; Draucker et al., 2011; Futa, Nash, Hansen, & Barbin, 2003; Leitenberg et al. 1992; Merrill, Thomsen, Sinclair, Gold, & Milner, 2001; Walsh et al., 2010), (c) spirituality (Wright et al., 2007), (d) meaning making (McFarland & Alvaro, 2000; Park, 2010; Schwarzer & Knoll 2003; Taylor, 1989; Walsh et al., 2010; Woodward & Joseph, 2003), and (e) personality (Whitelock, Lamb, & Rentfrow, 2013). Although much research has been conducted to explore influential factors on personal perception and adjustment following CSA, it appears that more research is needed to explore what factors most influence a person to experience positive changes or growth following CSA. An increased understanding of what influences people with a history of CSA to experience positive changes in the aftermath of abuse will help better inform the counseling field to help clients achieve personal growth following a traumatic event.

### Personal Growth

People tend to experience positive changes, or personal growth, following a traumatic event when they actively work to reconfigure their mental maps to accommodate new trauma-related information (Tedeschi & Calhoun, 1995). As the experience of a traumatic event (e.g., CSA) causes a significant strain on people's cognitive processing abilities, people tend to struggle to resolve discrepancies between their old assumptions about the world and new trauma-related information. As such, there is a tendency to vacillate between intrusion and avoidance of the trauma related information. The cognitive processing required to work through these discrepancies involves the harnessing of uncontrollable intrusions into a force for positive change (Joseph, 2011). Stockton, Hunt, and Joseph (2011) suggested that reflective rumination

on traumatic experiences helps new trauma-related information to become part of conscious cognitive-activity under personal control. Reflective rumination is a purposeful turning inward to engage in adaptive problem-solving and emotion-focused coping. Researchers have revealed that reflective rumination is important to cognitive processing, as individuals seek resolution, search for meaning, and reframe and re-author their life (Stockton et al., 2011).

In fact, some adults who have experienced CSA have identified that the positive change process was related to making sense of the abuse (Woodward & Joseph, 2003). Existing approaches to working with survivors of CSA have been shown to be effective with emotion regulation and behavior modification such as trauma focused cognitive behavior therapy ([TF-CBT] Cohen, Mannarino, & Deblinger; 2010). Still, it appears that attention to integrating growth oriented approaches to counseling may help people with a history of CSA not only recover from the experience but also make meaning of the experience. As a result of making-meaning of their situations, survivors of CSA may be able to experience personal growth.

This study sought to explore experiences of growth among people with a history of CSA in relation to (a) survivors' personal perception of the experience as being traumatic; (b) personal attachment qualities of the survivor; and (c) demographic variables, such as age, gender, time since the event, quality of relationship with their primary caregiver, and having a history of receiving psychological services. Enhancing their understanding of personal growth experienced by people with a history of CSA in relation to the variables previously listed, may help clinicians increase their knowledge of

what factors help clients achieve growth. Such increased knowledge may help clinicians better understand what factors of a person's life need to be addressed in counseling in order to best help clients with a history of CSA to achieve growth. Furthermore, such an increased understanding may lead to improved clinical approaches such as adding the exploration of attachment styles to current treatment modalities to help survivors of CSA move beyond recovery and experience growth.

### Theoretical Framework

The need to explore growth, specifically posttraumatic growth ([PTG] Tedeschi & Calhoun, 2004), among survivors of CSA is important given that research highlights the importance of potential health benefits associated with the experience of PTG (e.g., decreased anxiety and depression, increased quality of life, and greater access to social supports; Milam, 2004; 2006). The majority of research regarding PTG has focused on survivors of cancer, war, and major disasters, with limited focus on CSA; therefore, there is a need to build the research in this area. Furthermore, there is only one study to date that has explored the influence of attachment style on PTG among survivors of sexual assault; therefore, further research is needed to explore the influence of attachment style on PTG among survivors of CSA.

Previous researchers have shown that CSA is traumatic (Briere, 2006) and that attachment styles influence psychological adjustment and coping following traumatic experiences (Canton-Cortes, Cortés, & Cantón, 2015; Mikulincer & Florian, 2004). This makes attachment a logical construct to include in the research. Although the construct of attachment has been explored in relation to PTG, it has not been explored with both male

and female survivors of CSA in relation to PTG. Moreover, empirical support is needed to explore the influence of attachment qualities on the experience of posttraumatic growth (McElheran et al., 2012). As such, the following constructs have been explored in this research study: (a) perception of CSA as traumatic, (b) PTG, and (c) attachment.

### Perception of Trauma

When a traumatic event occurs, what qualifies the event as traumatic are individuals' assumptions and beliefs about the world and themselves. People begin building working models of themselves and the world during childhood (Bowlby, 1982), and these working models establish an individual's assumptive world such as the fundamental assumptions that form the foundation of their conceptual system (Joseph, 2011). When children experience a traumatic event, their world view is altered, and their understanding of the world and prior worldview may become invalidated by the event (Calhoun & Tedeschi, 1999; Janoff-Bulman, 1992). As such, they are faced with deciding how to resume life with a now shattered belief system (Janoff-Bulman, 1992), leading to posttraumatic stress. Although it appears that many people with a history of CSA experience posttraumatic stress, it also seems that some people are able to thrive in the aftermath.

Adjustment following CSA varies among individuals, it appears that more research is needed to gain a deeper understanding of what factors influence how individuals may perceive themselves and the world following abuse, and what factors lead to growth in the aftermath of abuse. Joseph (2011) proposed that following a traumatic event such as CSA, individuals will either identify as a *victim*, *survivor*, or

*thriver*, and that such identification influences their personal adjustment to life in the aftermath of the traumatic event. According to Joseph, the term *victim* implies passivity and helplessness, whereas the term *survivor* implies recovery, and the term *thriver* implies mastery, hope, and growth. However, these terms do not necessarily represent permanent personality types, but rather different mindsets. Joseph suggested that everyone can cultivate the *thriver* mindset if he or she chooses to do so, thereby, leading to the experience of growth, or posttraumatic growth.

### Posttraumatic Growth

Posttraumatic growth (PTG) is the result of an active reconfiguration of a person's mental map to accommodate new trauma-related information (Tedeschi & Calhoun, 1995). PTG refers to the ways in which people are positively transformed by the experience of surviving significant adversity (Tedeschi & Calhoun, 2004). The idea that people can experience positive changes in their lives after encountering a traumatic event is not new information (Saakvitne, Tennen, & Affleck, 1998; Tedeschi & Calhoun, 1995). However, scholars and researchers have begun to focus on the phenomenon of PTG. Some pioneers of this work, who explored the possibility of growth after loss, include Caplan (1964), Dowhrend (1978), Frankl (1963), Maslow (1954), and Yalom (1980). Only in the past 20 years has the attention turned to a systematic process of trauma-related positive changes (Calhoun & Tedeschi, 2006).

Although traumatic events can lead to many negative and psychological consequences (Tedeschi, 1999), researchers have also suggested that some people who experience traumatic events, are capable of perceiving some good from their struggles



(e.g., rape-[Burt & Katz, 1988; Veronon & Kilpatrick, 1983]; incest [Silver et al., 1983]; bereavement (Calhoun & Tedeschi, 1989; Schwartzberg & Janoff-Bulman, 1991], cancer [Collins, Taylor, & Skokan, 1990; Taylor, 1983]; HIV [Schwartzberg, 1993], heart attack, [Affleck, Tennen, Croog, & Levine, 1987]; disasters [Thompson, 1985], ; and the Holocaust [Kahana, 1992]). In addition to identifying some good from the experience of a traumatic event, some people have also identified personal growth from their experiences. Tedeschi and Calhoun (1995) began exploring the personal growth among people who had experienced a traumatic event in order to better understand this phenomenon.

Qualitative data, originally used to discern the categories of personal growth that some people have experienced in the aftermath of a traumatic event, have been divided into three general domains: (a) changes in the perception of self, (b) changes in the experience of relationships with others, and (c) changes in one's general philosophy of life (Tedeschi & Calhoun, 1995). Later, factor analysis revealed a five-factor approach to posttraumatic growth, which includes five domains: (a) relating to others, (b) new possibilities, (c) personal strength, (d) spiritual change, and (e) appreciation of life (Tedeschi & Calhoun, 1996). Although much research has been conducted to explore the experience of PTG and factors that influence PTG, there has been limited research into the influence of attachment style on the experience of PTG.

### Attachment

Attachment Theory is based on the work of Bowlby (1969), and Ainsworth (1991). Attachment theory proposes that human behavior and psychological development

is heavily influenced by the early relationship between an infant and their primary caregiver. As a result, children build working models of themselves and the world through interactions with caregivers (Bowlby, 1969). Thus, early childhood experiences with the primary caregiver influence the development of their attachment style: *secure*, *ambivalent/anxious*, *avoidant* (Ainsworth, Blehar, Walters, & Wall, 1978; Grossman & Grossman, 1991; Main, Kaplan, & Cassidy, 1985).

A *secure* attachment style is developed when the primary caregiver responds to the child's distress on a consistent basis, thus promoting trust in relationships (Ainsworth et al. (1978). On the other hand, an *ambivalent/anxious* attachment style develops when a child's distress is responded to on an inconsistent basis, leading to a high level of anxiety and difficulty in expressing emotions (Ainsworth et al., 1978). Finally, an *avoidant* attachment style is developed when children's distress is consistently ignored or they are rejected on a continuous basis (Ainsworth et al., 1978).

Although attachment behavior is at its most obvious in early childhood, it can be observed throughout the life cycle, especially in emergency situations (Bowlby, 1982). When children experience CSA, their cognitive and emotional orientation to the world is altered, and self-concept and affective capacities are distorted (Collin-Vézina et al., 2013).

Researchers have shown that attachment systems influence psychological adjustment and coping following traumatic experiences (Canton-Cortes et al., 2015), and that people with secure attachment systems tend to be able to better regulate emotions, reduce anxiety, and make sense of their experiences (Mikulincer & Florian, 2004). As

such, it appears that investigating the influence of attachment style on the experience of PTG among adult survivors of CSA is necessary.

As attachment systems are viewed as a form of social support, and have been found to influence psychological adjustment and coping following traumatic experiences such as CSA (Canton-Cortes et al., 2015; Mikulincer & Florian, 2004), this research study was conducted to explore attachment style as a mediating factor between the perceived experience of CSA and the experience of posttraumatic growth among adults with a history of CSA.

#### Statement of the Problem

As CSA continues to be a problem (Wurtele, 2009) that causes major psychological difficulties among survivors such as depression, anxiety, suicidality, and PTSD (Berliner & Elliott, 2002; Finkelhor, 1993; Paolucci et al., 2001; Tyler, 2002), there is a continued need to not only help survivors recover from the experience but also to thrive in the aftermath, that is, help them to experience PTG. Although many researchers have explored the experience of PTG among survivors of various types of traumatic experiences (i.e., chronic illness, car accidents, terrorist attacks, and natural disasters; (Cryder, Kilmer, Salter & Stallard, 2006; Tedeschi & Calhoun, 2004, 2006; Wong, Cavanaugh, MacLeamy, Sojourner-Nelson, and Koopman, 2009), limited research has been focused on the experience of PTG among survivors of CSA (Easton, Coohey, Rhodes, & Moorthy et al, 2013; Shakespeare-Finch & De Dassel, 2009; Walker-Williams et al., 2014; Woodward & Joseph, 2003). Furthermore, only one researcher to date has explored the influence of personal attachment qualities on the experience of PTG among

survivors of sexual assault (Gwynn, 2009). Although Gwynn's study provides insight into the influence of attachment style on PTG, it was only concerned with PTG among female survivors of sexual assault beyond the age of 14. As such, there remains a gap in the literature regarding the influence of attachment style on PTG among both male and female survivors of CSA under the age of 14. Given that research shows that attachment systems influence psychological adjustment and coping following traumatic experiences (Cantón-Cortés et al., 2015; Kilmer, 2006; Mercer, 2006; McElheran et al., 2012), it was appropriate to explore attachment qualities on the experience of PTG.

### Research Questions & Hypotheses

This study aimed to add to the needed research surrounding PTG among survivors of CSA while also aiming to fill the gap in the literature regarding attachment influences on PTG among both male and female survivors of CSA. The study's research questions are as follows:

#### Primary Research Question

Do adults' attachment styles, (as measured by the *Experiences in Close Relationships – Short Form* ([ECR-S] Wei et al., 2007), serve as a mediator between perceived impact of CSA (as measured by the *Impact of Event Scale-Revised* ([IES-R] Weiss & Marmar, 1996) and their experience of posttraumatic growth (as measured by the *Posttraumatic Growth Inventory* ([PTGI] Tedeschi & Calhoun, 1996)?

#### Primary Hypothesis

The influence of adults' perceived impact of their experience with childhood sexual abuse as measured by the IES-R (Weiss & Marmar, 1996) on their experience of

posttraumatic growth as measured by the PTGI (Tedeschi & Calhoun, 1996) is mediated by their attachment style as measured by the ECR-S (Wei et al., 2007). Specifically, the investigation tested the hypothesized directional relationship that adults' scoring in the insecure attachment range (i.e., anxious or avoidant) with greater levels of posttraumatic stress (i.e., indicative of PTSD) would score lower in levels of posttraumatic growth.

Figure 1 shows the hypothesized structural model with manifest variables. The hypothesized measurement models for each latent factor are displayed in Figures 2, 3, and 4.

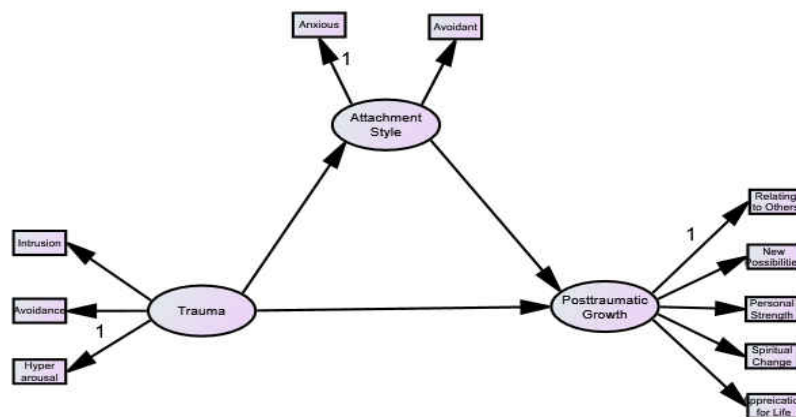


Figure 1. Hypothesized Structural Model With Manifest Variables

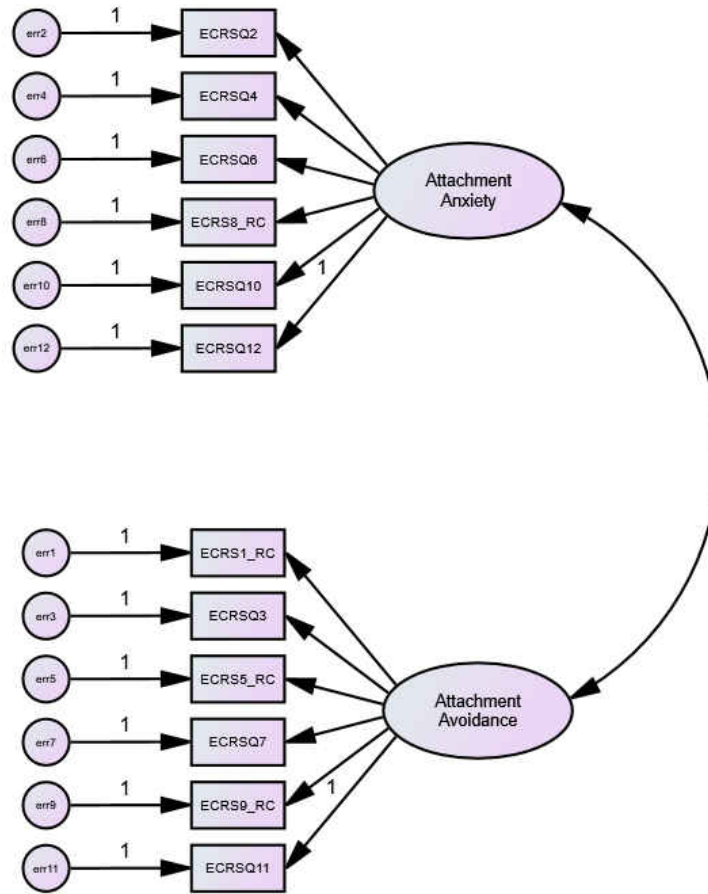


Figure 2. Hypothesized Attachment Style (ECR-S) Measurement Model

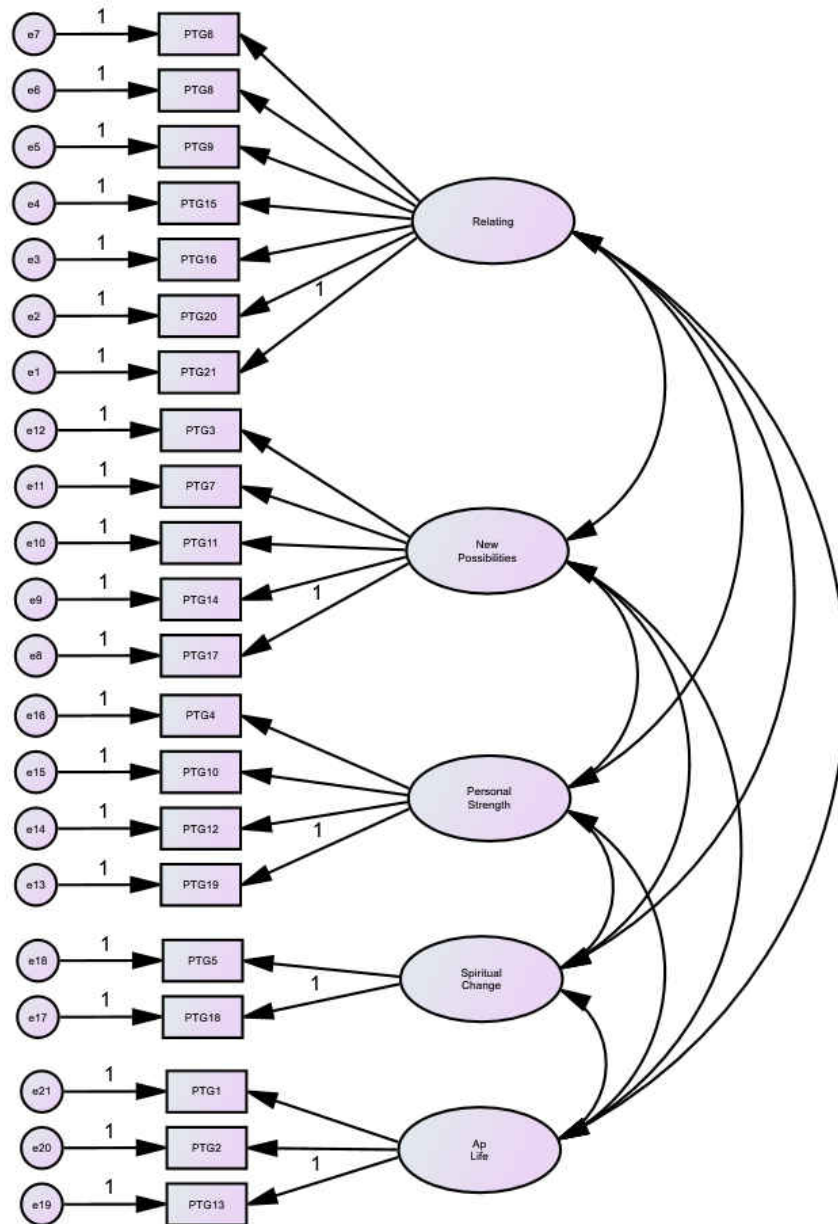


Figure 3. Hypothesized Posttraumatic Growth (PTGI) Measurement Model



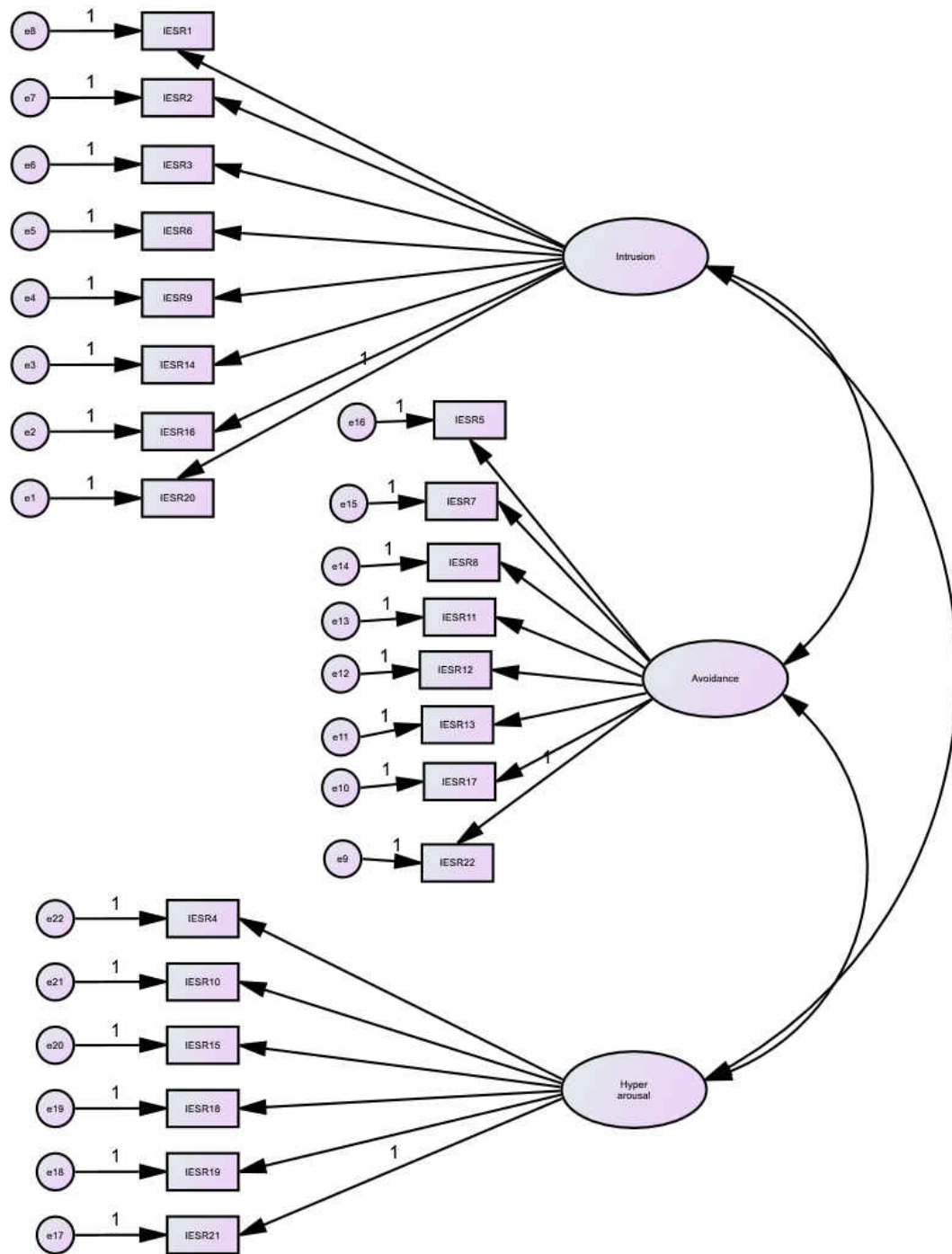


Figure 4. Hypothesized Trauma (IES-R) Measurement Model

### Exploratory Research Question 1

Is there a statistically significant difference in attachment styles of adult survivors of CSA as measured by the ECR-S (Wei et al., 2007), and their reported demographic variables (i.e., gender, age, race, relationship status, time since event, identification as spiritual/religious, relationship with caregiver, and history of receiving psychological services)?

### Exploratory Research Hypothesis 1

There is a statistically significant difference in attachment styles of adult survivors of CSA as measured by the ECR-S (Wei et al., 2007) and their reported demographic variables (i.e., gender, age, race, relationship status, time since event, primary caregiver support, identification as spiritual/religious, and history of receiving psychological services).

### Exploratory Research Question 2

Is there a statistically significant difference in experiences of PTG among adult survivors of CSA as measured by the total score of the PTGI (Tedeschi & Calhoun, 1996), and their reported demographic variables (i.e., gender, age, race, time since event, relationship with caregiver, and history of receiving psychological services)?

### Exploratory Research Hypothesis 2

There is a statistically significant difference in experiences of PTG among adult survivors of CSA as measured by the PTGI (Tedeschi & Calhoun, 1996), and their reported demographic variables (i.e., gender, age, race, relationship status, time since

event, primary caregiver support, identification as spiritual/religious, and history of receiving psychological services).

### Exploratory Research Question 3

Is there a statistically significant difference in adults' perceived impact of their experience with CSA as measured by the IES-R (Weiss & Marmar, 1996) and their reported demographic variables (i.e., gender, age, race, time since event, relationship with caregiver, and history of receiving psychological services)?

### Exploratory Research Hypothesis 3

There is a statistically significant difference in adults' perceived impact of their experience with CSA as measured by the IES-R (Weiss & Marmar, 1996) and their reported demographic variables (i.e., gender, age, race, relationship status, time since event, primary caregiver support, identification as spiritual/religious, and history of receiving psychological services).

### Significance of the Study

This study offers contributions to the counseling literature, including: (a) increased awareness of psychological experiences of adults with a history of CSA; (b) additional understanding of the relationship between perceived impact of CSA, attachment styles, and the experience of PTG; and (c) greater knowledge about the experience of PTG among adults with a history of CSA.

This study breaks new ground by investigating the experiences of adults who have experienced CSA at any point during childhood, and how their experience is perceived, if they have experienced PTG, and if their attachment style is a mediating factor. Thus, this

study adds new research to the field, and expands one's understanding of the role of attachment style in recovery from CSA and achieving PTG.

CSA is a difficult experience from which to find meaning (Wright et al., 2007). In the aftermath, individuals are confronted with the challenge of coping with a new, unfamiliar, and unexpected situation. An individual's personal attachment style can influence (a) his or her view of self and others, (b) cognitive flexibility in incorporating traumatic memories, and (c) coping strategies. Wright and colleagues (2007) found that effective resolution of the trauma and positive adjustment appear to be most strongly associated with the ability to acknowledge and not avoid the pain and suffering individuals had endured. Among 60 adult female survivors of CSA, 87% perceived some benefit from coping with the experience of CSA. Furthermore, when survivors were able to cognitively process the emotional impact of these experiences, there was greater potential for recovery and growth (Wright et al., 2007). Counselors may benefit from the results of this study. An increased understanding of how attachment style can play a role in the experience of posttraumatic growth among survivors of CSA may better inform counselors of the need to address attachment style and implement the PTG model into their work with adult clients with a history of CSA.

#### Limitations

This study included potential limitations associated with the research design, sampling methods, and data collection procedures. Given that the study used a correlational research design, threats to external validity existed. For example, although the researcher sought to utilize a large sample ( $N = 1,600$ ) of participants, this was not a

true experimental design; therefore, the researcher could not report accurate generalizability to the greater population (Frankel et al., 2011).

The researcher utilized convenience sampling, and this has its strengths and weaknesses. This sampling approach is necessary, as the researcher sought to utilize a sample of participants with specific characteristics (i.e., being an adult, having a history of childhood sexual abuse, and living in the United States). However, given that there is a great deal of shame surrounding having a history of CSA, not all survivors seek support; therefore, were not easily accessible. As such, the researcher sought participants from a national online support network, thus limiting the sample to those already seeking some form of assistance for their experience with CSA. Such a sample limits the generalizability of results, as individuals available for participation may already have more support and/or treatment than survivors who are outside of the network or who have never disclosed their abuse.

In order to collect data from the online sample, the researcher utilized Qualtrics to administer assessments. Although the instruments utilized were chosen for their sound psychometric properties, potential threats to internal validity exist. For example, the researcher could not assume a realistic variance in scores, as the participants who completed the instruments did so voluntarily and were sought from support networks, inferring that they were already seeking support and/or treatment for their experiences with CSA. Furthermore, the researcher could not control for environmental factors, as participants were given access to the online assessment to complete on their own time, not in the presence of the researcher.

Although there were inherent limitations to the present study, the researcher ensured that the study was conducted in an ethical manner by seeking approval from the university's Institutional Review Board, requesting that the dissertation chair and committee members review the research study to ensure sound and ethical practices, and gaining permission and access to all necessary instruments before implementing the study.

### Operational Definition of Terms

Attachment Styles (i.e., secure, anxious, avoidant): Human behavior and psychological development that is heavily influenced by the early relationship between an infant and their primary caregiver. These attachment styles can be observed throughout the life cycle, especially in emergencies (Bowlby, 1982).

Child sexual abuse: The use, persuasion, inducement, enticement, or coercion of any child to engage in, or assist any other person to engage in, any sexually explicit conduct or any simulation of such conduct for the purpose of producing any visual depiction of such conduct; or rape, and in cases of caretaker or inter-familial relationships, statutory rape, molestation, prostitution, or other form of sexual exploitation of children, or incest with children (U.S. Legal, 2015).

Posttraumatic growth (PTG): The result of an active reconfiguration of a person's mental map to accommodate new trauma-related information (Tedeschi & Calhoun, 1995). PTG refers to the ways in which people are positively transformed by the experience of surviving significant adversity (Tedeschi & Calhoun, 2004). People who experience PTG have been found to make gains in five areas of their life: (a)

renew/discover personal strength, (b) discover new life possibilities, (c) form meaningful interpersonal relationships, (d) gain a new appreciation for life, and (e) renew/develop spirituality.

Traumatic Event: A highly stressful and challenging experience (e.g., exposure to war, accidents, bereavement, threats to health) that has the potential to affect the individual's level of functioning (Tedeschi & Calhoun, 2004).

### Summary

This chapter has provided an introduction to the present study, including and overview of theoretical constructs, a statement of the problem, research questions/hypotheses, and operational definition of terms. This chapter aimed to reveal why the chosen constructs warranted further investigation and to identify gaps in the current research in this area. As the research surrounding CSA has primarily focused on the negative effects of such a traumatic event, more attention is needed to better understand the potential for PTG among survivors of CSA. Furthermore, there is a gap in the literature regarding the potential influence of attachment style on PTG. This gap needs to be addressed in order to increase understanding of how people with a history of CSA can experience PTG and improve ways to help clients achieve PTG. Chapter 2 provides a thorough review of the literature surrounding the constructs investigated.

## CHAPTER 2 REVIEW OF THE LITERATURE

### Introduction

Most people experience some form of trauma during their lifetime, and frequently this occurs in childhood (CDC, 2013). An estimated 70% of the general population in the United States have experienced some form of trauma during their lifetime (Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995), with 25% developing symptoms of Posttraumatic Stress Disorder (PTSD; Meichenbaum, 2014). Among the various types of trauma that can be experienced, sexual trauma, in particular has been associated with higher rates of PTSD (Nooner et al., 2012). Childhood sexual abuse (CSA) is a form of sexual trauma that often results in psychological, interpersonal, and behavioral challenges. As statistics show that one in four girls and one in six boys will experience CSA by the age of 18 years (NAASCA, 2015; Schober, 2012), there is a need for counselors to be prepared to help such individuals recover from their experience and thrive beyond the trauma.

When exposed to a traumatic event such as CSA, a child's belief systems and psychological well-being, are believed to influence their response to the event, and how they make sense of the event once it has passed, (Kilmer, 2006). People begin building their belief systems, which include working models of themselves and their world, during childhood (Bowlby, 1982). When trauma is experienced, their world view is altered, and their understanding of the world may become invalidated by the event (Calhoun & Tedeschi, 1999; Janoff-Bulman, 1992), affecting their adjustment to life following the traumatic event.



Although many factors can influence the development of one's worldview as well as how one may respond to a traumatic event, researchers have shown that the following variables have a significant influence on one's adjustment following CSA: (a) aspects of the abusive situation itself (e.g., severity, use of force, relationship to the offender, and age of the victim; Browne & Finkelhor, 1986; Spaccarelli, 1994; Wyatt & Newcomb, 1990), (b) parental warmth (Wind & Silvern, 1994), (c) family functioning (Koverola et al., 1996; Nash et al., 1993), (d) social support (Testa et al., 1992), and (e) support and belief from the non-offending parent (Everson et al., 1989; Spaccarelli & Kim, 1995). Furthermore, individual cognitive processing of the event (Coffey et al., 1996; Wyatt & Newcomb, 1990), and the search to find meaning (Roth & Newman, 1993; Silver et al., 1983) have also been found to influence the recovery from CSA (Runtz & Schallow, 1997). Runtz and Schallow (1997) identified that cognitive, environmental, and social factors may be more important than the actual characteristics of the abuse itself in predicting the adjustment of people with a history of CSA. Among the social factors needing further exploration in regard to PTG, following CSA, is attachment style. As such, this study sought to build upon the existing research by exploring the influence of personal attachment styles on the experience of PTG among adults with a history of CSA.

Although many people who experience CSA may experience psychological and behavioral challenges, not all demonstrate significant impairment later in life (Runtz & Schallow, 1997). As noted by numerous researchers, individuals with a history of CSA are not a homogeneous group. Many may demonstrate healthy adjustment years after the abuse (Farber & Egeland, 1987; Herman et al., 1986; McMillen, Zuravin, & Rideout,

1995), and may even experience greater posttraumatic growth (Wright, Crawford, & Sebastian, 2007).

Posttraumatic growth (PTG) refers to the ways in which people are positively transformed by the experience of surviving significant adversity (Tedeschi & Calhoun, 2004) and is the result of an active reconfiguration of a person's mental map to accommodate new trauma-related information (Tedeschi & Calhoun, 1995). Calhoun and Tedeschi (1999) found that 40-70% of people who experience some form of traumatic event may later report some form of positive benefit from their experience. Although there is literature surrounding PTG among survivors of various types of traumatic events such as natural disasters, chronic illness, car accidents, and terrorist attacks (Cryder et al., 2006; Salter & Stallard, 2004; Tedeschi & Calhoun, 2004; Wong et al., 2009), the research findings have been inconclusive regarding which variables most influence the experience of PTG. Moreover, the research regarding PTG among people who have experienced CSA is limited (Easton et al, 2013; Lev-Wiesel, Amir, & Besser, 2005; Shakespeare-Finch & De Dassel, 2009; Walker-Williams, van Eeden, & van der Merwe, 2013; Woodward, & Joseph, 2003); therefore, future research should be conducted to explore the experience of PTG and which variables influence PTG among this population. A comprehensive theoretical model of PTG processes (Calhoun, Cann, & Tedeschi, 2010; Calhoun & Tedeschi, 2006; Tedeschi & Calhoun, 2004) describes the cognitive, emotional, and social processes that should facilitate PTG. These include: (a) characteristics of the person pretrauma, (b) managing the emotional distress related to the triggering event, (c) intrusive and deliberate rumination processes associated with

rebuilding core beliefs, (d) self-disclosure, and (e) sociocultural elements that could be important components of the PTG process.

In order to provide a theoretical structure for this study, a review of constructs contributing to posttraumatic growth is provided. Further, because the theory of PTG proposes the assumption that those who experience PTG have undergone a highly challenging or traumatic event, support for establishing CSA as a traumatic event is provided. Additionally, attachment style, a concept shown to influence how people will cope in the aftermath of traumatic events (Salo, Qouta & Punamäki, 2005; Schmidt, Blank, Bellizzi, & Park, 2012; Arikan & Karanci, 2012), and a potential contributor to PTG, is also explored. Furthermore, Chapter 2 presents a thorough review of the literature surrounding the experience of PTG for those who have a history of CSA. Specifically, the chapter provides the following: (a) rationale and empirical support for viewing CSA as a traumatic event, (b) history and empirical support of posttraumatic growth, (c) theories and empirical support of attachment, and (d) relationships between each of the constructs (i.e., attachment, perception of trauma, and PTG).

### Childhood Sexual Abuse (CSA) as Trauma

Childhood sexual abuse (CSA) has reached epidemic proportions (CDC, 2013), causing various social and health care problems (Draucker et al., 2011). CSA has been identified as a traumatic event, even if threatened or actual violence or injury is not involved (Briere, 2006). The experience of CSA can cause profound short-term and long-term effects on mental health, such as depression, anxiety, suicidality, and PTSD (Paolucci, et al., 2001; Tyler, 2002). Additionally, such negative effects on mental health

can lead to behavioral and academic problems at school, physical problems, and interpersonal difficulties, such as risky sexual promiscuity, sexual perpetration, academic performance difficulties, substance use, and gang involvement (Paolucci et al., 2001; Tyler, 2002). Given the profound impact on emotional health and well-being (Kendall-Tackett, Williams, & Finkelhor, 1993), CSA poses a major risk factor for developing posttraumatic stress disorder [PTSD] (Tyler, 2002).

#### Childhood Sexual Abuse (CSA) and Posttraumatic Stress Disorder (PTSD)

According to the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-V, 2013), PTSD is characterized by intrusion symptoms (e.g., intrusive thoughts, dreams; persistent avoidance of stimuli; negative cognitions and/or mood associated with the traumatic event (e.g., CSA); negative beliefs about one's self, others, or the world; and marked arousal or reactivity associated with the traumatic event as a result of exposure to threatened or actual death, serious injury, or form of sexual violence. PTSD can occur at any age (DSM-V, 2013), and left untreated, may lead to further challenges with daily functioning, and adopting maladaptive behaviors.

Originally explored, and recognized as a disorder among people who had experienced war, PTSD was not recognized as something that might occur among children. It was only when Terr (1979, 1983) conducted studies with children who had been kidnapped and held hostage, that PTSD was acknowledged as a disorder that could occur among young children and adolescents as well as adults. As such, the diagnostic criteria of PTSD is the same for children, adolescents, and adults, unless children are under the age of six. In children under the age of six, the DSM-V (2013) diagnostic

criteria for PTSD is similar to that of those above age six with minor differences to account for the fact that clinical expression of symptoms may vary due to developmental differences.

The symptoms of PTSD are similar across age groups; however, the onset can vary (Beals & Scott, 2012). Although symptoms usually begin within the first three months following exposure to a traumatic event, onset may be delayed for months or even years before meeting diagnostic criteria (DSM-V, 2013). For example, Dyregrov and Yule (2006) investigated the occurrence of PTSD among adolescent survivors of a sinking ship. Among the 200 participants in the study, 51% had experienced PTSD. Although most cases of PTSD were present within the first few weeks of the event, some experienced delayed onset. Knowing that delayed onset of PTSD is possible, the presence of PTSD among adult survivors of CSA is worth attention, as some studies show that PTSD and PTG may co-exist (e.g., Alisic, van der Schoot, van Ginkel, & Kleber, 2008; Lev-Wiesel et al., 2005; McLean et al., 2013; Taku, Tedeschi, & Cann, 2015; Tang, 2007).

Cieslak, Benight, and Lehman (2008) explained that following the experience of a traumatic event (e.g., CSA), the development of PTSD can occur as a result of negative cognitions related to oneself and the world. Furthermore, the longer the period of time that PTSD is left untreated, the more likely it is that individuals may develop depressive symptoms, suicidal ideations, and/or other personality changes (Dyregrov & Yule, 2009). Conversely, it appears that growth oriented treatment for PTSD may lead to PTG, as people who have reexamined their core beliefs and practiced cognitive processing (e.g.,

deliberate rumination) following a traumatic event have been found to experience PTG (Cann et al., 2011; Stockton et al., 2011).

### Empirical Support for Perceptions of CSA as Traumatic

People with a history of CSA can experience a wide array of psychological, social, and behavioral challenges (Berliner & Elliott, 2002; Paolucci et al., 2001; Tyler, 2002; Wurtele, 2009). A thorough review of the literature highlights the various ways in which having experienced CSA can negatively affect individuals, couples, and families. As this study was designed to explore experiences among adult survivors of CSA, this review of the literature was also focused on the adult population and demonstrates how people can experience negative effects well into adulthood.

Researchers have shown that people who have experienced CSA are more prone to experience a wide range of psychological, behavioral, and social difficulties than those who have not experienced CSA (Berliner & Elliott, 2002; Paolucci et al., 2001; Tyler, 2002; Wurtele, 2009). Furthermore, people with a history of CSA have also been found to experience such difficulties into adulthood (Dube et al., 2005), including depression, anxiety, anger, substance abuse, problems with sexuality, poor self-esteem, somatic complaints, cognitive disturbances, personality disorders, marital and family problems, and PTSD (Beitchman et al., 1992; Dube, et al., 2005; Finkelhor, 1990; Molner et al., 2001; Neumann, 1994; Neumann et al., 1996; Stein et al., 1988; Tyler, 2002; Wurtele, 2009). In order to gather a thorough understanding of the potential traumatic effects of CSA, Paolucci and colleagues (2001) conducted a meta-analysis of 37 studies that were conducted to explore the experiences of survivors of CSA ( $N = 25,367$ ) published

between 1981 and 1995. The analyses revealed evidence confirming both short and long-term negative effects of CSA, including: PTSD, depression, suicide, sexual promiscuity, sexual perpetration, and academic performance difficulties.

Following this meta-analysis, Tyler (2002) conducted a review of the literature to further explore the social and emotional outcomes among people with a history of CSA. Tyler examined 41 articles published between 1987 to 1999 to explore the findings of social and emotional outcomes reported among survivors of CSA. Similar to findings of Paolucci and colleagues (2001), results revealed the following outcomes of having experienced CSA: suicidality, substance use, PTSD, running away, risky sexual behavior, pregnancy, gang involvement, and behavioral problems. These results provide further support to enhance one's understanding of the negative ramifications of CSA.

Expanding upon the existing research, Lev-Wiesel and Markus (2013) conducted a study to investigate the personal experience and perceived impact of CSA among adult female survivors ( $N = 225$ ). Results revealed high scores of depression, and posttraumatic stress among women who had experienced CSA. Additionally, results revealed that avoidance symptoms of posttraumatic stress were common when coerced intercourse was reported. Although effect size was not reported, these results provide additional support for CSA as a traumatic experience, and further demonstrate the need to help survivors of CSA not only recover from their experience, but also achieve growth.

#### Posttraumatic Growth (PTG)

Posttraumatic growth (PTG) refers to the ways in which people are positively transformed by the experience of surviving significant adversity (Tedeschi & Calhoun,

2004). When people experience traumatic events, their world view is altered; and their understanding of the world and their prior worldview may become invalidated by the event (Calhoun & Tedeschi, 1999; Janoff-Bulman, 1992). Joseph (2011) suggested that in the aftermath of a traumatic experience, some people survive but never recover to the previous mental and emotional way of being; rather, they consistently view themselves as victims. Meanwhile, others not only survive the event but also somehow recover to their previous state of mental and emotional well-being, seeing themselves not as victims but as survivors. Still others not only survive and recover, but they move forward to thrive in the aftermath of trauma.

Those factors that contribute to how some people survive while others recover and still others thrive is still under investigation. Although, some researchers have identified (a) support systems (Brand & Alexander 2003; Leitenberg et al. 1992; Walsh et al. 2010), (b) coping strategies (Bal et al. 2003; Brand & Alexander 2003; Coffey et al., 1996; Draucker et al., 2011; Futa et al., 2003; Leitenberg et al., 1992; Merrill et al., 2001; Walsh et al., 2010), (c) spirituality (Wright, Crawford, & Sebastian, 2007), (d) meaning making (McFarland & Alvaro, 2000; Park, 2010; Schwarzer & Knoll 2003; Taylor, 1989; Walsh et al., 2010; Woodward & Joseph, 2003), and (e) personality (Whitelock, Lamb, & Rentfrow, 2013) as potentially influential to an individual's response to trauma, the research results are inconclusive. Therefore, more research is needed to explore potentially influential factors, especially those related to growth in the aftermath of abuse. Among such factors, attachment styles need to be researched further to enhance the understanding of their influence on PTG.



The concept of PTG indicates that after a crisis there is potential for growth beyond recovery; and beyond the pre-crisis level of functioning (Calhoun & Tedeschi, 2006). According to Tedeschi and Calhoun (1995), PTG involves positive changes in the following areas of one's life: (a) relating to others; (b) personal strength; (c) new life possibilities; (d) spiritual change; and (e) appreciation for life. Instead of crumbling in the face of tragedy, some people may experience an awakened new strength and wisdom, as the tragedy serves as a catalyst to redefine oneself and what one must do with his or her life (Joseph, 2011).

#### History of Posttraumatic Growth (PTG)

Although the term, posttraumatic growth (PTG) has been recognized since the early 1990s, growth from traumatic experiences has been acknowledged for centuries. This section contains a discussion of (a) the history of acknowledging that growth can occur in the aftermath of traumatic events and (b) how the term posttraumatic growth came to be.

Traditionally, the focus of psychotherapy has been on the negative part of the human psyche with the mission of reducing symptoms and relieving negative disturbances (Calhoun & Tedeschi, 2006). In conjunction with this focus on psychological disturbances, the goal of psychotherapy has been to help clients return to their previous, or normal, state of being (Calhoun & Tedeschi, 2006). Although a large focus of psychotherapy has been on the negative aspects of human psychology, other schools of therapy have emphasized the potential for human growth beyond one's former or normal state of being (Calhoun & Tedeschi, 2006).

Before the term PTG was developed, Frankl (1969) acknowledged personal growth in the face of adversity. Frankl, the founder of Logotherapy, emphasized the importance of finding meaning as a source of personal strength and personal growth. Logotherapy represents a spiritually oriented approach to psychotherapy, which acknowledges the human spirit as a force within all people and provides motivation to grow beyond one's former state of being to rise above the negative effects of experiencing adversity. Although somewhat different from Logotherapy, existential therapeutic approaches (May & Yalom, 2005; Yalom, 1980) also acknowledge the significance of meaning-making in the face of adversity. Both Logotherapy and existential approaches to psychotherapy have provided invaluable contributions to the field of psychotherapy, bringing attention to the potential for personal growth following a traumatic event. Although spirituality is not necessary for PTG to occur, research on PTG has revealed a clear indication that people who experience such growth have also experienced positive changes in the existential or spiritual domain (Tedeschi & Calhoun, 1995).

Often expressed in the literature, the term *resiliency* has been used to describe how some people experience positive changes in the aftermath of a traumatic experience (Crete & Singh, 2015; Dale et al., 2015; Walker, Hernandez, & Davey, 2012; Wilcox, Richards, & O'Keefe, 2004). However, it is important to understand that resiliency is different from PTG (Calhoun & Tedeschi, 2006). In the following section, the comparison between PTG and resilience is presented.

## Posttraumatic Growth (PTG) Compared to Resilience

In this section, the term resiliency is discussed as it is presented in the literature in three different facets: (a) recovery, (b) resistance, and (c) reconfiguration. Additionally, the term resilience is compared to the term posttraumatic growth, helping to clarify the distinction between the two terms.

Resiliency is recognized as an individual's capacity for adapting to adverse and traumatic life events (Wilcox & Richards, 2002). Three facets of resiliency are reported within the literature: recovery, resistance, and reconfiguration (Bonanno, 2004; Selye, 1956; Walsh, 1998). Recovery resilience is recognized as an individual resuming his or her pre-stressor level of functioning after the stressor has passed (Selye, 1956).

Resistance resiliency is explained as an individual being undisturbed by adversity, exhibiting normal functioning before, during, and after a stressful event (Bonanno, 2004). Lastly, reconfiguration resiliency is described as (a) rebounding after an adverse experience, (b) becoming further strengthened and more resourceful (Walsh, 1998), and (c) adapting to the changed environment (Cicchetti & Cohen, 1995).

Reconfiguration resilience is similar to PTG in that they both involve personal transformations beyond the return to normal functioning following adversity. However, reconfiguration resilience may include positive or negative changes following a stressor, whereas PTG refers specifically to positive transformations. As personal resilience is recognized as a personality trait, it is important to understand that PTG is not a personality trait, but rather the result of an active and positive reconfiguration of a person's mental map to accommodate new trauma-related information (Tedeschi &

Calhoun, 1995). The following section provides an overview of the theory of PTG, and how people experience PTG.

### Theory of Posttraumatic Growth (PTG)

In this section, the concept of PTG as well as the way in which people can experience PTG is presented. The concept of PTG is that after surviving a significant stressor or trauma, some individuals are often able to make gains in five domains: (a) personal strength, (b) new possibilities, (c) relating to others, (d) appreciation of life, and (e) spiritual change (Tedeschi & Calhoun, 2006). In this section, each of the five domains is presented in further detail.

In terms of personal strength, the theory of PTG is that following a traumatic event, some people discover a found realization that they may be stronger than originally thought. As described by Calhoun and Tedeschi (2006), an encounter with a major life stressor can increase an individual's sense of being tested and having survived the worst, thereby, gaining a sense of personal strength.

As some people experience this new sense of strength, they may also experience a realization of new life possibilities. Thus, such people develop new interests, sometimes related to the traumatic experience they endured. The variety of new interests or new life possibilities that some people may develop could include: perusing a medical career after the loss of a loved one, becoming a marriage and family therapist after having experienced a traumatic childhood, or becoming an advocate for change in a particular area of interest after having experienced a traumatic event related to that area.

In addition to a new sense of personal strength, and recognition of new life possibilities, those who have experienced PTG have also reported significant changes in interpersonal relationships. Through the intention of forming meaningful interpersonal relationships, those who experience PTG report experiencing a greater connection to other people along with an increased compassion for others who may be experiencing a traumatic event. It appears that some people, who experience this intention to form meaningful interpersonal relationships following a traumatic event, place greater value on such relationships as a result of reprioritizing their values and interests.

Along with intentionally forming meaningful interpersonal relationships after a traumatic event, many people who experience PTG have also reported a new appreciation for life. This new appreciation for life appears to be a result of reexamining one's priorities, especially in the aftermath of an event where death or injury was part of the experience. It seems that such people place greater value on life than they had prior to the traumatic event, some even perceiving it as a gift.

In conjunction with a new appreciation for life, people who experience PTG often report spiritual change as well. Such people have reported experiencing a deeper spiritual connection and existential meaning in their lives. Furthermore, people have reported that such spiritual change has helped them to deal with the trauma and, in some cases, the rehabilitation process following the traumatic event (Grossoehme et al., 2012; Sherrill & Larson, 1988).

Calhoun and Tedeschi (1999) found that 40-70% of people who experience some form of traumatic event may later report some form of positive benefit from their

experience. The empirical support for PTG among adults abounds, as there have been numerous qualitative and quantitative studies regarding PTG among survivors of traumatic experiences (e.g., Calhoun & Tedeschi, 2006; Janoff-Bulman, 1992; Tang, 2007). Such research has contributed to a better understanding of the experience of PTG.

Although much research has been conducted to support the concept of PTG, most studies have been conducted with adults, regarding traumatic experiences that have occurred during adulthood (e.g., Calhoun & Tedeschi, 2006; Janoff-Bulman, 1992; Tang, 2007). Research has been limited regarding traumatic experiences that have occurred during childhood (e.g., Cryder et al., 2006; Salter & Stallard, 2004; Alisic et al., 2008), especially in regard to CSA (e.g., Easton et al., 2013; Lev-Wiesel et al., 2005; Shakespeare-Finch & De Dassel, 2009; Ullman, 2014; Walker-Williams et al., 2013; Woodward & Joseph, 2003). Although the existing research provides one with some insight into the experience of PTG among survivors of traumatic events that occurred during childhood, there is still more to learn in regard to what helps such survivors obtain PTG, especially in cases of CSA. Among the studies that have been conducted to explore childhood experiences of trauma, results reveal PTG can be experienced both in childhood as well as in adulthood following a childhood experience of trauma, including experiences of CSA. However, no research has been conducted to date to explore the role of attachment on the experience of PTG among CSA survivors. In the next section, an overview of the empirical support for PTG is provided. Additionally, the limitations of studies conducted are presented, providing support for the need to explore attachment

style as a potentially influential factor in the process of obtaining PTG among survivors of CSA.

### Empirical Research on Posttraumatic Growth

In this section, an overview of empirical support for PTG, particularly among survivors of childhood traumas, is presented. Although research regarding PTG, specifically among survivors of CSA is limited, the research surrounding PTG among survivors of various other types of childhood traumas provides us with an enhanced understanding of the experience of PTG and the research supporting the theory. Furthermore, the review of research presented in this section provides support for the need to further explore PTG and PTSD, as the research findings have been inconclusive about the relationship.

Among the research regarding childhood experiences of trauma associated with PTG, Salter and Stallard (2004) explored childhood experiences with traffic accidents ( $N = 158$ ), using qualitative methodology. Participants of the study were children between 13-18 years of age. Results revealed that 42% of participants reported some evidence of PTG, with the majority of PTG being evident through reports of an increased appreciation for life. Meanwhile, 37% of the participants also identified as having experienced posttraumatic stress disorder. These results demonstrate that posttraumatic growth and PTSD are not mutually exclusive, contrary to the findings of other researchers (e.g., Alisic et al., 2008; Tang, 2007), that show posttraumatic stress reactions and posttraumatic growth may co-exist.

An investigation into the relationship between posttraumatic stress reactions and PTG by Alisic and colleagues (2008) explored these factors among children ( $N = 1770$ ) who had experienced a traumatic event. Results revealed a positive correlation between posttraumatic stress reactions and PTG ( $r = 0.41, p < .01$ ), thereby supporting previous research revealing that the two constructs may co-exist (e.g., Tang, 2007). Results of this study also revealed that children who had been exposed to a traumatic event experienced significantly higher posttraumatic stress reactions ( $\beta = .12, p < .01$ ), as well as increased levels of PTG ( $\beta = .09, p < .01$ ), as opposed to children who had not been exposed to trauma. Given the inconsistency in the research regarding the relationship between posttraumatic stress reactions and PTG, further research is needed to better understand the relationship.

In addition to exploring the relationship between posttraumatic stress reactions and PTG, other research has been conducted to explore hypothesized linkages among PTG and social support, competency beliefs, and ruminative thinking. Cryder and colleagues (2006) explored children's responses to having had experienced Hurricane Floyd ( $N = 46$ ) in 1999 and the role that competency beliefs (i.e., perceptions of one's competence in handling past problems resulting from traumatic events, and future problems that may arise in one's life), ruminative thinking, and social support played in their recovery process. Results revealed a significant correlation between indicators of PTG and competency beliefs among the children ( $r = .547, p < .01$ ). Additionally, social support and ruminative thinking correlated with positive competency beliefs ( $r = .382, p < .01$ ). Although the sample size was small and the measures used were new, the results



inferred that some children who struggle with traumatic circumstances may also experience significant growth. Furthermore, these results provided support for other research that reflects the importance of having positive expectations and beliefs about one's competencies and one's future. These factors may influence how children perceive events, how they respond to trauma, and the effort they put forth in grappling with the traumatic circumstances (Werner & Smith, 1982; Wyman, Cowen, Work, & Kerley, 1993). Given that social support (e.g., familial support) has been shown to influence how children respond and recover from traumatic event, it is necessary to explore other forms of social support (e.g., attachment style) on the recovery from traumatic events such as CSA, particularly in regard to the development of PTG.

Qualitative research was conducted by Wong and colleagues (2009), exploring the development of PTG following a childhood trauma, to examine the long-term effects of parental cancer during childhood ( $N = 27$ ). The results of retrospective interviews with adults whose parents had cancer when they were children, revealed that 44% of participants reported PTG. Participants reported three of the five areas of PTG: an increased appreciation for life, stronger personal relationships, and new life possibilities (Tedeschi & Calhoun, 2006). Furthermore, PTG was reported by participants whether their parents survived their illness or not, indicating that the threat of parental death was sufficient to facilitate PTG among children. Although these findings add to the literature regarding PTG among survivors of childhood trauma, the sample size was small, suggesting further research is needed using a larger, more diverse sample to enhance understanding of childhood traumas as they relate to experiences of PTG.

Although much research has been conducted regarding PTG among survivors of various types of traumatic events, providing support for the concept of PTG, there has been limited research regarding PTG and survivors of CSA (Easton et al., 2013; Lev-Wiese et al., 2005; Shakespeare-Finch, & De Dassel, 2009; Walker-Williams et al., 2014; Woodward & Joseph, 2003). As researchers have explored PTG among survivors of various traumatic events, attachment style has been found to serve as a moderator between trauma and PTG (Arikan & Karanci, 2012; Salo et al., 2005; Schmidt et al., 2012). As such, attachment style, and its influence on PTG is presented in the following section.

#### Overview of Attachment Theory

In this section, an overview of attachment theory and empirical support for attachment theory as it relates to the recovery process from CSA is presented. Additionally, the need to explore attachment systems in conjunction with the development of PTG among survivors of CSA is discussed.

Attachment theory, based on the work of Bowlby (1969), and Ainsworth (1991), proposes that human behavior and psychological development are heavily influenced by the early relationship between infants and their primary caregivers. According to attachment theory, infants develop a set of behaviors designed to elicit and maintain proximity to their primary caregivers (Bowlby, 1980), and this influences an individual's expectations about availability and responsiveness from attachment figures (Feeney, 1999). Such expectations influence the development of an individual's working model of self and others (Ainsworth & Bowlby, 1991), and guide perceptions and behaviors in

adult relationships. In order to understand the development of attachment systems and how they remain consistent throughout adulthood, the next section provides an overview of infant attachment followed by a discussion about adult attachment.

### Infant Attachment

At the foundation of attachment theory, infants are recognized as dependent on their caregivers to provide for their basic needs, and thus develop a set of behaviors designed to elicit and maintain proximity to their primary caregivers (Bowlby, 1980). The caregiver's response to an infant's attachment behaviors (e.g., crying, smiling, and following), theoretically forms the foundation of attachment relationship. The infant experiences anxiety at the sign of a perceived threat to the attachment relationship, resulting in the infant striving for proximity to the caregiver through engagement in increased attachment.

The presence of the caregiver (e.g., mother) serves as a secure base from which children can explore their surroundings and to which they can return, if tired or threatened. Exploration gradually increases over the lifespan and begins to occur over longer periods of time, expanding to a larger base of people. This larger base eventually includes the family of origin, friends, or a different base in which the individual creates

A seminal study by Ainsworth et al. (1978), called the "Strange Situation" provided important information about parent-child relationships and how attachment systems are formed. This study also led to the classification of attachment styles (i.e., secure, ambivalent/anxious, and avoidant) which was in use at the time of the present study. Following Ainsworth and colleagues' 1978 laboratory study, additional research

(e.g., Grossman & Grossman, 1991; Main et al., 1985) provided further support for the classification of infant attachment style. Such research has led to the understanding of the behaviors typically demonstrated by those with secure, anxious, or avoidant attachment styles.

Results based on the research previously discussed (i.e., Ainsworth et al., 1978; Grossman & Grossman, 1991; Main et al., 1985), indicated that securely attached children evidenced clear preference for parents over strangers. Such behavior has been found to be indicative of parents/caregivers who have been consistently engaged and actively involved with their children, consistently providing nurturing and care. Thus, secure attachment is developed when the primary caregiver responds to the child's distress on a consistent basis, thus promoting trust in relationships. On the other hand, ambivalently/anxiously attached children displayed distress upon their parents' departure but refused contact with parents upon their return (Ainsworth et al., 1978). Such behaviors have been found to be indicative of parents who have been inconsistently reliable to provide attention and support for their children. Thus, an ambivalent/anxious attachment style is developed when children's distress is consistently ignored or they are rejected on a continuous basis. This leads to a high level of anxiety and difficulty in expressing emotions. Finally, avoidant children do not differentiate between parent and stranger and avoid contact with their parents (Ainsworth et al., 1978). Such behavior has been found to be indicative of parents who have not been responsive to their children's needs. Thus, an avoidant attachment style develops when a child's distress is responded to on an inconsistent basis. This pattern results in an avoidance of seeking attachment

figures for support and protection and diminishes the ability to express emotions appropriately.

Although attachment behavior is at its most obvious in early childhood, it can be observed throughout the life cycle (Bowlby, 1982). The next section presents the concept of adult attachment, how it is recognized throughout life, and how it relates to this study.

### Adult Attachment

Attachment style has been found to influence relationships even in adulthood (Crowell et al., 2002). Expectations about availability and responsiveness from attachment figures are based on the early interactions with primary caregivers (Feeney, 1999). Such expectations influence the development of personal formation of working models (i.e., thoughts, beliefs) of the self and others, thus guiding perceptions and behaviors in adult relationships.

Bartholomew (1990) described personal models of the self and others which when characterized by the attachment system, can result in either positive or negative models. The model of the self is developed into either a positive view of the self (i.e., someone worthy of love and attention), or a negative view of the self (i.e., someone unworthy of love and attention). Similarly, the model of others is developed into either a positive view of others (i.e., being available and caring), or a negative view of others (i.e., being unreliable or rejecting). Furthermore, Bartholomew and Horowitz (1991) established the attachment dimensions, which describe the role of anxiety and avoidance. Anxiety refers to the way in which abandonment is associated with a negative model of the self.

Avoidance of emotional involvement is associated with the development of a negative model of others.

Although the attachment system is crucial during the early years of life, it is also important throughout all stages of life, as people are never free from reliance on others (Shaver & Fraley, 2000). The attachment system maintains an active role throughout one's lifespan, as indicated by adults' tendencies to seek proximity and support when threatened or distressed (Zeifman & Hazan, 2008). As the attachment system remains active, adults are capable of becoming emotionally attached to a variety of close relationship partners (e.g., friends, romantic partners, leaders), seeking love, encouragement, and support in times of need (Bowlby, 1980; Shaver & Fraley, 2000).

Findings from research into attachment orientations (e.g., Ainsworth et al., 1978; Brennan, Clark, & Shaver, 1998; Mikulincer & Shaver, 2003, 2007) indicates that attachment styles can be measured along two orthogonal dimensions: (a) attachment anxiety; and (b) attachment avoidance, both indicative of insecure attachment. Individuals' positions within the attachment anxiety dimension are indicative of the degree to which they worry that partners may not be available and supportive during times of need, thus heightening efforts to maintain proximity to relationship partners. In regard to the avoidance dimension, individuals' positions are indicative of the extent to which they distrust relationship partners' goodwill and capacity to help, thus heightening efforts to maintain a safe degree of independence and self-reliance (Mikulincer & Shaver, 2012). Both attachment anxiety and attachment avoidance are representative of an insecure attachment style. Outside the realm of the anxious and avoidant attachment

dimensions are people recognized as demonstrating secure attachment relationships. Secure attachment relationships are characterized by positive relationship qualities and are found to be more satisfying and effective than insecure attachment relationships (Shaver & Hazan, 1993).

Insecure attachments (i.e., anxious or avoidant) are marked by feared loss of relationship, less adequate recall and integration of previous attachment experiences, low (preoccupied) or high (avoidant) threshold for activating attachment behavior, and search for security (Ainsworth, 1989). Such adults often experience lower levels of trust, intimacy, stability and satisfaction in their relationships as compared to securely attached individuals (Kirkpatrick & Davis, 1994). Additionally, anxiously attached individuals often have negative views of themselves and tend to be more worried about being abandoned from relationship with others (Guerrero, 1998). As such, anxiously attached individuals tend to utilize hyper-activating strategies including clingy, intrusive, angry, and controlling efforts to obtain closeness, attention, care, and support (Mikulincer & Shaver, 2007). On the other hand, avoidantly attached adults tend to utilize deactivating strategies including defensive distancing, denial of intimacy needs, and diverting attention away from attachment-related cues, thoughts, and emotions (Mikulincer & Shaver, 2007).

The internal working models of attachment have been found to influence both illness and mental health (Muris, Meesters, & van den Berg, 2003). Attachment style has also been found to outweigh abuse characteristics in determining psychological adjustment (CantónCortés, 2013; McElheran, et al., 2012). Specifically, secure

attachment qualities have been related to better emotion regulation in the aftermath of traumatic events (Mikulincer & Florian, 2004), thus leading to better psychological and emotional health. Conversely, an insecure attachment style leads to an unproductive and excessive focus on negative emotions, or turning away from feelings of distress, leading to inappropriate emotional regulation (Moran, Neufeld, Gleason, Deoliveira, & Pederson, 2008). In the next section, an overview of empirical support for attachment theory and the influence of attachment style on psychological adjustment following a traumatic experience is presented.

#### Empirical Support for Attachment Theory

Following Ainsworth and colleagues' (1978) study (i.e., the Strange Situation), where infant attachment styles were classified (i.e., secure, ambivalent/anxious, and avoidant), Hazan and Shaver (1987, 1994) explored attachment qualities among adults. Exploring adult relationships ( $N = 620$ ) through the use of a questionnaire that measured adult attachment based on Ainsworth and colleagues' (1978) description of the three attachment styles (i.e., secure, avoidant, anxious/ambivalent), results revealed that individuals tend to seek partners that they perceive will satisfy their needs for emotional security and care. Interestingly, it appeared that adults tend to select relationships (e.g., intimate partners, friends) based on the same criteria (i.e., familiarity, responsiveness) used during infancy to choose their attachment figure (Hazan & Shaver, 1987). These results provide further support for the theory that attachment styles remain consistent throughout adulthood. Therefore, it seems appropriate to investigate the influence of adult attachment style in the present study.



Adding to the literature surrounding adult attachment, Crowell and colleagues (2002) examined the stability of adult attachment patterns among couples across the transition to marriage ( $N = 157$ ). The results indicated that the original parent-child attachment relationship formation has a strong influence on attachment behavior in adult relationships, as adult attachment representations appear to be very steady over time, well into marriage. Within a committed relationship, it seems that a couple creates their own secure base relationship. This may lead to revisions of their existing working attachment models or the development of a new relationship-specific working attachment model. Again, such results provide support for investigating adult attachment styles in the present study.

In addition to understanding that attachment patterns may remain consistent throughout life, it is also important to understand how attachment styles affect how people respond to life events, especially distressing events. It appears that an increased understanding of how attachment styles influence people's responses to distressing events will help clinicians better understand their clients' experiences and how to best help them in times of distress. In an effort to enhance understanding of the role of attachment style on emotion regulation, Kobak, Cole, Ferenz-Gillies, Fleming, and Gamble (1993) explored emotion regulation during mother-teen problem solving. The researchers examined interview transcripts from a previous study on adolescent attachment and the transition to college (Kobak & Sceery, 1988) among first year college students ( $N = 53$ ). Results revealed that adolescents classified as securely attached engaged in less dysfunctional anger and more engagement in problem-solving discussions when they

encountered conflict than did those adolescents who were insecurely attached (Kobak et al., 1993). These results provided support for other studies (e.g., Canton-Cortes et al., 2015; Mikulincer & Florian, 2004) that showed that securely attached individuals tend to be better able to cope with stressful events as opposed to those who are insecurely attached. Additionally, securely attached individuals have been found to understand that distress is manageable, and difficulties can be overcome as control can be exercised during external events all the way through the outcome of such events (Shaver & Mikulincer, 2002). As such, these results support the need to explore the relationship between attachment style and PTG among survivors of traumatic events such as CSA.

Researchers have noted that attachment behavior can be observed throughout the life cycle, especially in emergencies (Bowlby, 1982; Hazan & Shaver, 1987, 1994; Leondari & Kiosseoglou, 2000). Additionally, attachment systems have been found to influence psychological adjustment and coping following traumatic experiences (Canton-Cortes et al., 2015; Mikulincer & Florian, 2004). Secure attachment systems have been associated with better emotion regulation, anxiety reduction, and meaning-making experiences (Mikulincer & Florian, 2004). As such, attention to attachment systems in counseling are relevant, especially in the aftermath of a traumatic experience such as CSA.

#### Child Sexual Abuse (CSA), Posttraumatic Growth (PTG), and Attachment

Throughout this section, the relationships between Child Sexual Abuse (CSA), Posttraumatic Growth (PTG) and attachment are presented. In addition to the solitary influences of each of these aforementioned constructs (i.e., perception of CSA as

traumatic, PTG, and attachment), each of these concepts have also been found to work in tandem with other constructs. The following section offers empirical support for the relationships between these core constructs including (a) the influence of attachment on adjustment from CSA, (b) the experience of PTG among adults with a history of CSA, and (c) the influence of attachment style on the development of PTG.

### Child Sexual Abuse (CSA) and Attachment

Attachment theory provides a valuable framework to help enhance understanding and treatment of emotional distress and interpersonal problems associated with having a history of CSA (Karakurt & Silver, 2014). Attachment theory also provides a foundational perspective for the development of psychopathology, affect dysregulation, and difficulties within relationships. Alexander (1992) suggested that a holistic understanding of CSA must include a child's family relationships, as specific family features are significant predictors for increased risk of experiencing CSA. Additionally, certain family factors have been found to be predictors of long-term effects of CSA (Alexander, 1992). Karakurt and Silver (2014) further suggested that therapists must understand the lifelong effects of CSA, as it has been demonstrated that survivors experience chronic emotional and interpersonal effects under three main themes: (a) betrayal, (b) powerlessness, and (c) stigmatization (Finkelhor, 1990).

Betrayal is experienced when children recognize that a caretaker they depend on can cause them harm or that an adult they once thought they could trust, lies or misrepresents moral standards to engage in sexual contact (Finkelhor, 1990). Additionally, parental or family responses to disclosure influences how a child will adjust

following a CSA. As Lynskey and Fergusson (1997) observed, family support mediates the long-term effects of CSA, whereas negative reactions from family members can exacerbate feelings of betrayal (Finkelhor, 1990). Furthermore, attachment security in peer and parent relationships has been found to protect against the negative effects of CSA (Aspelmeier, Elliott, & Smith, 2007).

Among the negative effects of CSA, powerlessness is experienced when children's efforts to stop the abuse are thwarted (Finkelhor, 1990). A home is supposed to be a safe haven; however, when children's homes are places of danger where they feel powerless to escape abuse, they may experience hyperarousal and vigilance. A chronic state of hyperarousal can cause dysregulation of children's developing brains and bodies; causing them to be more likely to develop depression (Abramson, Seligman, & Teasdale, 1978). In addition to the potential for experiencing a sense of betrayal and powerlessness, the experience of CSA can also lead to feelings of stigmatization.

Stigmatization is associated with feelings of shame and guilt and is experienced as conceptualizing oneself to be bad and responsible for the abuse (Finkelhor & Browne, 1985). A negative self-image can develop over time, as survivors begin to accept and internalize such messages (Levenkron & Levenkron, 2007). Survivors of CSA often experience feelings of guilt, as many blame themselves for the abuse (Levenkron & Levenkron, 2007). Furthermore, children with an insecure attachment may be prone to self-blame, as a history of CSA could lead to a lack of self-efficacy, a reduced capacity for coping, and negative expectations of others that could hinder help-seeking behaviors (Liem & Boudewyn, 1999)

According to attachment theory, the role of a parent is to be attentive, caring, protect their children, and teach them self-protection strategies (Ainsworth & Bowlby, 1991). When parents are abusive or neglectful, they do not serve as a secure base. Thus, the child of such parents will not develop a functional working model of how to remain secure and sufficient; thus potentially predisposing the child to further victimization. Furthermore, lack of a supportive family system can lead to abuse survivors being more likely to experience psychological damage (Finkelhor, 1990). Insecure attachment systems can predispose an individual toward anxiety disorders and PTSD, whereas secure attachment can lead to a willingness to confront memories of trauma (Alexander, 1993).

In order to enhance the understanding of how attachment styles influence coping in the aftermath of CSA, Shapiro and Levendosky (1999) examined attachment style and coping strategies as potential mediating variables between CSA and psychological and interpersonal functioning among adolescent females ( $N = 80$ ). Through the use of structural equation modeling, results revealed that attachment style mediates the effects of CSA on coping and psychological distress. The results inferred that attachment style and coping strategies influence psychological and interpersonal functioning, mediating the direct effects of CSA. A secure attachment style was negatively related to avoidant coping strategies. Meanwhile, CSA was negatively related to secure attachment, and positively related to avoidant coping. Furthermore, attachment style had a large direct effect on psychological distress and mediated the effects of CSA by accounting for most of the indirect effects. Results revealed that 44% of the variance in psychological distress was primarily accounted for due to the role of attachment. These results inferred that

quality of attachment may determine the level of psychological distress experienced by survivors of CSA. Moreover, a majority of the influence of CSA on psychological distress was found to be attributed to the indirect effect through attachment, demonstrating its powerful mediating role. Overall, the results of this study suggest that attachment style is strongly associated with amount of psychological distress a person experiences following a traumatic event such as CSA. As such, it seems appropriate to explore the influence of attachment style on positive adjustment (i.e., the development of PTG) among survivors of CSA.

Closely related to the present study, with the exception of exploring PTG, Roche and colleagues (1999) examined the relationship between CSA, adult attachment, and adult psychological adjustment among undergraduate female students ( $N = 307$ ). Results revealed that attachment mediates the relationship between CSA and psychological adjustment; predicting both adult attachment style and psychological adjustment. Attachment was also found to predict psychological adjustment. Additionally, when the effects of CSA were controlled for, attachment style continued to predict adjustment. These results suggest that adult attachment style mediates the relationship between CSA and psychological adjustment. Additionally, women with a history of CSA developed a less secure attachment than women without such a history, indicating that adult attachment style is influenced by having a history of CSA. Sexual abuse has been found to be strongly associated with adult attachment style. Therefore, the role of attachment in adjustment is particularly important for survivors of CSA. Although the results of this Roch et al.'s (1999) study provided important information about the relationship between

CSA, attachment, and psychological functioning, PTG was not explored. The present study enhances the literature by exploring the relationship between CSA, attachment, and PTG.

Adding to the literature surrounding CSA, subsequent trauma, and psychological adjustment, Twaite and Rodriguez-Srednicki (2004) surveyed witnesses to the attack on the World Trade Center, some of whom also had a history of child physical abuse and/or CSA ( $N = 284$ ). Results revealed that individuals who reported histories of CSA were found to report more serious symptoms of PTSD compared to individuals who witnessed a live terrorist attack. Additionally, the presence of secure attachments and dissociative symptoms were found to be significantly related to both CSA and child physical abuse. Furthermore, adult attachment was found to mediate the relationship between childhood abuse and severity of PTSD. These results are consistent with those of previous studies suggesting that individuals who experience child abuse are more likely to develop symptoms of PTSD in the aftermath of a traumatic event experienced in adulthood (Alexander 1993; Briere, 1997; Elliot & Brier, 1995; Murphy et al., 1988; Runtz, 1991). The results support the belief that CSA impairs one's ability to form secure adult attachments (Browne & Finkelhor, 1986; Finkelhor & Browne, 1985) and are consistent with other research findings which indicate that childhood abuse may result in the implementation of behavioral patterns involving defensive dissociation that remain through adulthood (Evans & Sullivan, 1995; Everill, Waller, & Macdonald, 1995). Given these results regarding attachment style as a mediating factor in the relationship between childhood abuse and PTSD and other research that is inconclusive about the relationship

between PTSD and PTG (e.g., Alisic et al., 2008; Salter & Stallard, 2004; Tang, 2007), more research is needed to better understand these relationships. Furthermore, given that attachment style has been shown to influence psychological adjustment following traumatic events, it was appropriate for the researcher in the present study to explore the relationship between CSA (possibly resulting in PTSD), attachment style, and the experience of PTG.

Providing further support for the relationship between CSA, attachment, and psychological functioning, Aspelmeier and colleagues (2007) tested a model which linked attachment, CSA, and adult psychological functioning, assessing the degree to which attachment security moderated the relationship between a history of CSA and trauma-related symptoms among college females ( $N = 324$ ). Results revealed that a history of CSA was related to higher levels of trauma-related symptoms and lower levels of attachment security in close-adult, parent-child, and peer relations. Additionally, attachment security was found to be steadily linked with trauma related symptoms. Based on these results, it was inferred that attachment security partially protects against negative outcomes of CSA. Additional results revealed that lower levels of trauma related symptomology were linked with higher levels of attachment security in close-adult, peer, and parental relationships. From these results, it was inferred that highly negative interpersonal interactions (e.g., alienation from parents and peers) were a strong predictor of trauma-related symptoms. Furthermore, reports from individuals with a history of CSA demonstrated a greater relationship between peer attachment and trauma symptomology than those of individuals without such a history. Conversely, results from individuals



with a history of CSA revealed secure attachment to parents was moderately associated with lower trauma-related symptoms. Aspelmeier and colleagues' results provided valuable information about the relationship between CSA, attachment, and psychological functioning; however, these researchers did not explore PTG. As such, the present study was conducted to explore the relationship between CSA, attachment style, and the experience of PTG among adults with a history of CSA.

Building upon existing research regarding the relationship between CSA, attachment, and experiences of distress, Pierrehumbert and colleagues, (2009) examined the influence of attachment on stress levels among women with histories of CSA ( $N = 27$ ) and those without such a history ( $N = 17$ ). Results revealed that women with a history of CSA experienced higher levels of perceived stress than did those without such a history. Additionally, a high prevalence of unresolved attachment was evident among women with a history of CSA (63%). Further research by Dimitrova and colleagues (2010) studied the effects of interpersonal relationships on the psychological well-being among women ( $N = 28$ ) who had experienced episodes of CSA and a control group of women without a history of CSA ( $N = 16$ ). The closeness dimension of attachment (being comfortable with close relationships) was found to mediate the severity of CSA effects on survivors' psychological functioning. Results revealed that higher scores of closeness, were related to better psychological adjustment. The results of these studies provide further support for the influence of attachment style on psychological functioning following adverse experiences. As such, these results provide additional support for the

exploration of the influence of attachment style on positive psychological adjustment experienced as PTG.

Adding further support for the influence of attachment style on psychological adjustment following a traumatic event, Cantón-Cortés and colleagues (2015) examined the role of attachment style by considering possible interactive effects with the type of abuse, the relationship with the perpetrator, and the continuity of abuse among young adult survivors of CSA ( $N = 168$ ). Cantón-Cortés and colleagues performed three hierarchical multiple regression analyses to explore the relationship between attachment style and depression. Results indicated that 27% of the variance in depressive symptomology was accounted for when the interaction of the type of abuse with attachment style was added as a predictor; an interaction between type of abuse with avoidant attachment accounted for this result ( $\beta = -0.13, p < .05$ ). Additionally, an interaction effect of the relationship with the perpetrator and attachment style was found to be statistically significant, accounting for 29% of the variance in depression score; anxious attachment style ( $\beta = -0.19, p < .001$ ) having a statistically significant interaction with the relationship variable. Furthermore, there was a statistically significant effect of the interaction between continuity of abuse and anxious attachment style ( $\beta = -0.21, p < .001$ ), accounting for 30% of the variance in depression score. Results indicating that a secure attachment style was associated with lower scores on depression, whereas an anxious attachment style was associated with higher scores of depression were consistent with results found in previous studies (Dimitrova et al., 2010; Mikulincer & Florian, 2004). Additionally, the results indicating that anxious attachment style was related to a

higher risk of negative psychological outcomes were consistent with the findings of Lutz-Zois and colleagues (2011) and Reese-Weber (2011). Overall, Cantón-Cortés and colleagues found that attachment style was related to psychological adjustment among survivors of CSA. Given the results of Cantón-Cortés and colleagues' (2015) study and other research on attachment styles and their influence on emotional regulation and coping in the aftermath of trauma, Cryder and colleagues (2006) suggested that people with secure attachment qualities could be expected to be more likely to be able to experience PTG as opposed to people with anxious or avoidant attachment qualities. Thus, it seemed appropriate to explore the influence of attachment style on the experience of PTG among adult survivors of CSA in the present study.

#### Post Traumatic Growth (PTG) and Child Sexual Abuse (CSA)

The relationship between CSA and PTG is presented in this section. A thorough review of the literature surrounding these constructs is discussed as are the limitations of each study reviewed. As noted, the research regarding PTG among survivors of CSA is scant. Although limited, the existing literature regarding PTG among survivors of CSA provided valuable evidence for understanding the relationship between the two constructs (e.g., Easton et al., 2013; Lev-Wiesel et al., 2005; Shakespeare-Finch & De Dassel, 2009; Ullman, 2014; Walker-Williams et al., 2013; Woodward & Joseph, 2003).

In an effort to better understand the experience of PTG, Woodward and Joseph (2003) explored themes of PTG among personal accounts of early childhood physical, emotional, or sexual abuse. Three thematic domains of positive change were: (a) inner drive toward growth, (b) vehicles of change, and (c) psychological changes. The inner

drive toward growth was identified as participants reported a will to live as well as a belief or faith in themselves that they would survive. Additionally, the vehicles of change refer to personal experiences of awakening of responsibility, validation and acceptance, love and nurturing, liberation and freedom, mastery and control, and belonging and connecting which were identified by participants as influencing areas of positive change and personal growth. These experiences of awakening, etc. came after reflection upon their experiences. Finally, psychological changes refer to the increased insight and understanding, recognition of personal changes, and the processing experiences brought about by vehicles of change. Increased insight and self-awareness was found to be a key factor that led to positive changes of the self among participants. Although, Woodward and Joseph's work provided valuable information about the experience of PTG and the importance of an increased insight and self-awareness, it did not account for the influence of social factors, such as attachment. As such, the researcher in the present study sought to add to the literature and enhance the understanding of how PTG is experienced by exploring the influence of attachment style on PTG.

Further expanding the research regarding PTG among survivors of CSA, Lev-Wiesel and colleagues (2005), examined the extent of PTSD symptomology and PTG among female survivors of CSA ( $N = 93$ ) in relation to the identity of the perpetrator (i.e., family member or stranger). Results revealed that levels of PTSD and PTG were both higher among survivors who were abused by a family member compared to those who were abused by a stranger. Additionally, levels of PTSD were found to mediate the identity of the perpetrator effect on PTG. Thus, the findings of the study (Lev-Wiesel et

al., 2005) revealed that PTSD and PTG coexist. Given that these results differed from those of other researchers regarding the relationship between PTSD and PTG (e.g., Salter and Stallard, 2004), showing inconsistency within the literature, further research is needed to explore this relationship. As such, this study was conducted to further explore the relationship between PTSD and PTG.

Building upon existing research regarding CSA and PTG, Shakespeare-Finch and De Dassel (2009), explored PTG and its relationship with negative posttraumatic outcomes among adolescent and adult female survivors of CSA ( $N = 40$ ) through a mixed method research design. The researchers looked at the subscales of the *Impact of Event Scale-Revised* (IES-R) and the *Posttraumatic Growth Inventory* (PTGI). Results showed negative correlation between the avoidance subscale of the IES-R and positive changes in relationships with others. The authors suggested that these findings may be the result of avoidance in the early stages of coping with CSA, inferring that those who continue to use avoidance as a coping strategy are less likely to experience positive changes in interpersonal relationships. The overall findings of this study provided confirmation that it is possible for survivors of CSA to experience PTG. Furthermore, the results indicating the effects of avoidance coping demonstrate support for this study to explore attachment styles, as avoidance is indicative of insecure attachment.

Adding further support for the present research, Shakespeare-Finch and De Dassel (2009) suggested that it is wrong to sum the IES-R when exploring experiences of CSA due to the varying directions of subscale pattern correlations. As such, this study explored subscale scores separately. Additionally, results from the Shakespeare-Finch and De

Dassel study showed that participants evidenced similar amounts of PTG whether they were children or adolescents at the time of the trauma. Participants who experienced trauma during the time when their assumptive world was being established, and who still experience significant levels of distress, have been able to experience PTG along the same dimensions as others who were more cognitively developed at the time of their abuse. This study was, therefore, conducted to explore experiences of PTG among people with a history of CSA that occurred during any point in childhood. Furthermore, the results of the Shakespeare-Finch and De Dassel study also showed that a majority of participants (95%) with a history of CSA experienced clinically significant symptoms in excess of the clinical cutoff for PTSD identified (Creamer et al., 2003). These results were comparable to previous findings among adults who had a history of CSA and had also been exposed to the terrorist attack on the World Trade Center (Twaite & Rodriguez-Srednicki, 2004). As noted, the research findings have been inconclusive about the relationship between PTSD and PTG. Therefore, this research was intended to expand the research by further exploring this relationship.

In another study, exploring the relationship between having a history of CSA and experiencing PTG, Easton and colleagues (2013) examined factors related to PTG among male survivors of CSA ( $N = 487$ ). Results revealed that men, who had an increased understanding of their experience with CSA, reported more growth. In terms of having an increased understanding of the abuse, participants revealed being able to place blame for the abuse on the perpetrator, understood their own as well as caregiver reactions, and understood emotional and behavioral responses to abuse. These results are consistent

with previous research findings where attempts to understand that traumatic events were related to growth (Helgeson, Reynolds, & Tomiche, 2006; Linley & Joseph, 2004; Stockton et al., 2011). Additionally, these results add further support for the need to explore attachment styles on PTG, as the caregiver's response to the abuse and the survivor's ability to emotionally regulate following abuse is indicative of attachment style.

Expanding PTG research further among survivors of CSA, Walker-Williams and colleagues (2013) conducted a qualitative study to investigate coping behaviors in relation to PTG among women with a history of CSA ( $N = 10$ ) and its long-term effects on their psychological well-being in adulthood. The researchers found the following themes: (a) the importance of positive coping behavior, (b) evolving alternative life narratives, and (c) development and utilization of inner strengths. Positive coping behaviors were identified as psycho-social spiritual resources, whereas spirituality was identified as the foundation for rebuilding their lives and included a renewed relationship with God. In terms of evolving alternative life narratives, participants reported that a conscious choice was made to rebuild their lives, and actively recognized how they have grown in the aftermath of abuse. Finally, the development and utilization of inner strengths involved participants' redefining themselves; no longer being seen as victims, but rather survivors, and even victors in control of their own process of renewal. Through this process, participants reported gaining self-awareness, identifying new strengths, and making meaning of their experiences. Ultimately, positive changes among participants were actively constructed by these survivors. Based on the results of this study, the

authors suggested that therapeutic interventions among abuse survivors should include attention to cognitive restructuring and the role of spirituality to help enhance the possibility of posttraumatic growth. These results provided additional support for the researcher to explore attachment style as an influential factor on PTG, as coping behaviors, life narratives, and perceptions of self are all related to attachment style.

Ullman (2014) examined how demographic variables (e.g., age, race, education level), CSA, assault-related factors, and post-assault responses predict PTG in a diverse sample ( $N = 1863$ ) of female adult sexual assault victims. Results revealed that post-assault factors (i.e., greater levels of maladaptive coping, characterological self-blame, negative social reactions from others, and PTSD symptoms) were all related to less PTG. On the other hand, positive social reactions from others, perceived control over recovery, adaptive individual coping, and disrupted core beliefs were all related to greater PTG. Given the heterogeneity of sexual assault victims and variability in recovery outcomes, trajectories of recovery including PTSD and PTG need to be studied further in order to gain a better understanding of resilience and recovery among people with a history of CSA (Bonanno & Mancini, 2012). Social responses to CSA from family, friends, and partners, experienced by the victim have been found to be influential to the healing process of people with a history of CSA (e.g., Shakespeare-Finch & De Dassel, 2009). Ullman (2014) suggested that clinicians facilitate modifiable social psychological factors when treating survivors to help increase the likelihood of their experiencing positive outcomes such as PTG. Additionally, Ullman's (2014) findings provide support for the need to explore attachment relationships among people with a history of CSA, as



attachment style is a form of social support and is influential to the healing process.

Furthermore, these results suggest that further research is needed to better understand the relationship between PTSD and PTG. Thus, this study was conducted to investigate the relationship between CSA (possibly resulting in PTSD), attachment, and PTG.

Overall, the research regarding CSA and PTG has provided valuable insight into the relationship between the two constructs. However, it is unclear if PTSD, resulting from CSA, co-exists with PTG. Further research regarding these constructs provides increased insight into the relationship. There is much to learn regarding potential mediating factors, such as attachment style, on the relationship between CSA and PTG. In the next section, the relationship between PTG and attachment is presented.

#### Posttraumatic Growth (PTG) and Attachment

This section presents research regarding the relationship between PTG and attachment. According to attachment theory, social relationships are profoundly affected by one's favorable view of others (Ainsworth & Bowlby, 1991). People who view others favorably are more likely to seek future relationships, whereas people with negative views of others are less likely to do so. Such views of others are developed early in life and are reinforced through numerous self-fulfilling interactions. Changing such views of others requires significant support, such as receiving support when severely needed (e.g., positive social reactions from others when disclosing CSA). Conversely, failure to receive such support (e.g., negative social reactions from others when disclosing CSA), will only further confirm the person's negative views of others. Posttraumatic growth has been explored in relation to attachment style among survivors of various types of trauma

(Arikan & Karanci, 2012; Salo et al., 2005; Schmidt et al., 2012) suggesting that attachment style serves as a moderator between trauma and PTG among trauma survivors.

Although the cause of PTG is unknown, it is believed that the presence of PTG is a possible result of the cognitive effort to redefine beliefs shattered by trauma and to rebuild one's assumptions about oneself, others, and the world (Calhoun & Tedeschi, 2006; Janoff-Bulman, 1992). In the process of rebuilding one's assumptive world, people reexamine many aspects of their lives and might recognize growth in areas like their personal strength, relationships with others, appreciation of life, spirituality, and new possibilities (Tedeschi & Calhoun, 1996). A conceptual model of PTG, which includes social, psychological, and cognitive factors to describe the process of PTG has been empirically supported. However, McElheran and colleagues (2012) have proposed that the model is insufficient and should include considerations for attachment style, gender, and time so as to better understand PTG among survivors of CSA.

As noted, when exposed to trauma, children's belief systems and psychological well-being are thought to meaningfully interact with children's response to the event and how they make sense of the event once it has passed (Kilmer, 2006). These variables are influenced by the attachment system children have developed with primary caregivers (Mercer, 2006). It can be reasonably assumed that securely attached children would be better able to expect and access appropriate social support post-trauma, which research has shown to be an important factor of PTG (Cryder et al., 2006; Milam, Ritt-Olson, Tan, Unger, & Nezami et al., 2005). On the other hand, avoidant and ambivalently/anxiously

attached children would be likely to question the reliability of caregiver support, adding even further distress to the aftermath of a traumatic event. Similarly, attachment dynamics may also predict whether parents would be able to appropriately respond to children following traumatic events. Therefore, attachment systems between children and caregivers should represent a key feature in the understanding of posttraumatic growth, and future research should incorporate variables of attachment style when examining the model of PTG among children and adolescents.

Exploring the relationship between attachment and PTG, Salo and colleagues (2005) examined relationships between exposure to torture and ill-treatment, PTG, and negative emotions as well as the role of adult attachment in moderating the association between exposure and positive growth among Palestinian men imprisoned in a political context ( $N = 275$ ). Results revealed that a high level of torture and ill-treatment was linked to a low level of PTG and a high level of negative emotions. Adult attachment style was found to serve as a moderator in this relationship. Results for individuals with secure attachment revealed that exposure to torture and ill-treatment was linked with a high level of PTG. However, results for individuals with insecure-avoidant attachment revealed that exposure was linked to a relatively higher level of negative emotions. Overall, results enabled the inference that men with secure attachment reported more posttraumatic growth, whereas insecure attachment was associated with negative emotions.

In order to expand upon the research related to attachment and PTG, Schmidt and colleagues (2012) examined attachment style, coping strategies, social support, and PTG

among cancer survivors ( $N = 54$ ). Results revealed that secure attachment was significantly related to active coping, positive reframing, and religion, which were all linked to PTG. Additionally, insecure attachment and social support variables were not linked to PTG. Furthermore, the results infer that positive reframing and religion as coping strategies may mediate the relationship between secure attachment and posttraumatic growth. These results provide support for the relationships between attachment and PTG; however, this research only accounts for the experiences of people who have survived cancer. Therefore, further research is needed to explore the relationship between attachment and PTG among survivors of other types of traumatic events such as CSA.

Further investigating the relationship between attachment and PTG, Arikan and Karanci, (2012) investigated the role of attachment and coping as facilitators of PTG among Turkish university students who experienced traumatic life events ( $N = 321$ ). Results revealed that when the impact of the traumatic event was experienced as helplessness and horror, coping styles were significant predictors of PTG. These results are consistent with the theory of PTG (Tedeschi & Calhoun, 1996), as the theory proposes that severe trauma leads to a shaking of basic assumptions about others and the world, which contributes to traumatic stress and negatively influences posttraumatic growth.

Although the research reflects the relationships between (a) CSA and attachment, (b) PTG and CSA, and (c) PTG and attachment, there has been limited research that has explored these three constructs together. In the following section, the relationship

between these three constructs is discussed, and empirical support for the relationship is presented.

Posttraumatic Growth (PTG), Child Sexual Abuse (CSA) PTG, and Attachment

Traumatic events such as CSA can cause extreme stress. In the aftermath of traumatic events, individuals are confronted with the challenge of coping with a new, unfamiliar, and unexpected situation. Personal attachment style can influence individuals' view of self and others, cognitive flexibility in incorporating traumatic memories, and coping strategies. A secure attachment style has been found to assist individuals in the successful integration of traumatic memories into pre-existing schemas, thus helping them acclimate to the new and unfamiliar situation. Such successful integration and accommodation allows trauma survivors to experience PTG. Although the research regarding attachment styles and PTG has been limited, the existing studies provide valuable insight into the relationship.

Research by Frazier and colleagues (2004), which explored attachment style, sexual assault, and positive change, suggests that having a social support network, reliance on religious faith, and employing more approach-oriented coping strategies (associated with a secure attachment style) results in positive change among survivors of sexual assault. Furthermore, Frazier, Tashiro, Berman, Steger & Long (2004) discovered that people with a history of CSA who utilize approach-oriented coping strategies, characterized by expression of emotion and cognitive restructuring (a key component in PTG), experienced more positive change. Conversely, individuals who experienced self-blame and utilized avoidant coping strategies experienced negative life changes post-

assault. Such coping strategies seem to be associated with an individual's attachment style and, therefore, merit further investigation into the relationship between attachment style and PTG outcomes among survivors of CSA.

The only study similar to the present study in regard to exploring sexual abuse, attachment, and PTG was conducted by Gwynn (2008). Gwynn examined adult attachment and PTG among adult female survivors of sexual assault ( $N = 151$ ). Gwynn investigated participants' adult romantic relationship attachment, parent-child attachment, and experiences with sexual assault after the age of 14. Results revealed that neither adult romantic attachment nor parent-child attachment variables served as mediators for the effects of PTG in survivors of sexual assault. However, results did indicate that objective threat appraisal and perceived threat appraisal were significantly correlated to PTG. Furthermore, perceived threat appraisal served as a better predictor for PTG. Although these results indicated that attachment style may not serve as a mediator between sexual assault and PTG, the study had its limitations which need to be acknowledged and used to guide further research. Although Gwynn's study provided new information to the field regarding attachment style and PTG among sexual assault survivors, it did not account for CSA that occurs prior to the age of 14. Furthermore, the study did not include survivors over the age of 25. Participants were primarily Caucasian, hindering the generalizability of results to minority groups. Moreover, similar to other studies exploring the relationship between CSA, attachment, and PTG, Gwynn's study only included female survivors. For these reasons, further research was viewed as potentially useful in better understanding the relationship between these constructs and further

informing the counseling field of the influence of attachment style on the experience of PTG among survivors of CSA.

In order to break new ground in the field of counseling research, the present study was conducted to build upon previous research exploring the relationship between CSA, attachment, and PTG. The researcher addressed limitations of previous research and examined these constructs among a more diverse sample (i.e., include participants who have experienced CSA prior to the age of 14, include male and female survivors, and not be restricted to an age range for participation other than being over the age of 18).

### Summary

Chapter 2 has provided a review of the literature of the constructs of interest that provide the theoretical framework for this study on the perceived impact of CSA, attachment style, and PTG among adult survivors of CSA. Empirical studies of each construct were reviewed to foster support for this study, and studies exploring the interactions between constructs were described.

## CHAPTER 3 RESEARCH METHODOLOGY

### Introduction

The purpose of this study was to investigate the influence of variables on the process of posttraumatic growth (PTG). Specifically, this study was conducted to test the influence of personal attachment qualities as measured by the *Experiences in Close Relationships-Short Form* ([ECR-S] Wei et al., 2007) and the impact of childhood sexual abuse (as measured by the *Impact of Event Scale-Revised* ([IES-R] Weiss & Marmar, 1996), on the experience of posttraumatic growth (as measured by the *Posttraumatic Growth Inventory* ([PTGI] Tedeschi & Calhoun, 1996) in adults with a history of childhood sexual abuse. The model carries a directional hypothesis that adult survivors of childhood sexual abuse who score low in attachment anxiety and avoidance (i.e., inferring secure adult attachment) on the ECR-S (Wei et al., 2007) would be more likely to experience PTG than those who score high in attachment anxiety and avoidance. In addition, attachment style was examined as a mediating variable between perceived impact of childhood sexual abuse and the presence of PTG. It was hypothesized that a secure attachment style would serve as a mediator between perceived impact of abuse and the experience of PTG. In other words, having a secure attachment style would result in an increase in PTG. The influence of demographic characteristics (e.g., age, gender, race, time since CSA, history of receiving psychological services, primary caregiver support, relationship status, identifying as spiritual or religious), which is explained in a subsequent section, was also explored to identify their influence on adult's experiences of posttraumatic growth. Additionally, the influence of a history of childhood sexual abuse



as measured by the *Impact of Event Scale-revised* ([IES-R] Weiss & Maramar, 1996) was explored to identify how impactful, and potentially traumatic adults view their experiences of childhood sexual abuse and how often survivors of childhood sexual abuse meet diagnostic criteria for PTSD following their experience.

Chapter 3 presents the research design, method, and procedures for the research investigation. In addition, detailed rationales for the instruments chosen, potential threats to internal and external validity, and descriptions of sample recruitment procedures are included. The chapter is divided into three primary sections: (a) research questions including research hypotheses; (b) research methodology which includes research design, sampling, population, instruments, and data collection and analysis procedures; and (c) potential limitations and challenges associated with the methodology presented.

#### Primary Research Question

This study aimed to add to the needed research surrounding PTG in survivors of childhood sexual abuse while also aiming to fill the gap on attachment influences on PTG for survivors of childhood sexual abuse.

The primary research question of this study was:

Do adults' attachment styles, (as measured by the *Experiences in Close Relationships – Short Form* ([ECR-S] Wei et al., 2007), serve as a mediator between perceived impact of CSA (as measured by the *Impact of Event Scale-Revised* ([IES-R] Weiss & Maramar, 1996), and their experience of posttraumatic growth (as measured by the *Posttraumatic Growth Inventory* ([PTGI] Tedeschi & Calhoun, 1996)?

### Research Hypothesis

The influence of adults' perceived impact of their experience with childhood sexual abuse as measured by the IES-R (Weiss & Marmar, 1996) on their experience of PTG as measured by the PTGI (Tedeschi & Calhoun, 1996) is mediated by their attachment style as measured by the ECR-S (Wei et al., 2007). Specifically, the investigation tested the hypothesized directional relationship that adults' scoring in the insecure attachment range (i.e., anxious or avoidant) with greater levels of posttraumatic stress (i.e., meeting criteria for PTSD) will score lower in levels of posttraumatic growth. The hypothesized measurement model path diagrams for each latent factor shown in Figure 5 can be seen in Figures 6, 7, and 8. The hypothesized theoretical model (structural model) is presented in Figure 9.

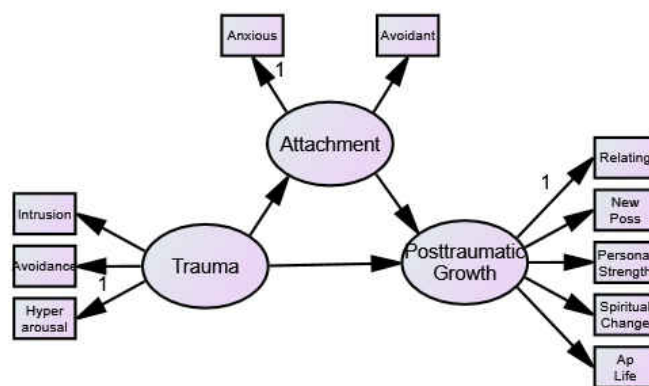


Figure 5. Hypothesized Path Model

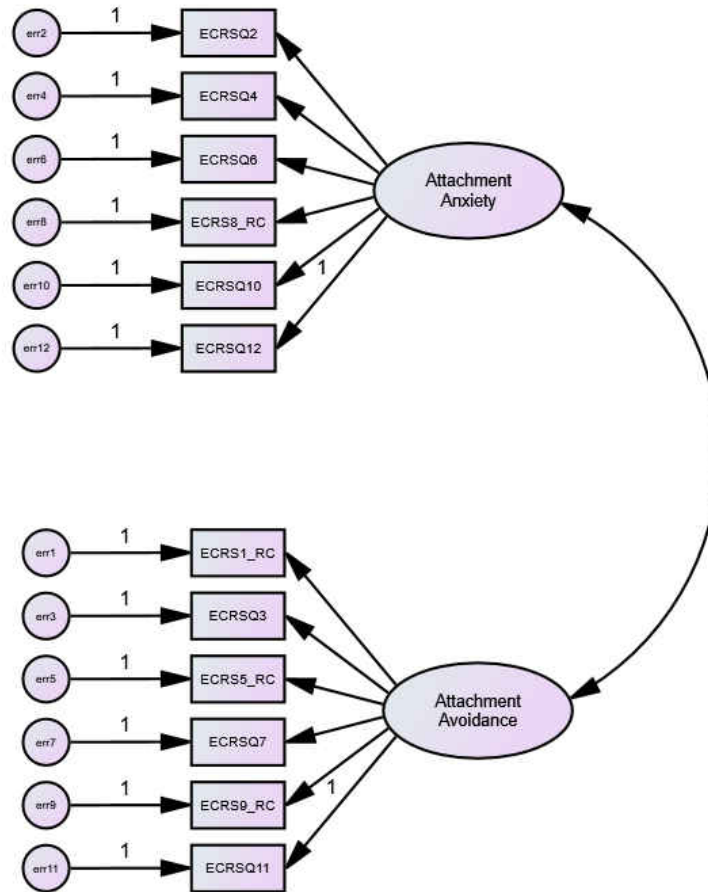


Figure 6. Hypothesized Attachment Style (ECR-S) Measurement Model

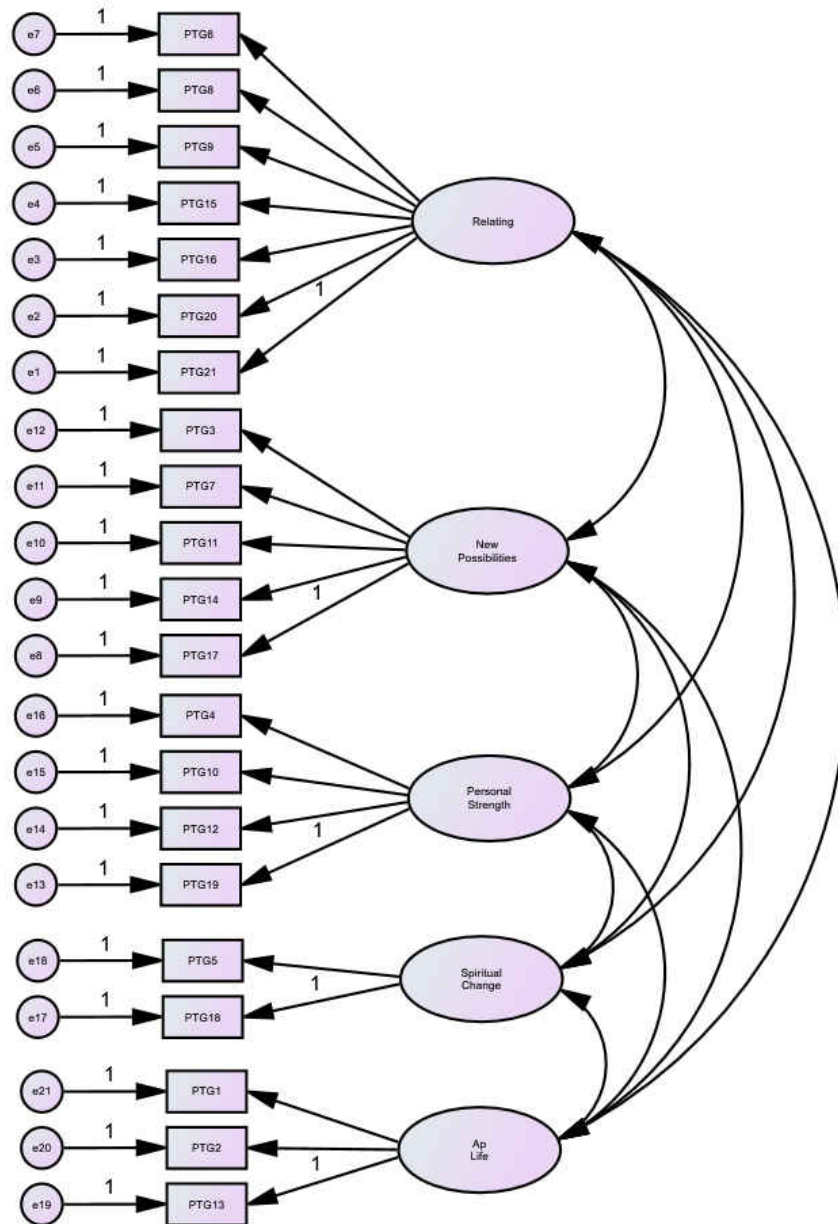


Figure 7. Hypothesized Posttraumatic Growth (PTGI) Measurement Model

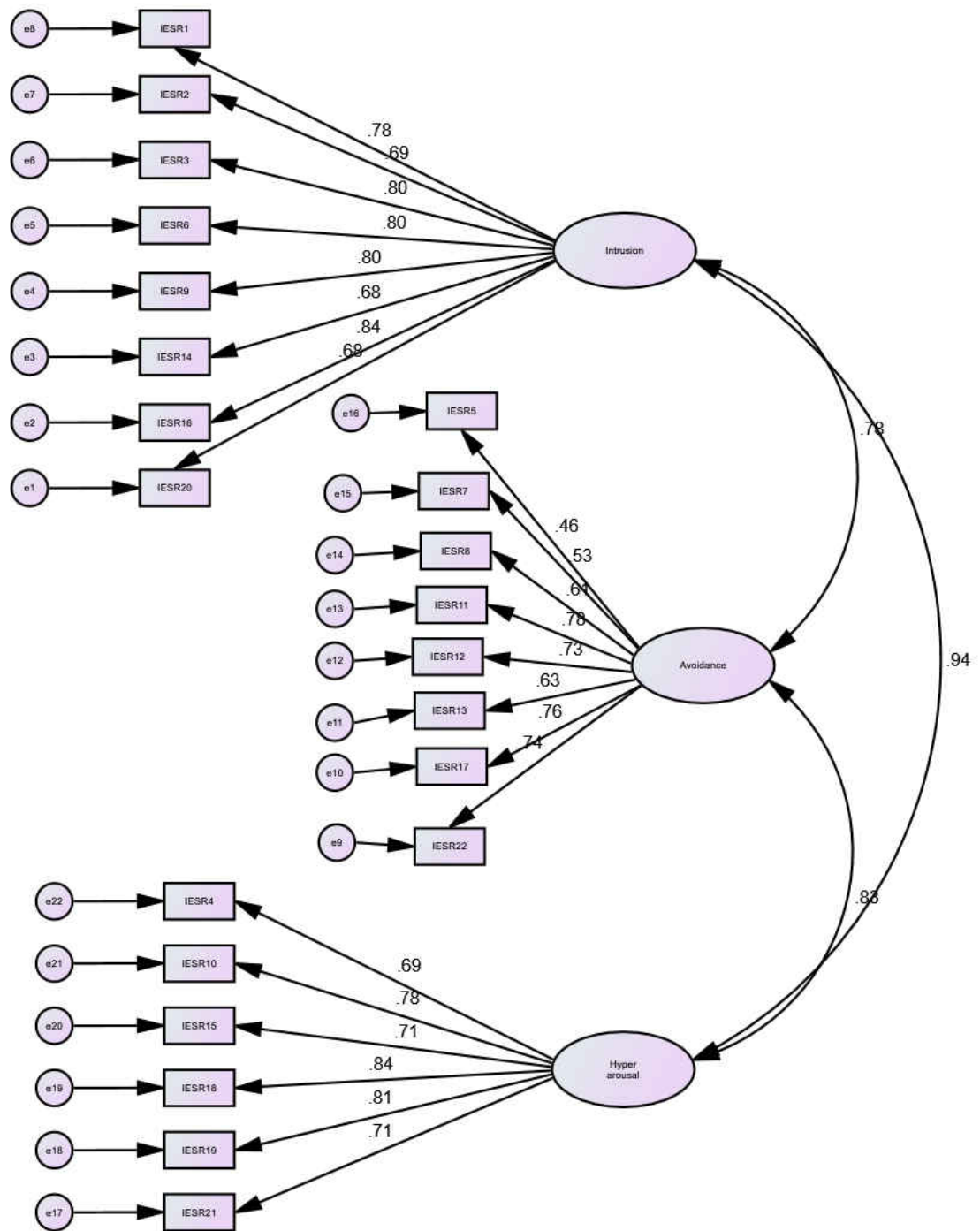


Figure 8. Hypothesized Trauma (IES-R) Measurement Model

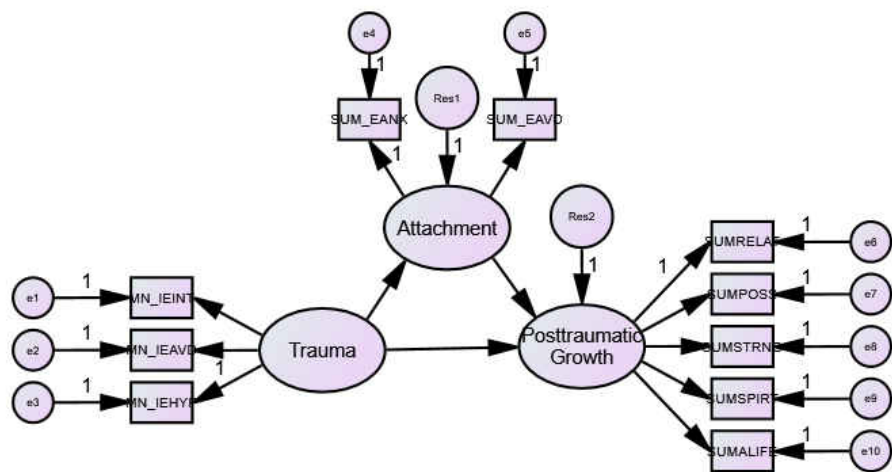


Figure 9. Hypothesized Theoretical Model (Structural Model)

### Exploratory Research Questions

In addition to the primary research question, the researcher sought to answer the following exploratory research questions:

1. Is there a statistically significant difference in attachment styles of adult survivors of CSA as measured by the ECR-S (Wei et al., 2007) and their reported demographic variables (i.e., gender, age, race, ethnicity, relationship status, primary caregiver support, time since event, identification as spiritual/religious, and history of receiving psychological services)?
2. Is there a statistically significant difference in experiences of PTG among adult survivors of CSA as measured by the PTGI (Tedeschi & Calhoun, 1996), and their reported demographic variables (i.e., gender, age, race, ethnicity, relationship status, primary caregiver support, time since event, identification as spiritual/religious, and history of receiving psychological services)?
3. Is there a statistically significant difference in adults' perceived impact of their experience with CSA as measured by the IES-R (Weiss & Marmar, 1996) and their reported demographic variables (i.e., gender, age, race, ethnicity, relationship status, primary caregiver support, time since event, identification as spiritual/religious, and history of receiving psychological services)?



## Hypotheses

A thorough review of the literature surrounding the theoretical constructs (posttraumatic growth, trauma, and attachment) assisted in the development of directional hypotheses. These hypotheses are as follows:

1. *Null Hypothesis:* There is no statistically significant difference in attachment styles of adult survivors of CSA as measured by the ECR-S (Wei et al., 2007) and their reported demographic variables (i.e., gender, age, ethnicity, time since event, and history of receiving psychological services).

*Hypothesis:* There is a statistically significant difference in attachment styles of adult survivors of CSA as measured by the ECR-S (Wei, et al., 2007), and their reported demographic variables (i.e., gender, age, race, ethnicity, relationship status, primary caregiver support, time since event, identification as spiritual/religious, and history of receiving psychological services).

2. *Null Hypothesis:* There is no statistically significant difference in experiences of PTG among adult survivors of CSA (as measured by the PTGI (Tedeschi & Calhoun, 1996) and their reported demographic variables (i.e., gender, age, race, ethnicity, relationship status, primary caregiver support, time since event, identification as spiritual/religious, and history of receiving psychological services).

*Hypothesis:* There is a statistically significant difference in experiences of PTG among adult survivors of CSA (as measured by the PTGI; Tedeschi & Calhoun, 1996) and their reported demographic variables (i.e., gender, age,

race, ethnicity, relationship status, primary caregiver support, time since event, identification as spiritual/religious, and history of receiving psychological services).

3. *Null Hypothesis:* There is no statistically significant difference in adults' perceived impact of their experience with CSA as measured by the IES-R (Weiss & Marmar, 1996) and their reported demographic variables (i.e., gender, age, race, ethnicity, relationship status, primary caregiver support, time since event, identification as spiritual/religious, and history of receiving psychological services).

*Hypothesis:* There is a statistically significant difference in an adults' perceived impact of their experience with CSA (as measure by the IES-R (Weiss & Marmar, 1996) and their reported demographic variables (i.e., gender, age, race, ethnicity, relationship status, primary caregiver support, time since event, identification as spiritual/religious, and history of receiving psychological services).

### Variables

Within the guiding research questions, independent, dependent, and mediating variables were present. For the first research question, exploring the relationship between experiences of PTG as measured by the PTGI (Tedeschi & Calhoun, 1996), and reports of CSA being traumatic, as measured by the IES-R, among adult survivors of CSA; the construct of PTG served as the dependent variable, and the perceived impact of CSA served as the independent variable. The inclusion of the variable of impact of CSA was

chosen due to the literature that cites that traumatic events produce a significant disruption in the individual's understanding of the world, and the prior worldview may become invalidated by the occurrence of tragedy (Calhoun & Tedeschi, 1999).

For the second research question, exploring the relationship between attachment styles of adult survivors of CSA as measured by the ECR-S (Wei et al., 2007), the perceived impact of CSA as measured by the IES-R, and the presence of PTG as measured by the PTGI, the construct of PTG served as the dependent variable.

Theoretically, the construct of attachment was chosen because it was likely to influence the dependent variable based on the literature (McElheran et al., 2012), and there is a need for future research exploring this construct in the context of PTG. Additionally, the inclusion of the variable of impact of childhood sexual abuse was chosen due to the literature that defines PTG as the experience of positive change after the occurrence of a highly stressful or challenging life crisis (Tedeschi & Calhoun, 2004). For this question, the independent variable of attachment represented secure, anxious, or avoidant attachment, and the independent variable of the impact of CSA measured how impactful this event was in terms of intrusion, avoidance, and hyperarousal.

For the third research question, exploring the relationship between experiences of PTG among adult survivors of CSA as measured by the PTGI (Tedeschi & Calhoun, 1996) and their reported demographic variables (e.g., gender, age, ethnicity, time since event, history of receiving psychological services, parental support, relationship status, identification as spiritual or religious); the construct of PTG served as the dependent variable. Meanwhile, demographic variables served as independent variables against the

dependent variable of PTG. The demographic variables listed were chosen to build upon existing research. Previous research has shown that spiritual or religious identification has an influence on how a person will respond to a traumatic event (Walker-Williams et al., 2013). For example, people who identify as having Buddhist and Shinto belief systems may be more likely to assume that life is unpredictable and that tragedy can occur randomly. This makes it less likely that these core beliefs would be challenged (Calhoun & Tedeschi, 2013) by unpredictable and tragic circumstances (Taku et al., 2015). Additionally, Zink, Klesges, Stevens, and Decker (2009) found that the factors that contribute to the severity of CSA are the age at first sexual abuse experience, more than one offender, degree of coercion, and the number of occurrences. Furthermore, parental influences (e.g., response to CSA, relationship with child) have been found to influence adjustment following CSA (Finkelhor, 1990; Lynskey & Fergusson, 1997).

### Research Design

The present study utilized a descriptive, correlational research design to investigate the relationship between attachment styles, perceived impact of CSA, the experience of PTG. Correlational research designs are used to determine relationships between two or more variables while also exploring if directional relationships exist in the data (Fraenkel, Wallen, & Hyun, 2011). Given that the researcher sought to explore the relationships and directionality between a dependent variable (PTG) and multiple independent variables (personal attachment qualities, perceived impact of CSA, demographic variables), a correlational research design was appropriate (Frankel et al., 2011). Relationships among variables were investigated with no manipulation of the

variables. Although correlational relationships may be indicative of association between variables, they do not establish cause and effect. Rather, correlational studies allow researchers to explore potential cause and effect relationships between specific constructs and predictive outcomes (Tabachnick & Fidell, 2013). Although correlational research designs have been commonly utilized in the field of counseling, thus adding to the literature, using more sophisticated analyses (i.e., SEM) allows researchers to gain better estimates of the relationships between variables within the causal framework (Raulin & Graziano, 1995; Tabachnick & Fidell, 2013).

#### Population and Sampling Procedures

The population of interest for this study was adult survivors of childhood sexual abuse living in the United States. Convenience sampling was used in this research study, as a specific population was being targeted. The inclusion criteria for the sample of participants were: (a) be an adult over the age of 18, (b) have a history of childhood sexual abuse, (c) reside in the United States, and (d) be able to give informed consent. Participants were recruited from an online support network (i.e., RAINN) and an online support groups (i.e., AfterSilence.org, and Stop It Now) for survivors of CSA. Adult survivors of CSA who belong to support networks were chosen because they were readily available to contact for participation in the study, and further investigation is warranted to identify the role of attachment style on the experience of posttraumatic growth among adult survivors of CSA. As choosing to join a support group may be indicative of growth, CSA survivors who belong to support networks were chosen to participate in this study as they may be likely to have experienced one of the main constructs of this study.

Additionally, to mitigate threats to external validity, and to acquire the most widely acceptable results by ensuring that the sample of CSA survivors was not narrowly defined, survivors of all ages (18 and over) were included in the sample (Frankel et al., 2012).

The online support network, Rape, Abuse & Incest National Network (RAINN) is the largest anti-sexual assault organization in the United States that serves to provide support for survivors of rape, abuse, and incest. RAINN created and operates the National Sexual Assault Hotline in partnership with more than 1,100 local sexual assault service providers across the country. Among the RAINN network is a group called the Speakers Bureau, which is a volunteer group of survivors of sexual violence who desire to share their stories. RAINN connects Speakers Bureau members with events, projects, and interview requests to educate the public about the reality of sexual violence. Members of the RAINN speaker Bureau are at all different points in the healing process. Additionally, the online support group, AfterSilence.org, provides a free and safely moderated online support group, message board, and chat room for survivors to connect with each other, share their stories, ask questions, and begin their path towards healing and recovery.

The mission of After Silence is to support, empower, validate, and educate survivors of rape, sexual abuse and all types of sexual violence by providing a safe, extensive, reliable and easy-to-read website where victims can find the answers and support they need to heal and reclaim their lives (After Silence, 2011).

In addition to providing information on recovery and peer to peer support, AfterSilence.org staff members also respond to email requests for help and provide referrals to local assistance and agencies.

In addition to inviting the 1,600 members of the RAINN Speakers Bureau, and visitors of the aftersilence.org website, the visitors of the Stop It Now! Facebook page were also invited to participate in this study. Stop it Now! is an online support organization for survivors of CSA that offers resources and support for healing and recovery. Participants were not excluded from the study based on other demographic information, such as: gender, age, ethnicity, or length of time since experiencing CSA. The sample was kept demographically broad due to the previously cited notion that CSA affects nearly all populations (CDC, 2013). Further, a diverse demographic representation was thought to be helpful in answering how demographic characteristics influence posttraumatic growth.

#### Desired Sample Size

There are over 40 million survivors of CSA in the United States (CDC, 2013). According to the National Association of Adult Survivors of Child Abuse (NAASCA, 2015), one fifth of the population will experience CSA by the time they are 18 years of age. Although, the total number of participants invited to participate as part of the sample was unknown; the known number of RAINN members causes the assumption over 1,600 participants were invited. It was important to calculate statistical power prior to beginning a quantitative study. The power is the long term probability of rejecting the null hypothesis (e.g., no difference or effect) given the sample size, effect size, and alpha

level (Balkin & Sherperis, 2011). An a priori power analysis was appropriate in order to make intentional decisions about sample size and avoid making a Type II error which occurs when a statistical test fails to reject a false null hypothesis (Balkin & Sherpis, 2011; Onwuegbuzie & Leech, 2004).

A specific method for calculating power for SEM is provided by MacCallum, Brown, and Cail (2006), where the statistical power of a SEM model “is a function of  $N$  (sample size),  $d$  (degrees of freedom),  $\varepsilon_0$  (RMSEA under  $H_0$ ), and  $\varepsilon_1$  (RMSEA under  $H_1$ ), and critical value  $\chi^2_c$  corresponding to a given  $\alpha$  (significance level)” (Lee, Cai, MacCallum, 2012, p. 191). Additionally, Schumaker and Lomax (2010) identified that most published SEM articles used between 250 and 500 subjects; however, they also noted that the greater the sample size, the more likely it is to validate the model using cross-validation. Furthermore, Raykov and Marcoulides (2006) suggested that for SEM and calculating minimal sample size, “a cautious and simplified attempt at a rule of thumb might suggest that sample size would desirably be more than 10 times the number of free model parameters” (p. 30).

To calculate a priori sample sizes for SEM, Schumaker and Lomax (2010) recommended the use of a website, [www.danielsoper.com](http://www.danielsoper.com). Using the recommended website to identify a small effect size (.1), and a high power (.8) with three latent variables and 65 observed variables at the probability level of  $p < .05$ , a minimum sample of 290 was needed for the study. Based on the literature, sample size equations, and sample size calculator, a desired sample size of 290 was sought for the purpose of this study.



## Recruitment Procedures

Convenience sampling was employed to ensure that participants are adult survivors of CSA living in the United States. Convenience sampling allowed participants to be selected based on the inclusion criteria: being an adult, having a history of CSA, and living in the United States. Participants were recruited through national online support networks for survivors of CSA (i.e., *RAINN*, *Aftersilence.org*, *Stop it Now!*). The researcher received permission from the Vice President of Communications for the Rape, Abuse, Incest, Neglect Network, the Moderators of AfterSilence.org, and the Communications Coordinator of Stop It Now to invite their members to participate in this research study. Although the researcher communicated with these organizations to obtain participants, the majority of participants came from the RAINN Network, which consisted of 1,600 members. The researcher and the Vice President of Communications for RAINN maintained regular communication throughout the study. In order to invite members of RAINN to participate in this study, the researcher was asked to send email invitations for participation to the VP who would then send the invitations to the RAINN Speakers Bureau members. Each day that the researcher sent an email invitation for participation, the VP of Communications would send a confirmation email to the researcher confirming that the email was sent to the Speakers Bureau. The researcher also maintained regular communication with the Moderators of AfterSilence.org throughout the study. The moderators of AfterSilence.org allowed the researcher to post invitations for participation on their website under the “research” link. As such, only survivors who visited the website and chose to click on the “research” link would be able to learn about

the study and choose to participate. As for the Stop It Now group, the Communications Coordinator allowed the researcher to provide invitations for participation to be posted on their Facebook page by the Communication Coordinator. Although the researcher sent invitations for participation, the Communication Coordinator failed to respond to the emails sent by researcher, and never confirmed whether such invitations were ever posted to the Facebook page. The researcher attempted to contact the Communications Coordinator on several occasions via email and phone; however, the researcher never received a response. The researcher also checked the Stop it Now Facebook page regularly to see if the invitation to participate in the study was ever posted; however, it appeared that the invitation was never posted. As such, it appears that members of the Stop It Now Facebook group never received an invitation to participate in this study. For the reasons discussed in this section, there was no way to estimate the number of available participants from AfterSilence.org or Stop It Now. Whereas, the total number of participants invited to participate as part of the sample was unknown; the known number of RAINN members causes the assumption over 1,600 participants were invited. All of the recruitment and communication emails that were sent to participants are included in Appendix A.

#### Data Collection Procedures

Prior to initiating her study, the researcher gained approval for the Institutional Review Board (IRB) at the University of Central Florida (UCF) to ensure appropriateness of the study and participant safety (Appendix B). Furthermore, the study was under the review of the researcher's dissertation committee to ensure appropriate research steps

were taken throughout the study. The researcher also gained permission from the authors of the data collection instruments for this study: (a) IES-R (Weis & Maramar, 1996; personal communication with Dr. Weis, September 22, 2015); PTGI (Tedeschi & Calhoun, 1996; personal communication with Dr. Tedeschi, September 23, 2015), and (c) the ECR-S (Wei, et al., 2007; personal communication with Dr. Vogel, October 13, 2015). Permission from the authors to use the data collection instruments also included permission to transfer the instruments into Qualtrics, an online data collection platform that offers researcher's tools to create online surveys that are secure. All instruments were combined to create an online survey on Qualtrics.

Dillman, Smyth, and Christian (2009) have suggested steps in web survey implementation which the researcher followed to increase response rate. To support sound data collection methods and response rates, Dillman, Smyth, and Christian's (2009) steps to web survey implementation (which are similar to Dillman's [2000] *Tailored Design Method*), were implemented. The researcher discussed the purpose and design of the study with the participating networks (i.e., RAINN, After Silence, and Stop it Now!) and provided an advertisement for participation in the study. The advertisement for the study included (a) an explanation of the research (i.e., informed consent) and (b) a secure link to the survey. Clicking the link to participate in the study served as agreement to the informed consent. One week after the initial posting/advertisement for the study was sent to the RAINN network, an additional advertisement to participate in the study was sent as a reminder for those who had not completed the survey. Three weeks after the initial posting (two weeks after the reminder notification) a final reminder was sent to

invite participants. Upon completion of the survey, participants received a “Thank you” for participating in the study (Appendix A).

In order to maintain anonymity for the CSA survivors participants, the *Tailored Design Method* could not be followed with all participants for several reasons: (a) for those participants recruited from Aftersilence.org and Stop It Now, individual, personalized emails could not be sent to each participant, but rather a general invitation to participate was posted on the AfterSilence.org website message board, and sent to the Communications Coordinator of Stop it Now to be posted on their Facebook page. Similarly, participants from the RAINN Network were forwarded a generic (i.e., not individual or personalized) invitation email that included a secure link to the informed consent, data collection instruments, and explanation of the incentive. To decrease measurement error, the survey link was reviewed by the dissertation committee and four of the researchers’ colleagues to ensure clarity and readability of the directions for completing the surveys (Dillman et al., 2000). Feedback from the dissertation committee and colleagues was integrated to refine the directions and demographic questionnaire to make it more user-friendly for the study participants.

Participants from the RAINN Speakers Bureau were forwarded an invitation email that included (a) the informed consent, (b) a secure link to the data collection instruments, and (c) an explanation of the incentive to participate in the study. Participants from AfterSilence.org were provided with an invitation message post on the After Silence website message board that included (a) the informed consent, (b) a secure link to the data collection instruments, and (c) explanation of the incentive to participate

in the study. The participants from Stop It Now! were forwarded an invitation Facebook post that included (a) the informed consent, (b) a secure link to the data collection instruments, and (c) an explanation of the incentive to participate in the study. Participants received an email/message post/Facebook post one week after the initial email/message post/Facebook post was sent as a reminder for those who had not completed the survey. Two weeks later (three weeks after the original email/message post/Facebook post) a final reminder was sent to these participants. A thank you message was sent immediately after the participants completed the survey. The incentive for this study was that for each survey completed, a \$1.00 donation was made to the RAINN network.

Data collection took place over the course of six weeks (e.g., January 2016-February 2016). Participation in the study was advertised as voluntary, and no names or identifying information were collected in order to ensure participant anonymity. Additionally, electronic data was stored in a double password protected computer belonging solely to the researcher. Study participants were offered the incentive of having the opportunity to contribute to the body of research that explored experiences of CSA survivors, and seeks to better inform the counseling field of best practices for treatment of survivors of CSA. Furthermore, for each completed survey, a \$1 donation was made to RAINN to support their programs and support services for survivors of sexual abuse and assault.

A potential risk to participating in this study was that participants could become triggered by the questions asked throughout the assessments and experience

psychological distress. Participants were informed, prior to completing assessments, that participation was completely voluntary, and that they could discontinue participation at any time. Furthermore, participants were provided with a list of resources for online sites that could link participants to local mental health resources (e.g., psychologytoday.com), and a 24-hour crisis hotline number; (Appendix C), to ensure that they had professional counseling support available should they experience any psychological distress while completing the assessments.

### Assessment Procedures

The online link to the study began with a request for informed consent, followed by inclusion criteria questions (a) Are you an adult over the age of 18? (b) Do you have a history of childhood sexual abuse? and (c) Do you currently reside in the United States? to ensure that only qualified participants partake in the study. If inclusion criteria was not met, the study link ended with a “Thank you for your participation.” If inclusion criteria were met, the participant was prompted to move forward with the remaining questions of the study (i.e., assessment questionnaires, and demographic questions). Completed assessments were automatically collected in Qualtrics and accessed only by the researcher to ensure protection of confidentiality and anonymity. Furthermore, no names or identifying information were included in the study report.

### Instruments

The following instruments were used to measure the constructs of the investigation: (a) *Impact of Event Scale-Revised* ([IES-R] Weis & Marmar, 1996), (b) *Experiences in Close Relationships-Short Form* ([ECR-S] Wei et al., 2007), and (c)

*Posttraumatic Growth Inventory* ([PTGI] Tedeschi & Calhoun, 1996). These instruments were chosen due to their psychometrically sound properties. In addition to the assessments used to collect data related to the dependent and independent variables explored, the researcher administered a demographic questionnaire (Appendix D). The demographic questionnaire was used to collect demographic information from participants (e.g., gender, age, ethnicity, time since event, and history of receiving psychological services) to explore relationships between demographic variables and the presence of PTG. The demographic questionnaire asked participants to place a mark next to their identified gender and ethnicity; type their age, and years since the event; and place a mark next to “yes” or “no” to report if they have ever received psychological services for their experience with CSA.

The survey of combined instruments were administered only once to each participant. Completion of all instruments, including the demographic questionnaire, were expected to take approximately 15 minutes. As measurement error for the study could occur, the researcher established safeguards for both social desirability and instrumentation.

Potential error exists when using assessments. Therefore, Dillman and colleagues (2009) have suggested that researchers include instruments that have clear instructions and are legible in order to mitigate such error. For this reason, the researcher reviewed the data collection instruments to ensure easy readability. Additionally, the demographic questionnaire was reviewed by other professionals in the counseling field to ensure face validity of the instrument. As noted, the instruments chosen for this study have sound

psychometric properties and have been commonly used in within the counseling field. The following section provides information regarding each instrument that was used in the study.

#### Posttraumatic Growth Inventory (PTGI)

The *Posttraumatic Growth Inventory* ([PTGI] Tedeschi & Calhoun, 1996) is aimed at measuring growth and increased functionality following a traumatic event. The PTGI is a self-reporting questionnaire that has 21-items and utilizes a 6-point Likert-type response ranging from 0-5 (“I did not experience this change as a result of my crisis” to “I experienced this change to a very great degree as a result of my crisis”). The PTGI has five subscales based on each of the five identified factors contributing to PTG: (a) relating to others, (b) new possibilities, (c) personal strength, (d) spiritual change, and (e) appreciation for life. The relating to others subscale has seven items; the new possibilities subscale has five items, the personal strength subscale has four items, the spiritual change subscale has two items, and the appreciation for life subscale has three items. The PTGI produces a total score as well as a score for each of the five subscales. Scores on the PTGI can potentially range from 0-105. The American Psychological Association (APA) reports that average scores on each of the subscales of the PTGI are as follows: Relating to Others (23), New Possibilities (18), Personal Strength (15), Spiritual Change (5), Appreciation for Life (11) (APA, 2013). In reference to each item, a response selection of 3 indicates moderate change. As such, a total score of 63 or above for all 21 items indicates a moderate amount of personal change experienced.



The PTGI is commonly used by researchers, and has been utilized in studies exploring the experiences of survivors of war, cancer, terrorist attacks, car accidents, and sexual assault. It is displayed in Appendix F.

### The Five Subscales

The PTGI produces scores for each of the five subscales based on the five identified factors that contribute to posttraumatic growth such as relating to others, new life possibilities, personal strength, spiritual change, and appreciation for life (Tedeschi & Calhoun, 1996). The first subscale, *relating to others*, refers to the increase in meaningful interpersonal relationships. In regard to the *new possibilities* factor, a realization of what is possible for the individual's life is represented. The factor of *personal strength* represents the recognition of personal strength as a result of experiencing one's own ability to deal with trauma. As for *spiritual change*, this factor is representative of a new, deepened, or renewed spiritual relationship as a result of the trauma. Finally, the factor of *appreciation for life* is representative of new gratitude for things previously taken for granted.

### Psychometric Properties

The PTGI demonstrates strong psychometric properties, with a high internal consistency of .90. Additionally, internal consistencies for the five scales are as follow: relating to others ( $\alpha = .85$ ), new possibilities ( $\alpha = .84$ ), personal strength ( $\alpha = .72$ ), spiritual change ( $\alpha = .85$ ), and appreciation for life ( $\alpha = .67$ ). The instrument also has adequate reliability with ( $r = .70$ ). Reliability was obtained through test-retest procedures, ensuring that the instrument is consistent.

Based on the literature suggesting that people exposed to traumatic events may perceive at least some good emerging from their struggle (e.g., Affleck et al., 1987; Silver et al., 1983; Kahana, 1992) at least three broad categories of benefits had been identified: changes in self-perception, changes in interpersonal relationships, and a changed philosophy of life (Tedeschi & Calhoun, 1996). In order to develop the PTGI, a scale measuring perceived benefits, Tedeschi and Calhoun (1996) created items that reflected the type of benefits described in the literature. Based on a thorough review of the literature regarding perceived benefits from traumatic events, 34 items were generated that referred to positive changes in the areas of perceived changes in self, of a changed sense of relationship with others, and of a changed philosophy of life. To control for acquiescence in responding, items were not worded in a negative direction. The original 34 item scale was administered to undergraduate students ( $N = 604$ ) who had reported that they had experienced a significant negative event in their life.

Data analyses revealed that the 34 items produced a very high internal consistency ( $\alpha = .94$ ). As such, the researchers performed a principal components analysis followed by a varimax rotation. The analyses manufactured six factors with eigenvalues greater than one. Five of these factors were easily interpretable; therefore, the 21 items that loaded on these factors were retained as having utility. These items accounted for 55% of the common variance and loaded greater than .5 on one of the five factors, and did not load .4 or greater on any other factor. Using the selected 21 items, a second principal components analysis and varimax rotation produced five factors with eigenvalues greater than one, and accounted for 62% of the common variance. These factors were labeled as

Relating to Others, New Possibilities, Personal strength, Spiritual Change, and Appreciation for Life. A Pearson product-moment correlation of  $r = .98$  between the total score based the 21-item version of the PTGI and the total score based on the original 34 items, revealing no significant loss of information by reducing the number of items of the scale.

The internal consistency of the 21-item PTGI is  $\alpha = .90$ , and deletion of individual items did not result in a drop in alpha below .89, indicating that all items contribute fairly equally to the consistency of the scale. Additionally, corrected item-total correlations were all in the moderate range ( $r = .35$  to  $r = .63$ ). Furthermore, Pearson product-moment correlations among the factors ranged from  $r = .27$  to  $r = .52$ , and the correlations of the factors with the PTGI ranged from  $r = .62$  to  $r = .83$ , revealing overlap with some separate contributions of these factors. The researchers obtained a sample of 28 people in order to determine test-retest reliability for the 21-item PTGI over two months. Results revealed that the 21-item PTGI was acceptable at  $r = .71$ . Test-retest reliabilities for the factors ranged from  $r = .65$  to  $r = .74$ , except for the Personal Strength factor ( $r = .37$ ) and the Appreciation for Life factor ( $r = .47$ ).

In order to examine the construct validity of the PTGI and determine if the PTGI measures some benefits unique to trauma, the researchers compared scores of people who had only experienced ordinary life events with those who experienced severely traumatic events. A sample of 194 psychology students was obtained, and responses of 117 students were selected for analysis based on an index of the presence and severity of trauma experienced. A total of 54 participants reported at least one major trauma of great

severity, and 63 participants reported no traumatic experience. Results of a gender x severity of trauma analysis of the variance with the total PTGI score as the dependent variable revealed that people who had experienced severe trauma reported more benefits ( $M = 83.16$ ,  $SD = 19.27$ ) than people who did not ( $M = 69.75$ ,  $SD = 20.47$ ) ( $F(1,113) = 12.33$ ,  $p < .001$ ), women reported more benefits ( $M = 81.60$ ,  $SD = 21.09$ ) than men ( $M = 70.25$ ;  $SD = 21.87$ ) ( $F(1, 113) = 10.69$ ,  $p < .0001$ ), and the gender x severity interaction was not significant ( $F(1, 113) = 1.70$ ). Additionally, results of a gender x severity of trauma multivariate analysis of the variance with the five factors of the PTGI as dependent variables revealed that people who had experienced severe trauma reported more benefits than those who did not ( $F(53,5) = 3.61$ ,  $p < .01$ ), women reported more benefits than men ( $F(53,5) = 3.68$ ,  $p < .01$ ), and the gender x severity interaction was not significant ( $F(53,5) = 1.36$ ).

Overall, the PTGI has good internal consistency, acceptable test-retest reliability, and scores on the scale are approximately normally distributed among people reporting a variety of life difficulties. Tedeschi and Calhoun (1996) also found that positive changes reported among participants were unrelated to the passage of time, indicating that it is likely that variables such as characteristics of survivors, and what circumstances they face as they recover from the traumatic event, are more important in determining perception of benefits than mere passage of time after the traumatic event.

For the present study, the internal consistency of the overall PTGI instrument was .940, while the Relating to Others subscale was .878, the New Possibilities subscale was .841, the Personal Strength subscale was .815, the Spiritual Change subscale was .777,

and the Appreciation for Life subscale was .743. These results indicate an acceptable internal consistency for the instrument and subscales (Pallant, 2010) with this sample of survivors of CSA. In regards to construct validity for this study, item factor loadings of the PTGI were examined using .5 as a guideline for good loading (Comery & Lee, 1992; Tabachnick & Fidell, 2007), and CFA results demonstrate that the PTGI accurately measures the constructs with these data.

#### Experiences in Close Relationships-S (ECR-S)

The ECR-S (Wei et al., 2007) was chosen to identify adult attachment styles. The ECR-S is a 12-item self-report questionnaire that utilizes a 7-point Likert scale format ranging from “strongly agree” to “strongly disagree,” and includes a “neutral” category as well. The 12 items that are divided into two subscales. These subscales are anxious attachment and avoidant attachment. The items contain a 7-point Likert scale format that ranges from “strongly disagree” to “strongly agree”. Each ECR-S subscale has six items. Items 2, 4, 6, 8 (reverse coded), 10, and 12 measure Attachment Anxiety, while items 1 (reverse coded), 3, 5 (reverse coded), 7, 9 (reverse coded), and 11 measure Attachment Avoidance. The minimum score for each subscale is 7 and a maximum score of 42 for each subscale. High scores on either or both of these dimensions (i.e., anxiety, avoidance) are indicative of an insecure adult attachment orientation. In contrast, low scores on either or both of these dimensions (i.e., anxiety, avoidance) are indicative of a secure adult attachment orientation (Brennan et al., 1998). Additionally, higher scores are significantly and positively related to depression, anxiety, interpersonal distress, or loneliness (Brennan et al., 1998). The ECR-S is designed to assess a general pattern of

adult attachment as independently as possible from influences of respondents' current circumstances. The instructions for the ECR-S are the same as for the *Experiences in Close Relationships* (ECR) assessment, and make it clear that the responses are valid whether the respondent is currently in a relationship or not. The ECR-S appears in Appendix G.

### Psychometric Properties

The ECR-S is an adapted form of the *Experiences in Close Relationships* (ECR) Scale originally developed by Brennan et al. (1998). The original ECR consists of 36 items, with a high level of internal consistency reported using a sample of undergraduates. Moreover, Brennan and colleagues (1998) reported coefficient alphas of .91 and .94 for Anxiety and Avoidance subscales, respectively. Additional studies with undergraduate samples (e.g., Lopez & Gormley, 2003; Lopez, Mauricio, Gormley, Simko, & Berger, 2001; Lopez, Mitchell, & Gormley, 2002; Vogel & Wei, 2005; Wei, Mallinckrodt, Russell, & Abraham, 2004) indicated a high level of internal consistency for the Anxiety subscale ( $\alpha$  ranges from .89 to .92) and the Avoidance subscale ( $\alpha$  ranges from .91 to .95). Test-retest reliability of .70 (Brennan et al, 2000), and .68 and .71 (Lopez & Gormley, 2002), for both Anxiety and Avoidance subscales, respectively, were reported. In terms of validity, the ECR subscales correlated with touch aversion (Brennan et al., 1998). Additional studies have provided support for the validity of the ECR among college samples, as Attachment Anxiety and Avoidance were found to be positively associated with: self-concealment and personal problems (Lopez, et al., 2002); ineffective coping (Wei, Heppner, Mallinckrodt, 2003; Wei Heppner, Russell, & Young, 2006);

maladaptive perfectionism (Wei et al., 2004; Wei et al., 2006); negative mood (Wei, Russell, Mallinckrodt, & Zakalik, 2004); and depression (Zakalik & Wei, 2006).

Both the reliability and validity of the ECR have been supported among diverse samples. However, the length of the assessment can be problematic, as the large quantity of items may decrease the research compliance rate and participants' motivation in responding to the questionnaire (Wei et al., 2007). For these reasons, Wei and colleagues (2007) developed the short form (i.e., ECR-S). The authors examined the reliability and factor structure of the measure through six different studies using college student samples. The authors cross-validated the reliability, factor structure, and validity of the short form measure and examined test-retest reliability over a month period. They further assessed the reliability, factor structure, and validity of the short form of the ECR when administered as a stand-alone assessment. Confirmatory factor analyses indicated that two factors (i.e., Anxiety and Avoidance), provided a good fit to the data after removing the influence of response sets. The authors found equivalent validity for both the original version and the short form of the ECR across studies.

In order to develop the ECR-S, Wei and colleagues (2007) conducted a preliminary study with 851 undergraduate students. Among the participants were 442 females, and 407 males, and two who did not indicate their gender. Furthermore, the age range among participants was 18-45 years old ( $M = 20.36$  years;  $SD = 2.04$ ). The ethnicity of the participants was as follows: 90.6% White, 2.1% African American, 2.4% Asian American, .1% Native American, and .7% Multiracial American. Furthermore, 94% of the sample reported being single. Following completion of the original ECR, the

authors conducted an exploratory factor analyses (EFA) separately for each of the 18 subscale items (anxiety and avoidance constructs). Additionally, they conducted a principle axis factor extraction with a promax (oblique) rotation on the *Avoidance* items. All six items retained for the ECR-S had corrected item total correlations of .62 or higher with the original version of the *Avoidance* subscale. The six items retained explained three domains that the theoretical literature suggest to be critical components of attachment avoidance: (a) fear of closeness or interpersonal intimacy, (b) reluctance to depend on others or excessive need for self-reliance, and (c) reluctance to self-disclose.

A principal factor analysis was conducted by Wei and Colleagues (2007) with oblique rotation on the 18-item Anxiety subscale. The six items retained for the ECR-S Anxiety subscale all corrected item total correlations of  $>.52$  with the total scores on the original version of the Anxiety subscale. Based on the theoretical literature and personal communication with Shaver (2004), the items offer a substantial representation of the three domains of adult attachment theory that theorists have suggested are integral components of the attachment anxiety construct, including (a) fear of interpersonal rejection or abandonment, (b) an excessive need for approval from others, and (c) distress when one's partner is unavailable or unresponsive.

The internal consistencies for the ECR-S subscales for the sample of college students used in Wei and colleagues (2007) study were .78 (Anxiety) and .84 (Avoidance), as compared to the internal consistencies of the original ECR, which were .92 (Anxiety) and .93 (Avoidance). Although the internal consistencies were lower for the ECR-S than the original ECR, the coefficient alphas of the 12-item ECR-S are acceptable



for use among populations similar to the college sample used. Additionally, correlations between the Anxiety and Avoidance subscales were  $r = .19$  (ECR-S) and  $r = .17$  (ECR), suggesting that these two measures reflect distinct dimensions of attachment. In order to examine the correlation between the two subscales for the ECR-S, and whether or not the correlation was equivalent to that of the two subscales of the ECR, Wei and colleagues conducted SEM. Results revealed that correlations between the Anxiety and Avoidance subscales were not significantly different for either version of the ECR. Furthermore, the authors examined the correlations between both versions of the Anxiety measures, and both versions of the Avoidance measures. Both sets of measures were found to correlate (.95) with one another. The high correlations between the two versions (i.e., original and short) of the Anxiety and Avoidance subscales provided offer further evidence that both versions assess the same underlying construct among diverse samples.

For the present study, the internal consistency of the overall ECR-S instrument was .779, while the Avoidant Attachment subscale was .795, and the Anxious Attachment subscale was .768. These results indicate an acceptable internal consistency for the instrument and subscales (Pallant, 2010) with this sample of survivors of CSA. In regards to construct validity for this study, item factor loadings of the ECR-S were examined using .5 as a guideline for good loading (Comery & Lee, 1992; Tabachnick & Fidell, 2007), and CFA results demonstrate that the ECR-S accurately measures the constructs with these data.

### Impact of Event Scale-Revised (IES-R)

The *Impact of Event Scale-Revised* ([IES-R] Weiss & Marmar, 1997) was used to measure the emotional impact of childhood sexual abuse and the incidence of PTSD that occurs from such an event. The original form of the IES was initially developed in 1978 as a result of the need to assess the degree of symptomology that individuals experienced following exposure to a traumatic event (Weiss & Marmar, 1996). However, the original assessment was developed prior to the acknowledgement of PTSD in the DSM-III. Additionally, the original version of the IES only measured symptoms of avoidance and intrusion which neglected to address measures of hyperarousal. As a result of this limitation, Weiss and Marmar developed the revised version which includes seven additional items that serve to measure hyperarousal symptoms. The IES-R is widely used in research and even been translated into various languages, including Chinese, Japanese, French, and Spanish (Beck, et al., 2008). The scale consists of 22 Likert-scaled questions, with response values ranging from 0-4 (“not at all” to “extremely”), measuring stress responses through three subscales: (a) avoidance, (b) intrusion, and (c) hyperarousal. Eight of the items are designed to represent avoidance, another eight items represent symptoms of intrusion, and six items designed to represent symptoms of hyperarousal. The intrusion subscale has 8 items; the avoidance subscale has 8 items, and the hyperarousal subscale has 6 items. The total score on the IES-R can range from 0 to 88. Scores that exceed 24 can be quite meaningful, as such high scores have the following associations: (a) 24 or higher is indicative that PTSD is a clinical concern, (b) 33 and above indicate the best cutoff for a probable diagnosis of PTSD, and (c) 37 or

higher is high enough to suppress the immune system's functioning (even ten years past the event). The authors note that the IES-R is only used as a guideline, not a diagnosis. The authors have suggested that it is appropriate to use the IES-R to measure events such as automobile accidents, natural disasters, sexual assault, and the rescue effort at the World Trade Center on 9/11. Participants are instructed to report the degree to which they have experienced such symptoms in the past seven days. They have the opportunity to report a range of symptom experience from "not at all" to "extremely." Three separate scores for each subscale, as well as a total score are reported through scoring. However, in the present study, only a total score was used to identify and indication of PTSD. The maximum score for the IES-R is an 88 with higher scores representing a greater presence of trauma. A total score of 33 or higher is considered to represent the presence of PTSD (Creamer, Bell, & Failla, 2003). This assessment has been widely used in research studies to measure stress. The IES-R is displayed in Appendix H.

### Psychometric Properties

The original *Impact of Event Scale* (IES) was designed to assess subjective distress that is currently being experienced in response to a life event (Horowitz, Wilner, & Alvarez, 1979). The IES has been widely used to assess for symptoms of Posttraumatic Stress Symptomatology (PTSS). The original IES is a 15-item scale describing symptoms of intrusion and avoidance that have occurred over the past seven days (Horowitz et al., 1979). Each item is ranked on a 5-point Likert scale. Test-retest reliability of .87 for the total score has been demonstrated, with scores of .89 for the intrusion subscale and .79 for the avoidance subscale (Horowitz et al., 1979). Additional scores provide further

strength for the psychometric value of the scale as reported Cronbach alphas of .85 for the total scale and .80 and .79 for the intrusion and avoidance subscales, respectively (Eid, Thayer, & Johnsen, 1999). However, several researchers found the scale to be sensitive to gender differences and change over time (Horowitz, et al., 1979; Schwarzwald, Solomon, Weisenberg, & Mikulincer, 1987; Zilberg, Weiss, & Horowitz, 1982).

The revised version, IES-R, (Weiss & Marmar, 1997) was developed to provide more alignment with the three domains of PTSD, as described in the *Diagnostic and Statistical Manual of Mental Disorders* (fourth edition, test revision; DSM-IV; American Psychiatric Association, 2000). The IES-R (Weiss & Marmar, 1997), includes eight new items intended to measure intrusions; eight intended for symptoms of avoidance; and six items intended for symptoms of hyperarousal. Creamer and colleagues (2003) explored the psychometric properties of the IES-R on a sample of Vietnam veterans ( $N = 120$ ) along with a community sample experiencing varying degrees of stress ( $N = 154$ ). They found that good internal consistency was demonstrated for the scale with each of these populations with a found Cronbach alpha of .79 - .94). Additionally, Weiss and Marmar (1997) reported strong test-retest reliability (.89-.94) over a six-month period.

Furthermore, strong correlations between the PTSD cutoff score for the scale (e.g., score of 33) and the PTSD checklist were also demonstrated in this study (Creamer et al., 2003). A three factor solution has been supported by research (Beck et al., 2008; Brunet, Hillaire, Jehel, & King, 2003; Wagner, 2011); however, other researchers have found that a two-factor solution measuring an intrusion/hyperarousal factor and avoidance factor to

be a better fit (Asukai et al., 2002; Creamer et al., 2003). Additional research by Wagner and Waters (2013) also provided support for the validity of the recommended subscales of the IES-R. The IES has been utilized in various studies exploring the impact of traumatic events from a retrospective standpoint (e.g., among Firefighters, [Wagner, 2011; Dean, Gow, & Shakespeare-Finch, 2003]; war survivors, [Morina et al., 2010]; survivors of an earthquake, [Wang et al., 2011]; survivors of motor vehicle accidents, [Beck et al., 2008]; adults with a history of CSA, [Elliott & Briere, 1995; Twaite & Rodriguez-Srednicki, 2004]), showing to be relevant for the present study.

For the present study, the internal consistency of the overall IES-R instrument was .950, while the Intrusion subscale was .913, the Avoidance subscale was .861, and the Hyperarousal subscale was .887. These results indicate an acceptable internal consistency for the instrument and subscales (Pallant, 2010) with this sample of survivors of CSA. In regards to construct validity for this study, item factor loadings of the IES-R were examined using .5 as a guideline for good loading (Comery & Lee, 1992; Tabachnick & Fidell, 2007), and CFA results demonstrate that the IES-R accurately measures the constructs with these data.

Permission to use the ECR-S, the IES-R, and the PTGI were obtained from the authors of the instruments. The email approvals are contained in Appendix I.

### Demographic Questionnaire

The researcher developed a demographic questionnaire (Appendix D) as part of the assessment that included demographic factors discussed throughout the literature regarding posttraumatic growth. The questionnaire was designed to collect information

regarding participants' age, gender, race, amount of time that has passed since the abuse occurred, primary caregiver, support or lack of support from the primary caregiver, relationship status, spiritual or religious identification, and history of receiving psychological services. As many studies exploring the CSA, PTG, and attachment have involved primarily female participants, there is a need to build the research related to male survivors of CSA as well. Additionally, much of the research has revealed limitations in diversity among participants resulting in a need to broaden the scope of research. Furthermore, some studies have suggested that age, time since the event, and having a history of receiving psychological services could influence the experience of PTG. The demographic questionnaire was included in the study, as the literature suggests that demographic factors influence experiences of posttraumatic growth.

### Data Analysis

Following data collection procedures, the researcher used structural equation modeling (SEM) to explore relationships and predictability between the independent variables (personal attachment qualities and perceived impact of CSA), and the dependent variable (presence of posttraumatic growth). SEM is a confirmatory procedure that involves a combination of multiple regression, path analysis, and confirmatory factor analysis (Schumacker & Lomax, 2010). SEM is most commonly used in correlational studies, and the results generated can only be applied to the sample used to test the model (Ullman, 2007). Furthermore, SEM is becoming more commonly used in counseling research due to its ability to evaluate complex theoretical counseling models (Crocket, 2012).

The data from this study were analyzed using SPSS and the *Analysis of Moment Structure*, 21<sup>st</sup> edition (AMOS, 2012). AMOS is a SEM statistical software that provides researchers a platform to create and translate path diagrams and analyze theoretical models (Byrne, 2010). Additionally, AMOS is used to detect missing data, outliers, and variable transformations within a data set (Crockett, 2012). SEM statistical assumptions (i.e., normality, homogeneity, and multicollinearity) were tested to ensure that the data collected in this study were appropriate for SEM analysis.

The theoretical model tested contained latent and manifest variables. The latent variables were (a) perceived impact of CSA, (b) attachment styles and (c) posttraumatic growth. In the model, these latent variables were represented by circles. Directionality of relationships between variables was signified by one-way arrows, and correlation between variables was represented by two-way arrows. The measured variables (observed or manifest) are the factors of each of these constructs and were represented by squares. There are two types of models within SEM: (a) the measurement model that connects the manifest variables to the latent variables; and the structural model that identifies the hypothesized relationships among the constructs of the study (Byrne, 2010). SEM corrects for measurement error. Therefore, relationships in SEM do not have measurement error, as the error is estimated and removed (Schumacker & Lomax, 2010). Thus, reliability of measurement can be accounted for within the analysis by estimating and removing the measurement errors (Schumacker & Lomax, 2010).

### Limitations/Challenges

The study had potential limitations with the research design, sampling methods, and data collection procedures. Such limitations posed potential threats to internal and external validity.

#### Research Design Limitations

Given that the study was a correlational research design, potential threats to external validity existed. From the results, the researcher can infer correlation/relationship but not causality between variables (Frankel et al., 2011). Furthermore, given that this is not a true experimental design, accurate generalizability to the greater population cannot be reported (Frankel et al., 2011).

#### Sampling Limitations

The researcher utilized convenience sampling which has its strengths and weaknesses. This sampling approach was necessary, as the researcher sought to utilize a sample of participants with specific characteristics (i.e., being an adult, having a history of childhood sexual abuse, and living in the United States). However, given that there is a great deal of shame surrounding having experienced childhood sexual abuse, not all survivors seek support and, therefore, are not easily accessible. As such, the researcher sought participants from a national online support network, thereby limiting the sample to those already seeking some form of assistance for their experience with childhood sexual abuse. Such a sample limits the generalizability of results, as individuals available for participation may already have more support and/or treatment than survivors outside of the network, or those who have never disclosed their abuse.



### Data Collection Limitations

Although the instruments utilized were chosen for their sound psychometric properties, potential threats to internal validity existed. For example, the researcher could not assume a realistic variance in scores, as the participants who complete the instruments are doing so voluntarily and are being sought from treatment centers and support groups. Thus, they were already seeking support and/or treatment for their experiences with CSA. Furthermore, the researcher could not control for environmental factors, as participants were given access to the online assessment to complete on their own time, not in the presence of the researcher.

### Ethical Considerations

The researcher sought approval from the university's Institutional Review Board (IRB) prior to conducting the study to ensure that the study is conducted in an ethical manner. First, the researcher contacted a member of the University of Central Florida IRB to ensure that the research proposal followed expected ethical guidelines. The researcher then submitted an IRB protocol application through the University of Central Florida, and gained permission from the IRB before proceeding with data collection (Appendix A). Additionally, the researcher requested that the dissertation chair and committee members review the research study to ensure sound and ethical practices before implementing the study. Furthermore, the researcher contacted the authors of each assessment to be used in order to gain permission to use the instruments in the study (Appendix I). The researcher gained permission from participants prior to their involvement in the study, and they were informed that they had the option to withdraw

from the study at any time without penalty, as clearly defined in the informed consent. As the study progressed, the researcher ensured that all data used in the study were free of identifying information, stored in Qualtrics, and only accessed by the researcher from the researcher's double-password protected private computer to ensure participant anonymity.

### Summary

The research methods used in the study have been presented in this chapter. The purpose of the study was to examine the theoretical model that adult survivors of CSA who have experienced some level of trauma as measured by the IES-R (Weiss & Marmar, 1996) with secure attachment as measured by the ECR-S (Wei et al., 2007) would experience greater levels of PTG as measured by the PTGI (Tedeschi & Calhoun, 1996) than adult survivors of CSA with insecure attachment (i.e., Anxious attachment or Avoidant attachment; as measured by the ECR-S (Wei et al., 2007)). The methodology has been outlined regarding the following topics: (a) population and sample; (b) data collection; (c) instrumentation; (d) research design; (e) research hypothesis and exploratory questions; and (f) data analysis. Additionally, the dependent and independent variables were discussed, as well as the procedures which were used to ensure ethical considerations and address any limitations of the study.

## CHAPTER 4 RESULTS

### Introduction

The purpose of this research study was to investigate the directional relationship between the perceived traumatic impact of CSA and adult attachment styles on the experience of posttraumatic growth among adult survivors of CSA. This investigation tested the theoretical model that adult attachment style as measured by the *Experiences in Close Relationships Scale-short form* ([ECR-S] Wei et al., 2007) and perceived impact of CSA as measured by the Impact of Events Scale-revised ([IES-R] Weiss & Marmar, 1996) contribute to the experience of posttraumatic growth as measured by the *Posttraumatic Growth Inventory* ([PTGI] Tedeschi & Calhoun, 1996) among adult survivors of CSA. Specifically, the investigation tested the hypothesized directional relationship that adults' scoring in the insecure attachment range (i.e., avoidant or anxious) with *some level of trauma* had *lower* levels of posttraumatic growth. In addition, this investigation examined the relationship between adults' attachment styles, perceived trauma, posttraumatic growth and their reported demographic information (e.g., age, gender, and race).

The research hypothesis was analyzed using structural equation modeling (SEM), which integrates multiple regression analysis, path analysis, and confirmatory factor analysis (Ullman 2007). The exploratory research questions were examined using: (a) descriptive statistics; (b) Pearson's correlations; (c) independent sample *t* tests, and (d) ANOVA (Pallant, 2010). The results are presented in this chapter in the following order:

(a) sampling and data collection procedures, (b) descriptive statistics, and (c) data analyses per the primary research question and exploratory research questions.

### Sampling Procedures and Data Collection Procedures

There are more than 40 million survivors of CSA in the United States (CDC, 2013). A convenience sample of members of three CSA survivor support networks were contacted to participate in this study. The researcher received permission from the Vice President of Communications for the Rape, Abuse, Incest, Neglect Network, the Moderators of AfterSilence.org, and the Communications Coordinator of Stop It Now to invite their members to participate in this research study. Although the researcher communicated with these organizations to obtain participants, due to various factors discussed in chapter three, the majority of participants came from the RAINN Network, which consisted of 1,600 members. There was no way to estimate the number of available participants from AfterSilence.org or Stop It Now. Whereas, the total number of participants invited to participate as part of the sample was unknown; the known number of RAINN members causes the assumption over 1,600 participants were invited.

The data collection package, which included all the instruments and the demographic form, was distributed electronically to all participants through Qualtrics. To support sound data collection methods and response rates, Dillman, Smyth, and Christian's (2009) steps to web survey implementation (which are similar to Dillman's 2000 *Tailored Design Method*), were implemented. However, in order to maintain anonymity for the CSA survivors participants, the *Tailored Design Method* could not be followed with all participants for several reasons: (a) for those participants recruited from

AfterSilence.org and Stop It Now, individual, personalized emails could not be sent to each participant, but rather a general invitation to participate was posted on the AfterSilence.org website message board, and sent to the Communications Coordinator of Stop it Now to be posted on their Facebook page. Similarly, participants from the RAINN Network were forwarded a generic (i.e., not individual or personalized) invitation email that included a secure link to the informed consent, data collection instruments, and explanation of the incentive. To decrease measurement error, the survey package was reviewed by the dissertation committee and four of the researcher's colleagues to ensure clarity and readability of the directions for completing the surveys (Dillman et al., 2000). Feedback from the dissertation committee and colleagues was integrated to refine the directions and demographic questionnaire to make it more user-friendly for the study participants.

Participants from the RAINN Speakers Bureau were forwarded an invitation email that included (a) the informed consent, (b) a secure link to the data collection instruments, and (c) an explanation of the incentive to participate in the study. Participants from AfterSilence.org were provided with an invitation message post on the After Silence website message board that included (a) the informed consent, (b) a secure link to the data collection instruments, and (c) explanation of the incentive to participate in the study. The participants from Stop It Now! were forwarded an invitation Facebook post that included (a) the informed consent, (b) a secure link to the data collection instruments, and (c) an explanation of the incentive to participate in the study. Participants received an email/message post/Facebook post one week after the initial

email/message post/Facebook post was sent as a reminder for those who had not completed the survey. Two weeks later (three weeks after the original email/message post/Facebook post), a final reminder was sent to these participants. A thank you message was sent immediately after the participants completed the survey. The incentive for this study was that for each survey completed, a \$1.00 donation was made to the RAINN network

### Descriptive Data Results

#### Response Rate

As noted in Chapter 3, the total number of RAINN members that were sent an email invitation to participate in the study was 1,600, whereas the number of visitors of After Silence message board, and Stop It Now Facebook group, was unknown. Given that the total number of individuals invited to participate is unknown, the researcher chose to calculate the response rate based on the 1,600 known members of RAINN. As such, the total number of survivors of CSA from the participating support networks who completed that data collection survey was 344, yielding a response rate of 21.5%. The researcher opted to delete cases that had greater than 50% missing values, resulting in 50 cases deleted, with two additional cases deleted as a result of their not consenting to participate in the study. The two deleted cases due to lack of consent were present in the raw data (prior to deletion) as participants were able to access the link to the survey, read the consent, and choose “yes” or “no” to participate. Although these two cases chose “no” to participation, Qualtrics obtained their “no” response in the raw data. As such, these two cases were originally present, but were deleted due to their “no” response to consent.

Upon removing these cases, the total number of participants who completed all of the data collection instruments was 292, yielding an 18.25% usable response rate out of the 344 surveys collected. With the exclusion of these cases, the extent of missing data was substantially reduced, and the reduction of sample size was 15%. Therefore, the overall sample for this study was 292 survivors of CSA associated with a support network (i.e., RAINN).

### Participant Demographics

Descriptive data and measures of central tendency and variability are presented for all participants in the study ( $N = 292$ ). The following descriptive analyses are reported on the total sample ( $N = 292$ ; see Table 1). The majority of participants were female ( $n = 247$ , 84.6%), compared to those who identified as male ( $n = 23$ , 7.9%), and those who self-identified as “something other” than female or male ( $n = 3$ , 1%), or chose not to disclose such information ( $n = 19$ , 6.5%). Participants were between the ages of 18-71 years ( $M = 41.64$ ,  $SD = 12.67$ ). Some participants chose not to report their age ( $n = 19$ , 6.5%). Race of participants ( $N = 292$ ) was 205 (70.2%) Caucasian/White, 35 (12%) African/African American/Black, 12 (4.1%) Hispanic/Latino(a), 12 (4.1%) Biracial/Multiracial, 1 (0.3 %) Asian/Asian/American, 6 (2.1%) reporting Other, and 21(7.2%) participants choosing *not* to disclose their race. The reported relationship status for the participants ( $N = 292$ ) was 135 (46.2%) married/partnered, 43 (14.7%) single, 36 (12.3%) divorced, 34 (11.6%) in a committed relationship, 9 (3.1%) engaged, 5 (1.7%) separated, 11 (3.8%) other, and 19 (6.5%) choosing *not* to report their relationship status.

Table 1

*Demographic Variables: Frequencies and Percentages*

Demographic	Total (n)	Percentage
Gender		
Female	247	84.6%
Male	23	7.9%
Other	3	1.0%
Chose not to report	19	6.5%
Age		
18-71	273	93.5%
$M = 41.64$ , $SD = 12.67$		
Chose not to report	19	6.5%
Race		
Caucasian/White	205	70.2%
African/African American/Black	35	12.0%
Hispanic/Latino(a)	12	4.1%
Biracial/Multiracial	12	4.1%
Other	6	2.1%
Asian/Asian American	1	.3%
Chose not to report	21	7.2%
Relationship Status		
Married/Partnered	135	46.2%
Single	43	14.7%
Divorced	36	12.3%
In a committed relationship	34	11.6%
Other	11	3.8%
Engaged	9	3.1%
Separated	5	1.7%
Chose not to report	19	6.5%
Years Since Event		
More than 20 years	188	64.4%
11-15 years	34	11.6%
16-20 years	32	11.0%
6-10 years	13	4.5%
1-5 years	5	1.7%
Chose not to report	20	6.8%
History of Psychological Services		
Received	243	83.2%
Not received	29	9.9%
Chose not to report	20	6.8%



Demographic	Total (n)	Percentage
Primary Caregiver		
Mother	147	50.3%
Father	19	6.5%
Other	21	7.2%
Mother & Father	71	24.3%
Mother, Father, & Other	5	1.7%
Mother & Other	8	2.7%
Father & Other	1	0.3%
Chose not to report	20	6.9%
Primary Caregiver/Parent Relationship	115	39.4%
Unsupportive	103	35.3%
Supportive	41	14.0%
Offender	33	11.3%
Chose not to report		
Spiritual/Religious		
Yes	202	69.2%
No	71	24.3%
Chose not to report	19	6.5%

In regard to participants' ( $N = 292$ ) experience with CSA, the majority of participants reported that more than 20 years had passed since they experienced CSA ( $n = 188, 64.4\%$ ), compared to 34 (11.6%) who reported that 11-15 years had passed, 32 (11%) reported 16-20 years had passed, 13 (4.5%) reported 6-10 years had passed, 5 (1.7%) reported 1-5 years had passed, and 20 (6.8%) participants did *not* report how many years had passed since they experienced CSA. The majority of participants (243, 83.2%) reported that they have received psychological services (e.g., counseling) for their experience with CSA, compared to 29 (9.9%) who reported *not* having received psychological services for their experience with CSA, and 20 (6.8%) who chose *not* to disclose if they had ever received psychological services for their experience with CSA.

In regard to participants' ( $N = 292$ ) experience with their primary caregiver, the majority of participants reported that their mother was their primary caregiver ( $n = 147$ , 50.3%), with the remaining sample reporting either that their father was their primary caregiver ( $n = 19$ , 6.5%), someone other than their father or mother (e.g., grandparent, aunt, family friend) was their primary caregiver ( $n = 21$ , 7.2%), their mother and father were their primary caregivers ( $n = 71$ , 24.3%), their mother, father, and someone else were their primary caregivers ( $n = 5$ , 1.7%), their mother and someone else was their primary caregiver ( $n = 8$ , 2.74%), their father and someone else were their primary caregivers ( $n = 1$ , 0.3%), and/or 20 (6.85%) chose not to report who their primary caregiver was. Many participants (115, 39.4%) reported that their primary caregiver/parent was unsupportive (i.e., did not believe the abuse, did not report the abuse, maintained contact with the offender), compared to 103 (35.3%) of participants who reported that their primary caregiver/parent was supportive (i.e., believed the abuse, reported the abuse, ceased contact with the offender), and 41 (14%) that reported that their primary caregiver/parent was the offender. Thirty-three (11.3%) participants chose *not* to disclose the nature of their relationship with their primary caregiver/parent. In terms of reported spiritual and or religion, , 202 (69.2%) identified as spiritual or religious, compared to 71 (24.3%) who did not identify as being spiritual or religious, and 19(6.5%) participants who chose *not* to identify whether or not they were spiritual or religious.

### Attachment Style

The *Experiences in Close Relationships Short Form* (ECR-S; Wei et al., 2007) was used to identify attachment styles among adult survivors of CSA. Cronbach's  $\alpha$  assessing the internal consistency of the overall ECR-S instrument was .779, Avoidant Attachment subscale was .795, and Anxious Attachment was .768, all of which indicate an acceptable internal consistency for the instrument and subscales (Pallant, 2010) with this sample of survivors of CSA. The measures of central tendency for the survivors of CSA per the ECR-S subscales are presented in Table 2.

Table 2

*Experiences in Close Relationships-Short Form Measures of Central Tendencies and Variability*

Instrument	<i>M</i>	<i>SD</i>	Range	<i>Mdn</i>	Mode	Cronbach's $\alpha$
Anxious Attachment	26.71	7.99	6.00-42.00	27.50	26.00	.768
Avoidant Attachment	21.14	7.79	6.00-42.00	22.00	14.00 <sup>a</sup>	.795
Total	47.85	12.32	17.00-76.00	50.00	54.00	.779

a. Multiple modes exist. The smallest value is shown.

### Impact of Event

The *Impact of Event Scale-Revised* (Weiss & Marmar, 1997) was used to measure participants' perceived impact of their experience with CSA. Cronbach's  $\alpha$  assessing the internal consistency of the overall IES-R instrument was .950, Intrusion subscale was .913, Avoidance subscale was .861, and Hyperarousal subscale was .887, also all of

which indicate an acceptable internal consistency for the instrument and subscales (Pallant, 2010) with this sample of survivors of CSA. The measures of central tendency for the survivors of CSA per the IES-R subscales are presented in Table 3.

Table 3

*Impact of Event Scale-Revised Measures of Central Tendencies and Variability*

Instrument	<i>M</i>	<i>SD</i>	Range	<i>Mdn</i>	Mode	Cronbach's $\alpha$
Intrusion	1.59	1.03	0.00-3.88	1.500	.63	.913
Avoidance	1.59	.99	0.00-4.00	1.63	2.38	.861
Hyperarousal	1.61	1.14	0.00-4.00	1.50	.00	.887
Total	35.11	21.04	0.00-82.00	34.50	.00 <sup>a</sup>	.950

a. Multiple modes exist. The smallest value is shown.

### Posttraumatic Growth

The *Posttraumatic Growth Inventory* (Tedeschi & Calhoun, 1996) was used to measure the presence of posttraumatic growth among survivors of CSA. Cronbach's  $\alpha$  assessing the internal consistency of the overall PTGI instrument was .940, Relating to Others subscale was .878, New Possibilities subscale was .841, Personal Strength subscale was .815, Spiritual Change subscale was .777, and Appreciation for Life subscale was .743, also all of which indicate an acceptable internal consistency for the instrument and subscales (Pallant, 2010) with this sample of survivors of CSA. The measures of central tendency for the survivors of CSA per the PTGI subscales are presented in Table 4.

Table 4

*Posttraumatic Growth Inventory Measures of Central Tendencies and Variability*

Instrument	<i>M</i>	<i>SD</i>	Range	<i>Mdn</i>	Mode	Cronbach's $\alpha$
Relating to Others	17.92	8.74	0.00-35.00	18.00	23.00	.878
New Possibilities	16.28	6.61	0.00-25.00	18.00	25.00	.841
Personal Strength	14.24	4.94	0.00-20.00	15.00	20.00	.815
Spiritual Change	5.66	3.56	0.00-10.00	6.00	10.00	.777
Appreciation for Life	10.17	4.12	0.00-15.00	11.00	15.00	.743
Total	64.28	23.71	7.00-105.00	66.51	78.00	.940

Data Analysis for the Research Questions and Hypotheses

The following section presents the results of the analyses for the primary research question and hypothesis, and the three exploratory research questions. All of the data was analyzed using the *Statistical Package for Social Sciences* (SPSS, Version 22) and the *Analysis of Moment Structures* (AMOS, version 23) for SEM. To confirm that 95% of the variance of the relationship between the variables was due to the actual relationship and *not* sampling error, an alpha level of .05 was set (Fraenkel, Wallen, & Hyun, 2011).

Statistical Assumptions and Data Screening

Preliminary analyses of the data were conducted to ensure the sample size was appropriate for SEM. Byrne (2010) suggests that the following assumptions are met for SEM: (a) appropriate sample size, (b) address missing data, (c) limited multicollinearity and singularity, (d) account for outliers, (e) multivariate normality, and (f) linearity

between variables. Although no single agreed upon best practice regarding minimum sample size for SEM has been established (Raykov & Marcoulides, 2006); the minimum sample size suggested for SEM is 200 (Byrne, 2010; Kline, 2011). Anticipating sample size is necessary to avoid making a Type II error (i.e., failing to reject a false null hypothesis; Balkin & Sherpis, 2011). As recommended by Schumaker and Lomax (2010), [www.danielsoper.com](http://www.danielsoper.com) was consulted to calculate a priori sample size for SEM for this study. Using the recommended website to identify a small effect size (.1), and a high power (.8) with three latent variables and 10 observed variables at the probability level of  $p < .05$ , a minimum sample of 290 was needed for the study. Therefore, with the final sample of 292, the researcher acquired an adequate sample size to conduct SEM (Raykov & Marcoulides, 2006; Schumaker & Lomax, 2010). The dataset did *not* have any missing data not at random (MNAR), or missing at random (MAR); however, there was data missing completely at random (MCAR).

A four-step process for identifying missing data and applying remedies is recommended by Hair, Black, Babin, and Anderson (2010). The first step involves determining the type of data missing. The researcher was concerned whether the missing data were part of the research design and under the control of the researcher, or whether the cause and impact of the missing data was unknown. The second step involves determining the extent of missing data, followed by step three, which involves diagnosing the randomness of the missing data processes. The fourth step involves selecting the imputation method (Hair et al., 2010).

The four-step process suggested by Hair and colleagues (2010) was applied to the research study as follows. Through Little's MCAR test ( $\chi^2 = 979.233$ ,  $df = 1012$ ,  $p = .765$ ), the data that were missing were identified as missing completely at random; however, data is rarely missing at random in the social sciences (Osborne, 2013). The researcher opted to conduct an Expectation Maximization (Maximum likelihood estimation) for imputation (Dempster, Laird, & Rubin, 1977). The Expectation Maximization algorithm is a general iterative algorithm for parameter estimation by maximum likelihood when some of the random variables involved are considered missing or incomplete. The Expectation Maximization algorithm formalizes an intuitive idea for obtaining parameter estimates when some of the data are missing: (a) replace missing values by estimated values, (b) estimate parameters, and (c) repeat (Dempster et al., 1997). Step 1 of the Expectation Maximization involves using estimated parameter values as true values, and step 2 involves using estimated values as observed values, iterating until convergence (Dempster et al., 1977). Additionally, Schumacker and Lomax (2010) identified three primary ways to address missing data (a) listwise deletion, (b) pairwise deletion, and (c) replacing missing values. As such, the researcher chose to delete cases that had greater than 50% missing values, resulting in 50 cases deleted, and 2 cases deleted as a result of not consenting to participate in the study.

Multicollinearity refers to the relationship between the independent variables, and exists when they are highly correlated ( $r = .9$  and above; Tabachnick & Fidell, 2013). The correlation matrix and the Tolerance and VIF (Variance Inflation Factor) values were examined to determine multicollinearity. Correlations between the independent variables

should be below .7 to retain all variables. A tolerance values below .10 and VIF values above 10 suggest the possibility of multicollinearity (Pallant, 2010). All correlations between the independent variables were below .7 and none of the tolerance or VIF values suggested multicollinearity. Therefore, the data met the assumption of multicollinearity.

When conducting SEM, a critically important assumption is that the data are multivariate normal (Byrne, 2010). As such, it is important to check that this criterion has been met. Data that are multivariate kurtotic are problematic to SEM analyses, as this is the situation where the multivariate distribution of the observed variables has both peaks and tails that differ from those characteristic of a multivariate normal distribution (Rykov & Marcoulides, 2000). Kurtosis affects tests of variances and covariances, and given that SEM is based on the analysis of covariance structures, evidence of kurtosis is known to be exceptionally detrimental in SEM analyses (DeCarlo, 1997). As such, Byrne (2011) recommends observing kurtosis values and their critical ratios to assess for normality. The standardized kurtosis index ( $\beta_2$ ) in a normal distribution has a value of 3, with larger values representing positive kurtosis and lesser values representing negative kurtosis. However, AMOS rescales this value by subtracting three from the  $\beta_2$  value, thus making zero the indicator of normal distribution and its sign of the indicator of positive or negative kurtosis (DeCarlo, 1997; Kline, 2005). Rescaled  $\beta_2$  values equal to or greater than 7 are indicative of non-normality (Byrne, 2011). Using the guide of seven, a review of the kurtosis values revealed no item to be substantially kurtotic, meaning no item greater than seven was found among kurtosis values in AMOS with these data. As such, the assumption of univariate normality was considered to be met with these data.



## Research Questions and Research Hypotheses

The purpose of this study was to investigate the directional relationship between adults' attachment styles and perceived impact of childhood sexual abuse (CSA) with their experience of posttraumatic growth. The following section presents the results for the research hypothesis and exploratory questions. The primary research question was analyzed using SEM and Pearson's correlation. There are five steps to SEM (Crockett, 2012; Ullman, 2007; Weston & Gore, 2006): (a) model specification, (b) model identification, (c) model estimation, (d) model testing, and (e) model modification. All five steps were used and repeated to analyze the primary hypothesis. To determine overall goodness of fit, the following fit indices were used: (a) Chi Square ( $\chi^2$ ), (b) Tucker-Lewis Index (TLI), (c) Comparative Fit Index (CFI), (d) Root Mean Square Error of Approximation, (e) Goodness of Fit Index (GFI) and (f) Standardized Root Mean Square Residual (SRMR) (Hair et al., 2010; Hooper, Coughlan, & Mullen, 2008; Hu & Bentler, 1998). However, given that the sample size was small (i.e.,  $N = 292$ ), Hu and Bentler (1999) suggested the following fit indices be examined for goodness of fit: (a) Comparative Fit Index (CFI), (b) Root Mean Square Error of Approximation (RMSEA), and (c) Standardized Root Mean Square Residual (SRMR). As such, the researcher chose to examine all fit indices listed, with emphasis on Chi Square ( $\chi^2$ ) to  $df$  ratio, CFI, RMSEA, and SRMR. All fit indices were evaluated based on recommended values indicating goodness of fit (Hair et al., 2010): Chi Square ( $\chi^2$ ) to  $df$  ratio of  $\leq 2$  or 3 with significant  $p$  values expected; CFI of  $\geq .90$ ; GFI of  $\geq .95$  for good fit or  $> .90$  for

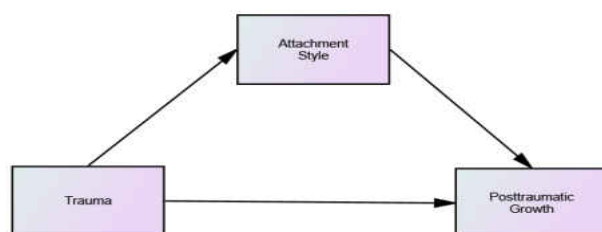
acceptable fit; RMSEA of  $\leq .07$  for good fit or  $.08$  for acceptable fit; TLI of  $\geq .90$ ; and SRMR of  $\leq .08$ .

#### Primary Research Question

The primary research question guiding this study was: Do adults' attachment styles, (as measured by the *Experiences in Close Relationships – Short Form* [ECR-S] Wei et al., 2007), serve as a mediator between perceived impact of CSA (as measured by the *Impact of Event Scale-Revised* [IES-R] Weiss & Marmar, 1996), and their experience of posttraumatic growth (as measured by the *Posttraumatic Growth Inventory* [PTGI] Tedeschi & Calhoun, 1996)?

#### Primary Research Hypothesis

The research hypothesis tested in this investigation was: The influence of adults' perceived impact of their experience with childhood sexual abuse (as measured by the IES-R; Weiss & Marmar, 1996) on their experience of posttraumatic growth (as measured by the PTGI; Tedeschi & Clalhoun, 1996) is mediated by their attachment style (as measured by the ECR-S; Wei et al., 2007). Specifically, the investigation tested the hypothesized directional relationship that adults' scoring in the insecure attachment range (i.e., anxious or avoidant) will score lower in levels of posttraumatic growth. The hypothesized path model is found in Figure 10



*Figure 10.* Hypothesized Path Model

### Pearson Correlations

To examine relationships between trauma and attachment, trauma and posttraumatic growth, attachment and posttraumatic growth a Pearson's correlation was used to verify significant relationships. Although correlational research does not allow researchers the ability to determine causal relationships, the correlation coefficient determines the strength, direction, and significance of relationships. A correlation coefficient is between -1.00 and +1.00. The closer the coefficient is to either -1.00 or +1.00, the stronger the relationship. The negative or positive signs indicate the direction of the relationship. Correlations ranging from .10 to .29 indicate a small relationship,

while correlations ranging from .30 to .49 indicate a moderate or medium relationship, and correlations ranging from .50 to 1.00 indicate a strong correlation (Cohen, 1988).

Pearson's correlation was used to verify significant relationships between trauma and attachment, trauma and posttraumatic growth, attachment and posttraumatic growth.

Pearson's correlation was used as it is appropriate for continuous variables, such as the scores from various measures (Pallant, 2010). Tables 5, 6, and 7 present the correlation coefficients for the scores.

Table 5

*Correlation Coefficients for the Impact of Event Scale-Revised (IES-R) and the Experiences in Close Relationships-Short Form (ECR-S)*

Trauma (Total and Subscale Scores)	Attachment Style		
	ECR-S Total Score	Anxious Attachment Subscale	Avoidant Attachment Subscale
IES-R total Score	$r = .417$ $r^2 = .174$ $p < .001$	$r = .281$ $r^2 = .079$ $p < .001$	$r = .372$ $r^2 = .138$ $p < .001$
Intrusion Subscale	$r = .368$ $r^2 = .135$ $p < .001$	$r = .248$ $r^2 = .062$ $p < .001$	$r = .328$ $r^2 = .107$ $p < .001$
Avoidance Subscale	$r = .386$ $r^2 = .149$ $p < .001$	$r = .254$ $r^2 = .065$ $p < .001$	$r = .351$ $r^2 = .123$ $p < .001$
Hyperarousal Subscale	$r = .392$ $r^2 = .153$ $p < .001$	$r = .270$ $r^2 = .073$ $p < .001$	$r = .342$ $r^2 = .117$ $p < .001$

Table 6

*Correlation Coefficients for the Experiences in Close Relationships-Short Form (ECR-S) and the Posttraumatic Growth Inventory (PTGI)*

Attachment Style	PTGI Total Score	Posttraumatic Growth				
		Relating to Others Subscale	New Possibilities Subscale	Personal Strength Subscale	Spiritual Change Subscale	Appreciation of Life Subscale
ECR-S total score	$r = -.198$ $r^2 = .039$ $p < .001$	$r = -.189$ $r^2 = .036$ $p < .001$	$r = -.167$ $r^2 = .028$ $p < .001$	$r = -.199$ $r^2 = .040$ $p < .001$	$r = -.014$ $r^2 = .000$ $p < .001$	$r = -.222$ $r^2 = .049$ $p < .001$
Anxious attachment subscale	$r = -.190$ $r^2 = .036$ $p < .001$	$r = -.103$ $r^2 = .011$ $p > .05$ (NS)	$r = -.171$ $r^2 = .029$ $p < .01$	$r = -.256$ $r^2 = .065$ $p < .001$	$r = -.082$ $r^2 = .007$ $p > .05$ (NS)	$r = -.225$ $r^2 = .051$ $p < .001$
Avoidant attachment subscale	$r = -.119$ $r^2 = .014$ $p < .05$	$r = -.194$ $r^2 = .038$ $p < .001$	$r = -.088$ $r^2 = .008$ $p > .05$ (NS)	$r = -.053$ $r^2 = .003$ $p > .05$ (NS)	$r = .062$ $r^2 = .004$ $p > .05$ (NS)	$r = -.119$ $r^2 = .014$ $p < .05$

Table 7

*Correlation Coefficients for the Impact of Event Scale (IES-R) and Posttraumatic Growth Inventory (PTGI)*

Trauma	Posttraumatic Growth					
	PTGI Total Score	Relating to Others Subscale	New Possibilities Subscale	Personal Strength Subscale	Spiritual Change Subscale	Appreciation of Life Subscale
IES-R total score	$r = -.113$ $r^2 = .013$ $p > .05$ (NS)	$r = -.079$ $r^2 = .006$ $p > .05$ (NS)	$r = -.114$ $r^2 = .013$ $p > .05$ (NS)	$r = -.172$ $r^2 = .030$ $p < .01$	$r = .013$ $r^2 = .000$ $p > .05$ (NS)	$r = -.104$ $r^2 = .011$ $p > .05$ (NS)
Intrusion subscale	$r = -.103$ $r^2 = .011$ $p > .05$ (NS)	$r = -.066$ $r^2 = .004$ $p > .05$ (NS)	$r = -.115$ $r^2 = .013$ $p < .05$	$r = -.174$ $r^2 = .030$ $p < .01$	$r = .016$ $r^2 = .000$ $p > .05$ (NS)	$r = -.076$ $r^2 = .006$ $p > .05$ (NS)
Avoidance subscale	$r = -.082$ $r^2 = .007$ $p > .05$ (NS)	$r = -.040$ $r^2 = .002$ $p > .05$ (NS)	$r = -.098$ $r^2 = .010$ $p > .05$ (NS)	$r = -.118$ $r^2 = .014$ $p < .05$	$r = .012$ $r^2 = .000$ $p > .05$ (NS)	$r = -.097$ $r^2 = .009$ $p > .05$ (NS)
Hyperarousal subscale	$r = -.127$ $r^2 = .016$ $p < .05$	$r = -.116$ $r^2 = .013$ $p < .05$	$r = -.098$ $r^2 = .010$ $p > .05$ (NS)	$r = -.183$ $r^2 = .034$ $p < .001$	$r = .007$ $r^2 = .000$ $p > .05$ (NS)	$r = -.115$ $r^2 = .013$ $p < .05$

Pearson's correlation analysis revealed statistically significant relationships between Trauma (as measured by the IES-R; Weiss & Marmar, 1996) and Attachment Style (as measured by the ECR-S; Wei et al., 2007) among total scores as well as all subscales (See table 6). The relationship between the trauma and attachment style based on total scores was moderate ( $r = .417$ ) with a large effect size ( $r^2 = .174$ ), while the relationship between trauma (based on the total score of the IES-R) and anxious attachment (based on the anxious attachment subscale of the ECR-S) was small ( $r = .281$ ) with a medium effect size ( $r^2 = .079$ ), and the relationship between trauma (based on the total score of the IES-R) and avoidant attachment (based on the avoidant attachment subscale of the ECR-S) was moderate ( $r = .372$ ) with a large effect size ( $r^2 = .138$ ). The relationship between the attachment style (based on the total score of the ECR-S) and all three subscales of the IES-R measuring trauma were moderate with large effect sizes: (a) intrusion subscale ( $r = .368$ ,  $r^2 = .135$ ), avoidance subscale ( $r = .386$ ,  $r^2 = .149$ ), and (c) hyperarousal subscale ( $r = .392$ ,  $r^2 = .153$ ). The relationship between anxious attachment (based on the anxious attachment subscale of the ECR-S) and all three subscales of the IES-R measuring trauma were small with moderate effect sizes: (a) intrusion subscale ( $r = .248$ ,  $r^2 = .062$ ), (b) avoidance subscale ( $r = .254$ ,  $r^2 = .065$ ), and (c) hyperarousal subscale ( $r = .270$ ,  $r^2 = .073$ ). The relationship between avoidant attachment (based on the avoidant attachment subscale of the ECR-S) and all three subscales of the IES-R measuring trauma were moderate with medium effect sizes: (a) intrusion subscale ( $r = .328$ ,  $r^2 = .107$ ), (b) avoidance subscale ( $r = .351$ ,  $r^2 = .123$ ), and (c) hyperarousal subscale ( $r = .342$ ,  $r^2 = .117$ ).

Additionally, results revealed statistically significant relationships between Attachment Style (as measured by the ECR-S; Wei et al., 2007) and PTG (as measured by the PTGI; Tedeschi & Calhoun, 1996) among total scores as well as all subscales with the exception of the relationships between (a) Anxious Attachment and Relating to Others, (b) Anxious Attachment and Spiritual Change, (c) Avoidant Attachment and New Possibilities, and (d) Avoidant Attachment and Spiritual Change which were all found to be *not* statistically significant. The relationship between attachment style (based on the total score of the ECR-S) and PTG (based on total scores as well as all five subscale scores of the PTGI) were negative and small with small effect sizes: (a) total PTGI ( $r = -.198$ ,  $r^2 = .039$ ), (b) Relating to Others subscale ( $r = -.189$ ,  $r^2 = .036$ ), (c) New Possibilities subscale ( $r = -.167$ ,  $r^2 = .028$ ), (d) Personal Growth subscale ( $r = -.199$ ,  $r^2 = .040$ ), (e) Spiritual Change subscale ( $r = -.014$ ,  $r^2 = .000$ ), and (f) Appreciation of life subscale ( $r = -.222$ ,  $r^2 = .049$ ). The relationship between anxious attachment (based on the anxious attachment subscale of the ECR-S) and PTG (based on the total score of the PTGI) was negative and small with a small effect size ( $r = -.190$ ,  $r^2 = .036$ ), while the relationship between anxious attachment (based on the anxious attachment subscale of the ECR-S) and PTG (based on the subscales of the PTGI) were also negative and small with small effect sizes for the New possibilities subscale ( $r = -.171$ ,  $r^2 = .029$ ) and the Appreciation of Life ( $r = -.225$ ,  $r^2 = .051$ ), but negative and small with a moderate effect size for the Personal Strength subscale ( $r = -.256$ ,  $r^2 = .065$ ). The relationship between avoidant attachment (based on the avoidant attachment subscale of the ECR-S) and PTG was negative and small with small effect sizes based on the total score of the PTGI ( $r = -$



.119,  $r^2 = .014$ ), as well as the Relating to Others ( $r = -.194$ ,  $r^2 = .038$ ), and Appreciation of Life subscales ( $r = -.119$ ,  $r^2 = .014$ ).

Conversely, results revealed that the relationship between trauma (as measured by the IES-R; Weiss & Marmar, 1996), and PTG (as measured by the PTGI; Tedeschi & Calhoun, 1996) was *not* statistically significant among total scores as well as most subscales, with the exception of (a) Hyperarousal and PTG total score, (b) Hyperarousal and Relating to Others, (c) Intrusion and New Possibilities, (d) Trauma total score and Personal Strength, (e) Intrusion and Personal Strength, (f) Avoidance and Personal Strength, (g) Hyperarousal and Personal Strength, and (h) Hyperarousal and Appreciation for life which were all found to be statistically significant. The relation between trauma (based on the total score of the IES-R) and the personal strength subscale of the PTGI was negative and small with a small effect size ( $r = -.172$ ,  $r^2 = .030$ ), while the relationship between trauma (based on the intrusion subscales of the IES-R) and PTG (based on the subscales of the PTGI) were also negative and small with small effect sizes: (a) new possibilities subscale ( $r = -.115$ ,  $r^2 = .013$ ), and (b) personal strength subscale ( $r = -.174$ ,  $r^2 = .030$ ); the relationship between trauma (based on the avoidance subscales of the IES-R) and PTG (based on the personal strength subscale of the PTGI) was negative and small with small effect sizes ( $r = -.118$ ,  $r^2 = .014$ ). Additionally, the relationship between trauma (based on the hyperarousal subscales of the IES-R) and PTG (based on the total score and subscales of the PTGI) was negative and small with small effect sizes: (a) total score ( $r = -.127$ ,  $r^2 = .016$ ), (b) relating to others subscale ( $r = -.116$ ,  $r^2 = .013$ ), (c) personal strength ( $r = -.183$ ,  $r^2 = .034$ ), and (d) spiritual change ( $r = -.115$ ,  $r^2 = .013$ ).

### Mediation Analysis

Prior to moving forward to model specification and identification, the researcher chose to explore attachment as a mediator using PROCESS Procedure for SPSS (Hayes, 2013). Trauma, as measured by the IES-R (Weiss & Marmar, 1996) was identified as the independent variable; attachment, as measured by the ECR-S (Wei et al., 2007) was identified as the mediator; and posttraumatic growth, as measured by the PTGI (Tedeschi & Calhoun, 1996) was identified as the dependent variable. The results of the Path Analysis revealed that the total effect of trauma on PTG with mediator present was statistically significant ( $-.127, p < .05$ ), while the direct effect of trauma on PTG without the mediator was not statistically significant ( $-.041, p > .05$ ), and the indirect effect of trauma on PTG through the mediator was statistically significant ( $-.086, p < .05$ ). The mediation effect is calculated as the total effect ( $-.127$ ) minus the direct effect ( $-.041$ ), which equals  $-.086$ . Trauma predicted 17% ( $r = .4168$ ) of the variance in attachment,  $F(1, 290) = 57.1245, p < .000$ ; while the mediating effect of attachment predicted 4% ( $r = .2011$ ) of the variance in PTG,  $F(2, 289) = 6.7680, p < .01$ , and trauma did *not* have a significant direct effect on PTG ( $p > .05$ ). Results of the PROCESS Procedures revealed that attachment style was a statistically significant predictor of PTG (4%,  $r = .040, p < .01$ ), and when run as a mediator, attachment showed to be a statistically significant mediator between trauma and PTG. The overall model is significant  $F(1, 290) = 3.7299, p \leq .05, R^2 = .0127$ ;  $b = -.1270, t(290) = -1.9313, p \leq .05$ . These results show that attachment style changes the relationship between trauma and PTG. Bootstrap results show that the total effect of trauma on PTG ( $-.1270$ ) minus the direct effect of trauma on

PTG  $(-.0409) = -.0861$ . As such, the indirect effect of trauma on PTG with attachment as a mediator is  $-.08$ . The model summaries for the PROCESS procedure are found in Tables 8, 9, and 10.

Table 8

*Model Summary: The Effect of Trauma on Attachment*

$R$	$R^2$	MSE	F	$df_1$	$df_2$	$p$
.4168	.1737	125.8832	57.1245	1.000	290.0000	.000

Table 9

*Model Summary: The Effect of Attachment on Posttraumatic Growth (PTG)*

$R$	$R^2$	MSE	F	$df_1$	$df_2$	$p$
.2011	.0404	543.2140	6.7680	2.0000	289.0000	.0013

Table 10

*Model Summary: Total Effect Model*

$R$	$R^2$	MSE	F	$df_1$	$df_2$	$p$
.1127	.0127	556.9965	3.7299	1.000	290.000	.0544

## Model Specification and Identification

The measurement model was specified and identified before testing the hypothesized model. Bryne (2010) suggests that measurement models are psychometrically sound for the dataset and that the validity of the measurement should be evaluated before assessing the structural model. In order to assess the validity of the measurement model, confirmatory factor analysis (CFA) was conducted to assess the fit of the indicators measuring the latent variables. A CFA was conducted on each measure to ensure that the items loaded independently on the factors identified in the previous research (Tedeschi & Calhoun, 1996; Wei et al., 2007; Weiss & Marmar, 1996). The CFA for each measurement model provided rationale for possibly modifying the models for these data.

### Confirmatory Factor Analysis: Trauma

Trauma was measured using the *Impact of Event Scale-Revised* (Weiss & Marmar, 1996). The CFA of the IES-R was conducted based on the structure proposed by Weiss and Marmar, (1996). The IES-R produces a total score as well as mean scores for each of the three factors. The item loading factors were examined using .5 as a guideline for good loading (Comrey & Lee, 1992; Tabachnick & Fidell, 2013). Although a review of the model fit summary revealed that the model fit was not acceptable, a review of the modification indices revealed that respecifying the model according to the modification indices could result in a better model fit, therefore the model was respecified (see figure 11) by allowing errors 7 and 20 (M.I. = 114.360) to be covaried based on the modification indices, and were theoretically justified. Although the

researcher sought to only allow errors that belonged to the same factor (e.g., error 1 [item 2] and error 6 [item 3]) to covary, review of the modification indices revealed that covarying errors 7 and 20 would result in the best fit with these data, and are theoretically justified. As suggested by Kenny (2011), covarying errors should be done cautiously. Thus, the researcher examined the modification indices as well as the assessment items that correspond with the errors in question, to ensure theoretical justification for covarying such errors. The specification provided an acceptable fit with these data (see Table 11 and Figure 11) to represent the data (Byrne, 2010).

Table 11

*Model Fit Indices of the IES-R (First Order CFA)*

Model	$\chi^2$	df	p	CMIN/df	GFI	CFI	TLI	RMSEA	SRMR
Model 1	695.095	206	.000	3.374	.826	.881	.867	.090	.099
$\Delta$ Model	-141.281	-1	.000	-0.672	+0.024	+0.034	+0.037	-0.014	
Model 2	553.814	205	.000	2.702	.851	.915	.904	.076	.088

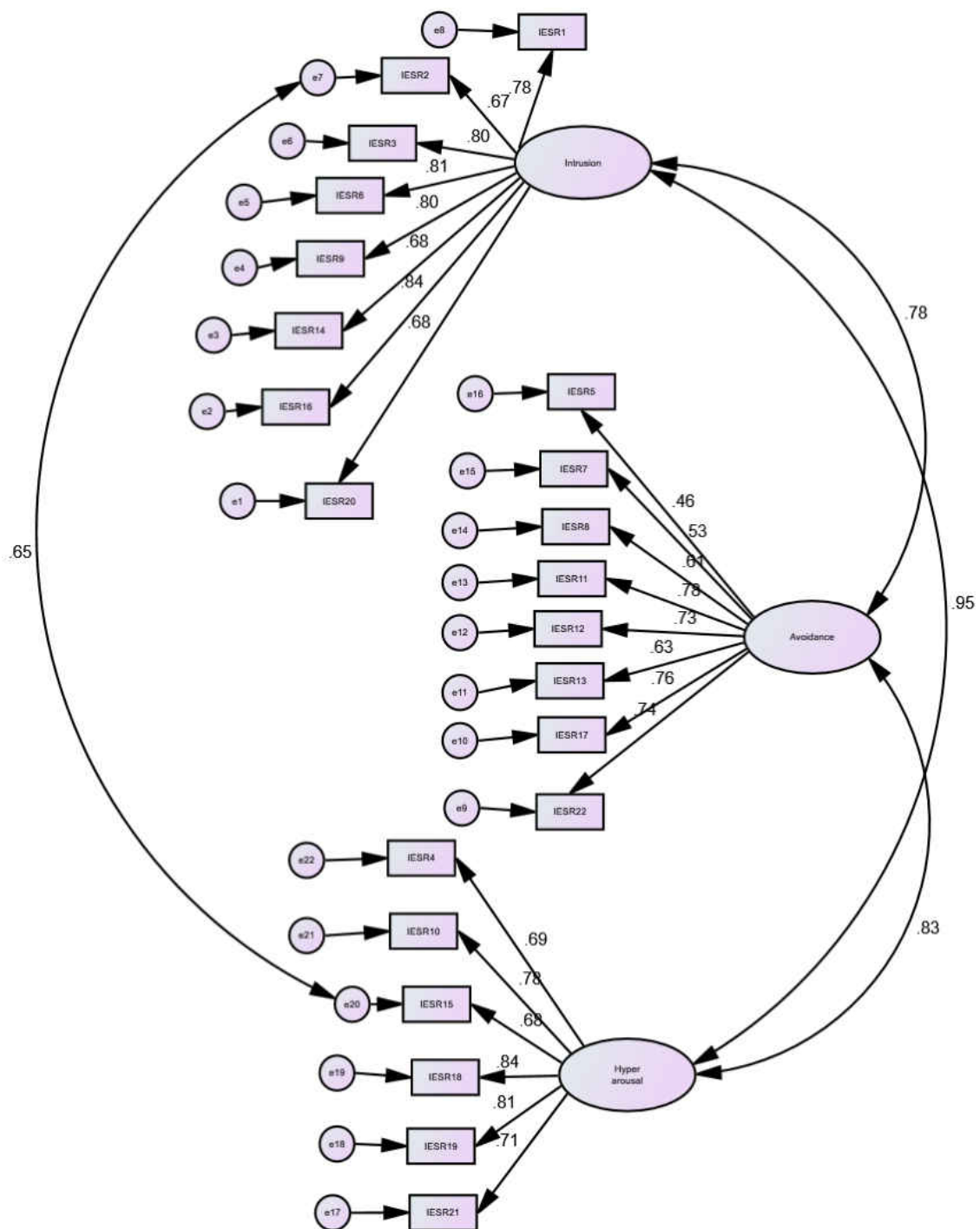


Figure 11. First Order Confirmatory Factor Analysis IES-R

A second order CFA was conducted because of high correlations among factors (Intrusion and Avoidance = .78; Avoidance and Hyperarousal = .83, and Intrusion and Hyperarousal = .94) of the IES-R. The second order CFA involved adding a single second order factor (IESR) as the first order factors may be better explained by a higher order structure (Byrne, 2010). Results revealed, that specification provided an acceptable fit with these data according to the  $\chi^2$  ratio (2.70), CFI (.92), TLI (.90), and RMSEA (.08); however, GFI = .850 reveal poor fit of the IES-R with these data (see Figure 12 and Table 12). Given that the sample size is small ( $N = 292$ ), Hu and Bentler (1996) suggest consulting the CFI for goodness of fit. Therefore, on the basis of findings related to the test of validity of the IES-R, this measurement model represents an acceptable fit to represent the data (Byrne, 2010).

Table 12

*Model Fit Indices of the IES-R (Second Order CFA)*

Figure	$\chi^2$	<i>df</i>	<i>p</i>	CMIN/ <i>df</i>	GFI	CFI	TLI	RMSEA	SRMR
	553.814	205	.000	2.702	.850	.915	.904	.076	.088

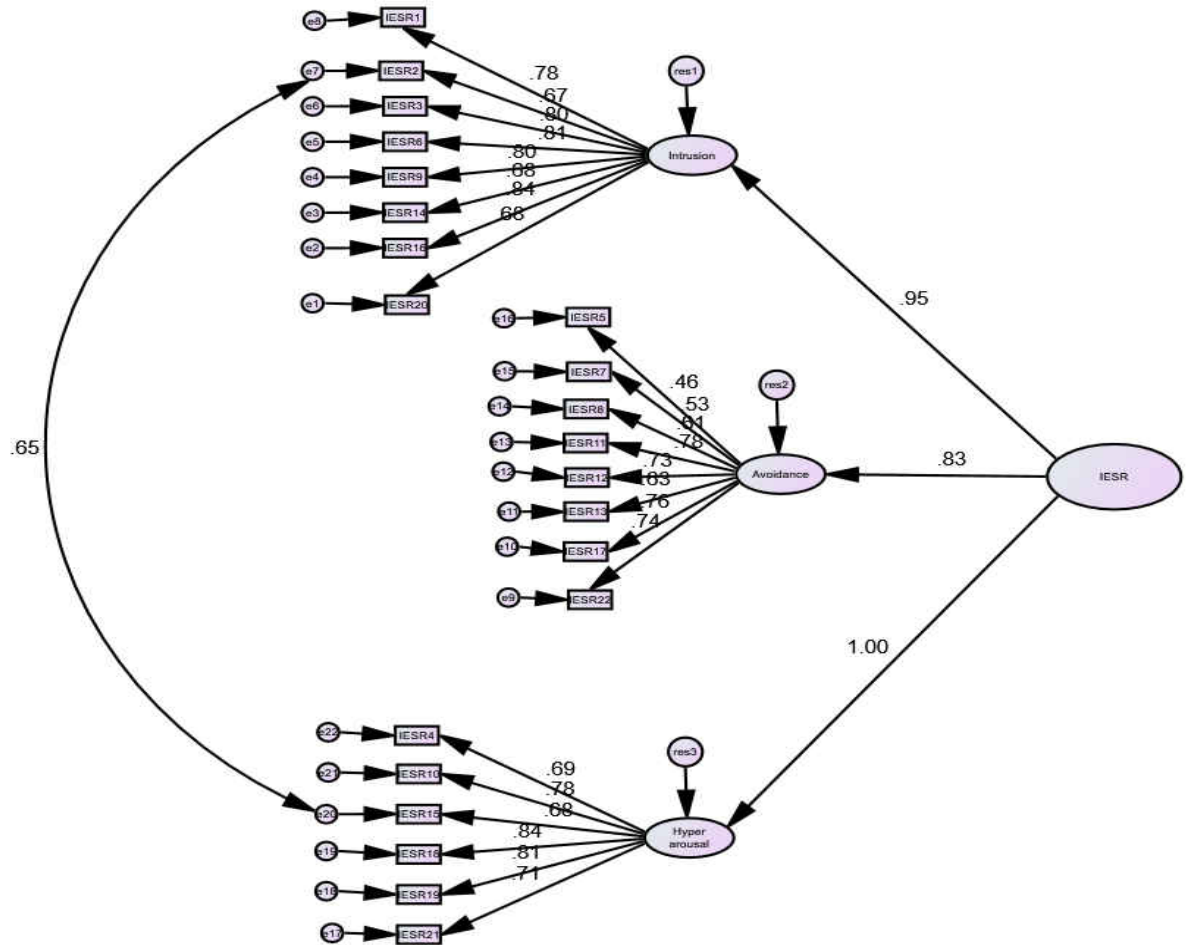


Figure 12. Second Order Confirmatory Factor Analysis IES-R



### Confirmatory Factor Analysis: Attachment

Attachment style was measured using the *Experiences in Close Relationships-Short Form* (Wei et al., 2007). The CFA of the ECR-S was conducted based on the factor structure proposed by Wei and colleagues (2007) and because the ECR-S is a two factor instrument, all items were constrained to load onto two factors. The item loading factors were examined using .5 as a guideline for good loading (Comrey & Lee, 1992; Tabachnick & Fidell, 2013). A review of the model fit summary revealed that this was not a good fitting model, and the modification indices revealed that respecifying the model according to the modification indices could result in a better model fit; therefore, the model was respecified (see Figure 13) by covarying errors 4 and 6 (M.I. = 13.436), 1 and 5 (M.I. = 77.375), 5 and 9 (M. I. = 35.994), and 1 and 9 (M.I. = 30.880) based on the modification indices, and were theoretically justified. The specification provided an acceptable fit with these data according to the  $\chi^2$  ratio (2.434), CFI (.93), GFI (.938), TLI (.91), and RMSEA (.07) (see Figure 13 and Table 13).

Table 13

#### *Model Fit Indices for the ECR-S (First Order CFA)*

Model	$\chi^2$	df	p	CMIN/df	GFI	CFI	TLI	RMSEA	SRMR
Model 1	278.255	53	.000	5.250	.858	.789	.738	.121	.320
$\Delta$ Model	-158.971	-4	.000	-2.816	+0.08	+0.145	+0.173	-0.051	
Model 2	119.284	49	.000	2.434	.938	.934	.911	.070	.237

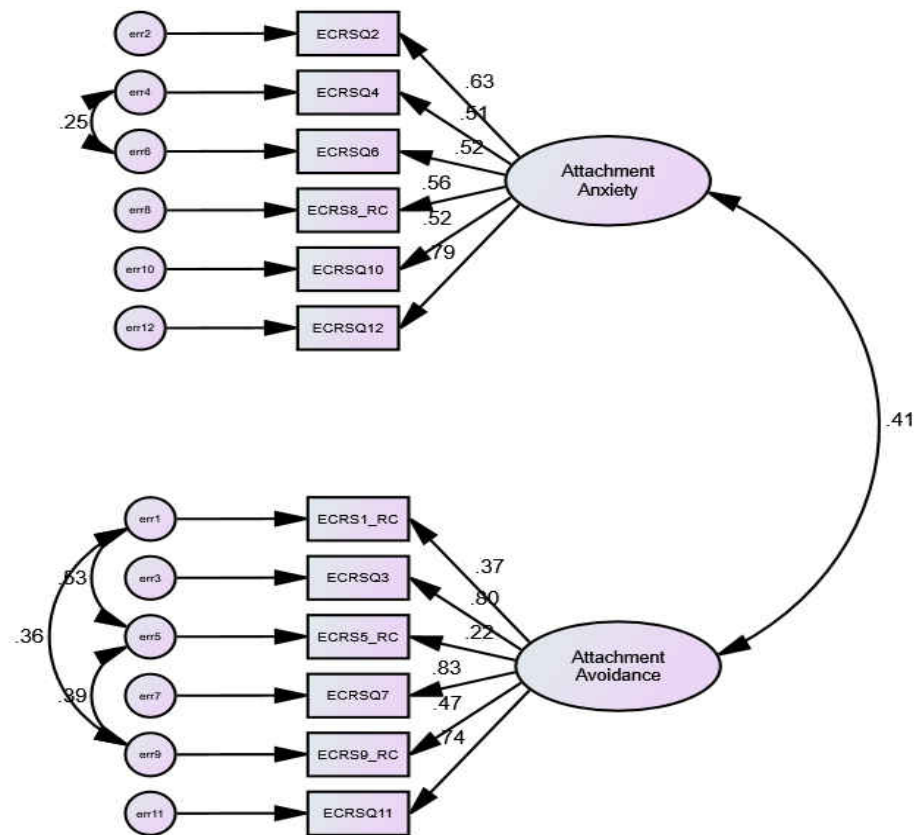


Figure 13. First Order Confirmatory Factor Analysis of the ECR-S

A second order CFA was conducted of the ECR-S. Although the correlation among factors (Anxiety and Avoidance) of the ECR-S were not high (.4), the researcher chose to conduct a second order CFA because the two factors (Anxiety and Avoidance) are both indicative of insecure attachment, and adding a second order factor may better explain the first order factors. The second order CFA involved adding a single second order factor (ECRS) as the first order factors may be better explained by a higher order structure (Byrne, 2010). Results revealed, that specification provided an acceptable fit with these data according to the  $\chi^2$  ratio (2.43), GFI (.94), CFI (.93), TLI (.91), and RMSEA (.07), (see Figure 14 and Table 14). Therefore, on the basis of findings related to the test of validity of the ECR-S, this measurement model represents an acceptable fit to represent the data (Byrne, 2010).

Table 14

*Model Fit Indices for the ECR-S (Second Order CFA)*

Figure	$\chi^2$	df	p	CMIN/df	GFI	CFI	TLI	RMSEA	SRMR
Figure 5	119.284	49	.000	2.434	.938	.934	.911	.070	.237

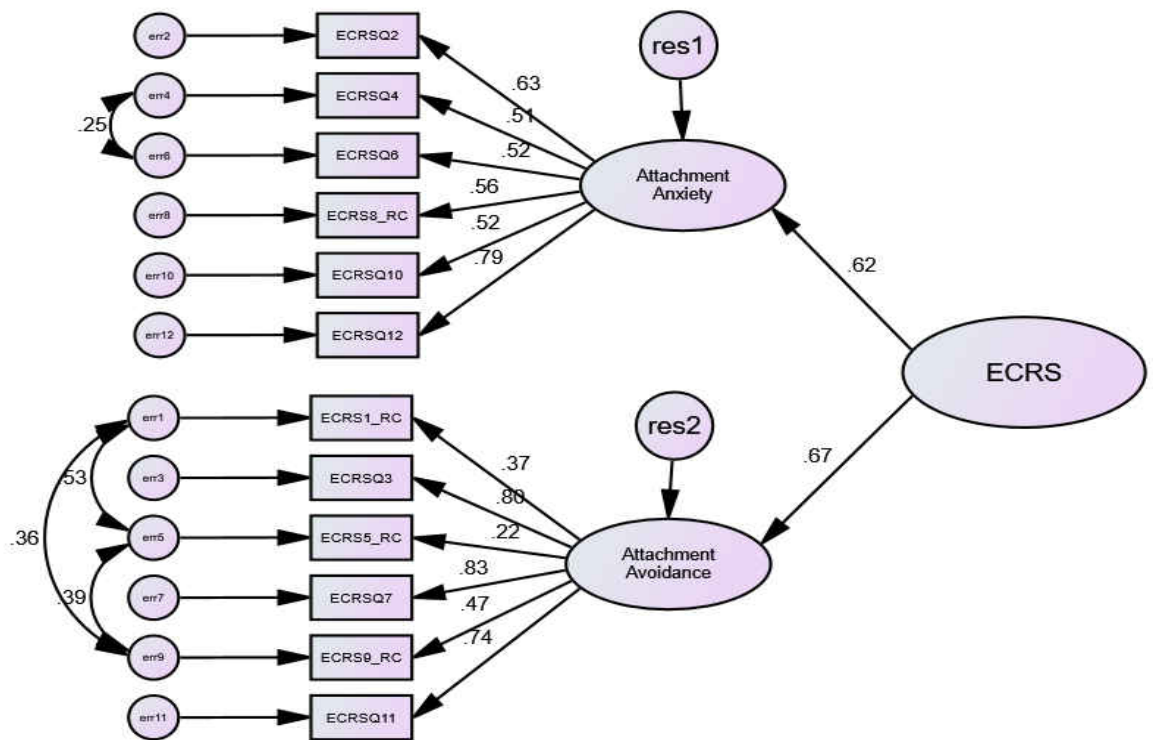


Figure 14. Second Order Confirmatory Factor Analysis of the ECR-S

### Confirmatory Factor Analysis: Posttraumatic Growth

Posttraumatic growth was measured using the *Posttraumatic Growth Inventory* (Tedeschi & Calhoun, 1996). The CFA of the PTGI was conducted based on the structure proposed by Tedeschi and Calhoun (1996). The item loading factors were examined using .5 as a guideline for good loading (Comrey & Lee, 1992; Tabachnick & Fidell, 2013). A review of the model fit summary revealed that the model fit was not acceptable, and a review of the modification indices revealed that respecifying the model according to the modification indices could result in a better model fit; therefore, the model was respecified (see figure 15) by allowing errors 3 and 8 (M. I. = 41.094), and 14 and 19 (M. I. = 34.972) to be covaried based on the modification indices, and were theoretically justified. Although the researcher sought to only allow errors that belonged to the same factor (e.g., error 7 [item 6] and error 3 [item 16]) to covary, a review of the modification indices revealed that covarying errors 3 and 8, and 14 and 19, would result in the best fit with these data, and are theoretically justified. The respecification provided an acceptable fit with these data according to the  $\chi^2$  ratio (2.75), GFI (.86), CFI (.91), TLI (.90), and RMSEA (.08); (see Figure 15 and Table 15).

Table 15

*Model Fit Indices for the PTGI (First Order CFA)*

Model	$\chi^2$	df	P	CMIN/df	GFI	CFI	TLI	RMSEA	SRMR
Model 1	569.295	179	.000	3.180	.842	.889	.870	.087	.164
$\Delta$ Model	-83.141	-2	.000	-0.433	+0.022	+0.023	+0.026	-0.01	
Model 2	486.154	177	.000	2.747	.864	.912	.896	.077	.159

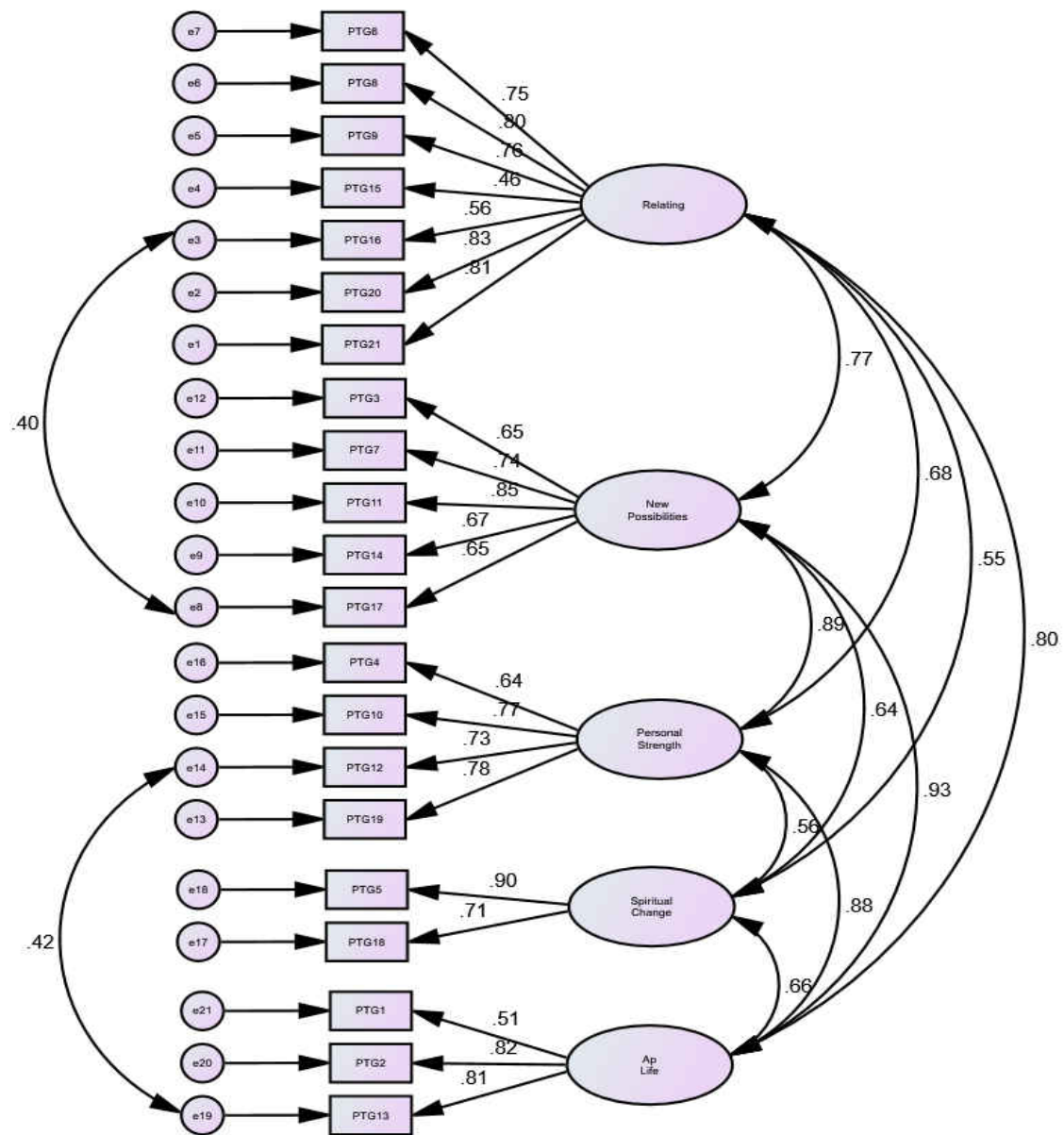


Figure 15. First Order Confirmatory Factor Analysis PTGI

A second order CFA was conducted because of high correlations among factors (Relating to Others and New Possibilities = .77; New Possibilities and Personal Strength = .89; Relating to Others and Appreciation of Life = .81; New Possibilities and Appreciation of Life = .94; and Personal Strength and Appreciation of Life = .90) of the PTGI. The second order CFA involved adding a single second order factor (PTGI) as the first order factors may be better explained by a higher order structure (Byrne, 2010). Results revealed, that specification provided an acceptable fit with these data according to the  $\chi^2$  ratio (2.72), CFI (.911), TLI (.898), and RMSEA (.08); however, GFI (.860) reveal poor fit of the PTGI with these data (see Figure 16 and Table 16). Given that the sample size is small ( $N = 292$ ), Hu and Bentler (1996) suggest consulting the CFI for goodness of fit. Therefore, on the basis of findings related to the test of validity of the PTGI, this measurement model represents an acceptable fit to represent the data (Byrne, 2010).

Table 16

*Model Fit Indices for the PTGI (Second Order CFA)*

Figure	$\chi^2$	<i>df</i>	<i>P</i>	CMIN/ <i>df</i>	GFI	CFI	TLI	RMSEA	SRMR
Figure 9	494.669	182	.000	2.718	.860	.911	.898	.077	.161

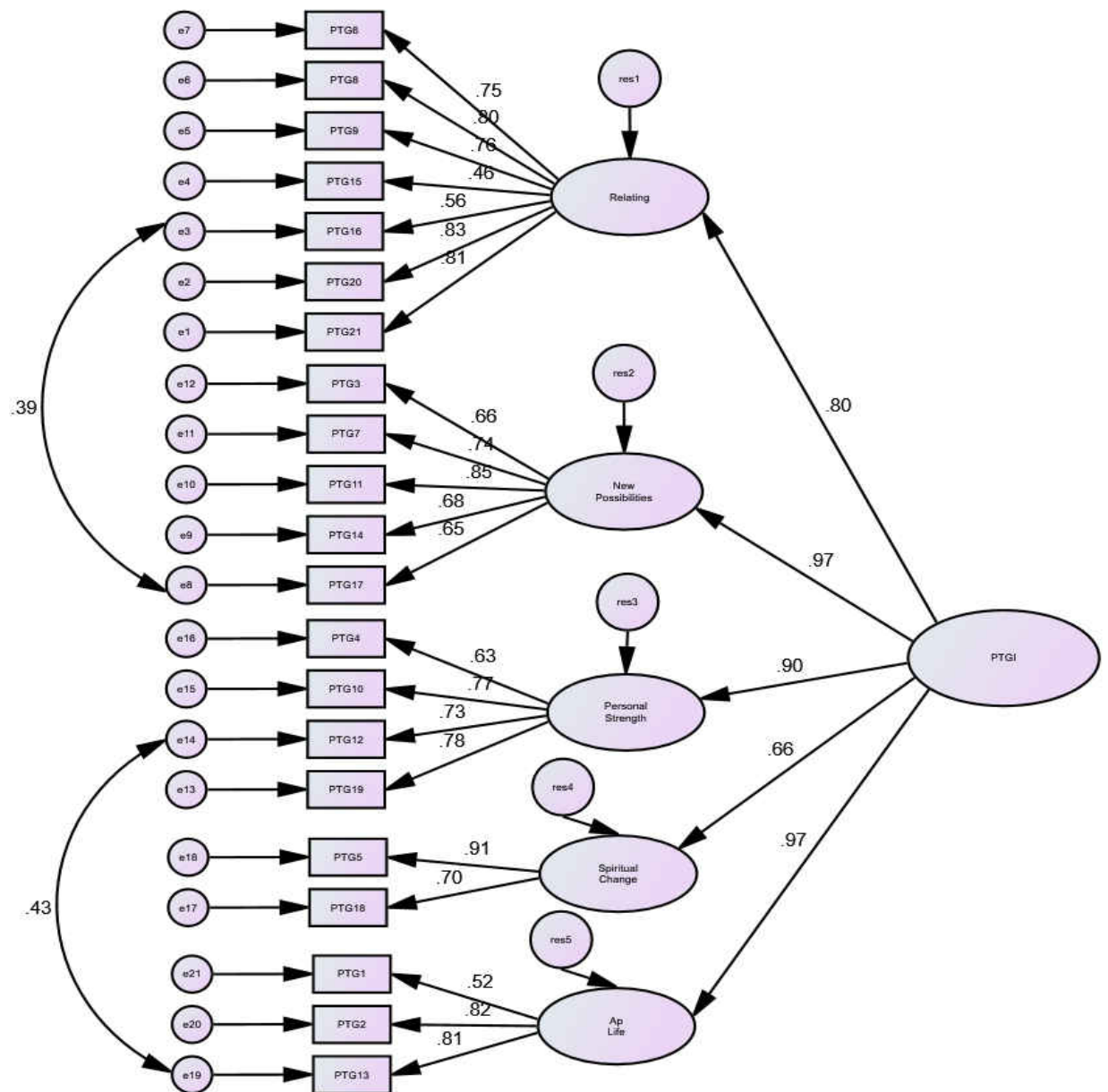


Figure 16. Second Order Confirmatory Factor Analysis PTGI



After exploring the measurement models through CFA, the researcher used SEM to examine the complete structural model. The complete structural model is comprised of the measurement models and structural model. The measurement models depict the links between latent variables and their observed variables, and the structural model depicts the links among the latent variables themselves (Byrne, 2010). SEM was used to examine the relationships between these variables.

#### Complete SEM Model

The complete SEM model was specified based on the measurement models. Trauma was defined as an exogenous latent variable, measured by three factor subscale scores on the *Impact of Event Scale-Revised*. Attachment was defined as mediation construct, measured by two factors on the *Experiences in Close Relationships-Short Form*. Posttraumatic growth was defined as an endogenous latent variable measured by the five factors of the *Posttraumatic Growth Inventory*. The full SEM model was estimated and it demonstrated an acceptable fit for these data according to  $\chi^2$  ratio (1.87), and RMSEA (.06); however, the GFI (.76) and TLI (.86) indicate poor fit for these data, while the CFI (.87) approximates the recommended cut off value of .90 to indicate a good fit. The modification indices and regression weights offer no other suggestions for model respecification, and it made no theoretical sense to alter the model further. Therefore, the researcher did not have to modify the model (see Figure 17 and Table 17). As such, the complete structural model shown in Figure 17 offers the most parsimonious and best fitting model to the data.

Table 17

*Complete SEM Model Fit Indices*

Figure	$\chi^2$	<i>df</i>	<i>p</i>	CMIN/ <i>df</i>	GFI	CFI	TLI	RMSEA	SRMR
Figure 18	2631.367	1410	.000	1.866	.757	.868	.861	.055	.176



According to the complete SEM model (see figure 17), level of trauma experienced by adult survivors of CSA (as measured by intrusion, avoidance, and hyperarousal) contributed to 39% of the variance in the attachment style ( $p < .000$ ) of adult survivors of CSA (standardized coefficient = .63). While the mediating effect of attachment style, contributed to 8% of the variance in the presence of PTG ( $p < .05$ ) among adult survivors of CSA (standardized coefficient -.31). Therefore, adult survivors of CSA scoring higher in trauma also have higher levels of insecure attachment. In addition, adult survivors of CSA scoring higher in insecure attachment have lower levels of PTG. However, trauma scores among survivors of CSA showed to have no significant influence on the presence of PTG in this sample ( $p = .756$ ). A review of the regression weights revealed that the effect of trauma on attachment was statistically significant ( $C.R. [.069/.314] = 4.549, p < .000$ ), and the effect of attachment on PTG was also statistically significant ( $C.R. [.345/-.701] = -2.033, p < .05$ ). However, the effect of trauma on PTG was not statistically significant ( $C.R. [.124/.038] = .310, p > .05$ ).

The direct effect of trauma (as measured by the IES-R) on PTG (as measured by the PTGI) was statistically significant ( $p < .05$ ), then the direct effect with mediation (i.e., attachment [as measured by the ECR-S]) drops in significance ( $p > .05$ ), which indicates full mediation (Baron & Kenny, 1986), and the indirect effect as shown through Bootstrap with AMOS is statistically significant ( $p < .05$ ) (see Table 18).

Table 18

*Mediation Effect in AMOS*

Relationship	Direct Effect		Indirect Effect	Total Effect
	Without Mediator	With Mediator		
IES → PTG	-.159 ( $p = .014$ )	.038 ( $p = .970$ )		
IES → ATT		.314 ( $p = .007$ )		
ATT → PTG		-.701 ( $p = .048$ )		
ATT → PTG			-.220 ( $p = .036$ )	
(Indrt) + (Dirct) (A → P) + (T → P)				-.182 ( $p = .017$ )

These results reveal that attachment style serves as a mediator among these data. The sample used for this study showed 34.25% ( $n = 100$ ) with anxious attachment, 8.2% ( $n = 24$ ) with avoidant attachment, and 32.88% ( $n = 96$ ) with no discrepancy between the anxious or avoidant attachment style. Based on Wei and colleagues (2007), it can be assumed that the remaining 24.66 % ( $n = 72$ ) of participants have secure attachment.

The relationship identified between trauma and attachment style was a positive correlation, suggesting that higher levels of trauma contributed to higher levels of insecure attachment, while levels of trauma did not have a significant influence on the presence of PTG. In addition, the results identified that greater levels of insecure attachment contributed to lower levels of PTG. Specifically, the results revealed that those participants who had insecure attachment styles experienced less PTG.

The addition of parameters, as identified by modification indices, was found to be justified, and no modification indices associated with structural paths were present in the output. Thus, no further consideration was given to the inclusion of additional

parameters. In reviewing the structural parameter estimates for the final model, the paths between trauma and attachment were statistically significant ( $p < .001$ ), and the paths between attachment and PTG were statistically significant ( $p = .042$ ); however, the paths between trauma and PTG were *not* statistically significant ( $p = .756$ ). Although, trauma showed to have no statistical significance on PTG, in the interest of model fit and parsimony, this structural model was identified as the best fitting model for these data. The model for these data had an acceptable fit (see Table 16).

The results of the SEM analysis of the complete structural model using AMOS are consistent with the results of the PROCESS path analysis regarding attachment as a mediating variable. Both PROCESS and AMOS reveal that attachment serves as a full mediating variable between trauma and PTG with these data. The results of the path analysis revealed that trauma predicted 17% ( $r = .4168$ ) of the variance in attachment,  $F(1, 290) = 57.1245, p < .000$ ; while the mediating effect of attachment predicted 4% ( $r = .2011$ ) of the variance in PTG,  $F(2, 289) = 6.7680, p < .001$ ; and trauma did not have a significant direct effect on PTG ( $p > .05$ ). Results of the PROCESS Procedures revealed that attachment style is a significant predictor of PTG, and when run as a mediator, showed to be a significant mediator between trauma and PTG. Similarly with AMOS, the path between trauma and attachment was statistically significant ( $p < .001$ ), and the path between attachment and PTG was statistically significant ( $p = .042$ ); however, the path between trauma and PTG was not statistically significant ( $p = .756$ ).

## Exploratory Research Questions

The exploratory research questions were examined using a one-way between groups analysis of variance (ANOVA), to explore the effect of participants' demographic variables on attachment style (as measured by the ECR-S; Wei et al., 2007), PTG (as measured by the PTGI; Tedeschi & Calhoun, 1996), and trauma (as measured by the IES-R; Weiss & Marmar, 1996).

### Exploratory Research Question 1

Is there a statistically significant difference in attachment styles of adult survivors of CSA as measured by the ECR-S (Wei et al., 2007), and their reported demographic variables (i.e., gender, age, race, relationship status, time since event, identification as spiritual/religious, relationship with caregiver, and history of receiving psychological services)?

The relationship between adults' attachment (as measured by the ECR-S; Wei et al., 2007) and their demographic variables was investigated using one-way between-groups analysis of variance (ANOVA). The analyses revealed that 10% of the variability in Attachment is accounted for by relationship status. There was a statistically significant difference at the  $p < .000$  level in ECR-S scores for the four categories of relationship status (Single; Engaged/ In a committed relationship; Married/Partnered; Divorced/ Separated):  $F(3, 262) = 9.065, p < .000$ . The effect size, calculated using partial eta squared, was .095. The results of the ANOVA for the relationship between adult's attachment style and their relationship status is reflected in Table

Table 19

*Descriptive Statistics: Attachment Style and Relationship Status*

Relationship Status	Mean	Std. Deviation	N
Single	48.9803	11.24301	43
Engaged/Committed	49.3953	10.01698	43
Married	44.5782	12.83749	135
Separated/Divorced	55.2439	11.00177	41
Total	47.7604	12.42453	262

Table 20

*Results of ANOVA: Attachment Style and Relationship Status*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
Corrected Model	3842.092 <sup>a</sup>	3	1280.697	9.065	.000	.095	27.196	.996
Intercept	501631.136	1	501631.136	3550.814	.000	.932	3550.814	1.000
Relation status	3842.092	3	1280.697	9.065	.000	.095	27.196	.996
Error	36448.213	258	141.272					
Total	637925.979	262						
Corrected Total	40290.305	261						

a. R Squared = .095 (Adjusted R Squared = .085)

b. Computed using alpha = .05

Post-hoc comparisons using Tukey HSD test indicated that the mean score for Married/Partnered ( $M = 44.58$ ,  $SD = 12.84$ ,  $n = 135$ ), was different from Single ( $M = 48.98$ ,  $SD = 11.24$ ,  $n = 43$ ), Engaged/In a committed relationship ( $M = 49.40$ ,  $SD = 10.02$ ,  $n = 43$ ), and Divorced/Separated ( $M = 55.24$ ,  $SD = 11.00$ ,  $n = 41$ ). The results of the post-



hoc comparisons between attachment style and relationship status are shown in Tables 21 and 22.

Table 21

*Descriptive Statistics for Post-hoc Comparison: Attachment Style and Relationship Status*

Relationship Status	N	Subset	
		1	2
Married	135	44.5782	
Single	43	48.9803	
Engaged/Committed	43	49.3953	49.3953
Separated/Divorced	41		55.2439
Sig.		.173	.064

*Note.* Means for groups in homogeneous subsets are displayed. based on observed means, the error term is Mean Square(Error) = 141.272.

a. Uses Harmonic Mean Sample Size = 51.080.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

c. Alpha = .05.

Table 22

*Post-hoc Comparisons: Attachment Style and Relationship Status*

Relation Status	Mean Difference	Std. Error	Sig.	95% Confidence Interval	
				Lower Bound	Upper Bound
Single					
Engaged/Committed	-.4150	2.56336	.998	-7.0435	6.2134
Married	4.4021	2.08131	.151	-.9799	9.7841
Separated/Divorced	-6.2636	2.59443	.077	-12.9724	.4452
Engaged/Committed					
Single	.4150	2.56336	.998	-6.2134	7.0435
Married	4.8171	2.08131	.097	-.5648	10.1991
Separated/Divorced	-5.8486	2.59443	.112	-12.5574	.8603
Married					
Single	-4.4021	2.08131	.151	-9.7841	.9799
Engaged/Committed	-4.8171	2.08131	.097	-10.1991	.5648
Separated/Divorced	-10.6657*	2.11946	.000	-16.1463	-5.1851
Divorced					
Single	6.2636	2.59443	.077	-.4452	12.9724
Engaged/Committed	5.8486	2.59443	.112	-.8603	12.5574
Married	10.6657*	2.11946	.000	5.1851	16.1463

*Note.* Based on observed means, the error term is Mean Square(Error) = 141.272.

\*. The mean difference is significant at the .05 level.

The analyses revealed a statistically significant difference in ECR-S scores between married/partnered and separated/divorced participants. Married/Partnered participants scored in the secure attachment range, while separated/divorced participants scored in the insecure attachment range of the ECR-S. There was no statistically significant differences in ECR-S scores between the other groups. These results indicate that survivors of CSA who are married or partnered are more likely to have a secure adult

attachment style, while survivors who are separated or divorced have an insecure attachment style among this sample. These results infer that relationship status may have an influence on adult attachment style, or adult attachment style may have an influence on relationship status among this sample of survivors of CSA.

The analyses revealed that there was *not* a statistically significant difference in ECR-S scores for the following demographic variables: gender, age, race, time since event, history of receiving psychological services, spiritual or religious identification, or caregiver support.

#### Exploratory Research Question 2

Is there a statistically significant difference in experiences of PTG among adult survivors of CSA as measured by the total score of the PTGI (Tedeschi & Calhoun, 1996), and their reported demographic variables (i.e., gender, age, race, time since event, relationship with caregiver, and history of receiving psychological services)?

The relationship between PTG among adult survivors of CSA (as measured by the PTGI; Tedeschi & Calhoun, 1996) and their demographic variables was investigated using one-way between-groups analysis of variance (ANOVA). The analyses revealed that the 4% of the variability in PTG is accounted for by race. There was a statistically significant difference at the  $p < .05$  level in PTG scores for the two categories of race (Caucasian/White [ $n = 205$ ]; and Minority [ $n = 60$ ]):  $F(1, 265) = 10.828, p < .05$ . The effect size, calculated using partial eta squared, was .040. The results of the ANOVA for the relationship between PTG and race are found in Tables 23 and 24.

Table 23

*Descriptive Statistics: Posttraumatic Growth (PTG) and Race*

Race Groups	Mean	Std. Deviation	N
White	61.6488	25.05530	205
Minority	73.3500	21.10974	60
Total	64.2981	24.67297	265

Table 24

*Results of ANOVA: Posttraumatic Growth (PTG) and Race*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
Corrected Model	6355.087 <sup>a</sup>	1	6355.087	10.828	.001	.040	10.828	.906
Intercept	845899.811	1	845899.811	1441.286	.000	.846	1441.286	1.000
Racegroups	6355.087	1	6355.087	10.828	.001	.040	10.828	.906
Error	154356.362	263	586.906					
Total	1256287.000	265						
Corrected Total	160711.449	264						

a. R Squared = .040 (Adjusted R Squared = .036)

b. Computed using alpha = .05

These results indicate that minority groups who have a history of CSA are more likely to experience higher levels of PTG, as opposed to Caucasian/White survivors among this sample. Additionally, the analyses revealed that the 3% of the variability in PTG is accounted for by time passed since the event. There was a statistically significant difference at the  $p < .05$  level in trauma scores for the two categories of time since the event ( $< 20$  years [ $n = 84$ ]; and  $> 20$  years [ $n = 188$ ]):  $F(1, 272) = 7.746, p < .05$ . The

effect size, calculated using partial eta squared, was .028. The results of the ANOVA for the relationship between PTG and time passed since the abuse are displayed in Tables 25 and 26.

Table 25

*Descriptive Statistics: Posttraumatic Growth (PTG) and Time Passed Since Abuse*

Time	Mean	Std. Deviation	N
More than 20 years	66.9681	23.77342	188
Less than 20 years	58.1548	24.91165	84
Total	64.2463	24.42750	272

Table 26

*Results of ANOVA: Posttraumatic Growth (PTG) and Time Passed Since Abuse*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
Corrected Model	4509.700 <sup>a</sup>	1	4509.700	7.746	.006	.028	7.746	.792
Intercept	908953.082	1	908953.082	1561.211	.000	.853	1561.211	1.000
Timegroups	4509.700	1	4509.700	7.746	.006	.028	7.746	.792
Error	157196.797	270	582.210					
Total	1284411.000	272						
Corrected Total	161706.496	271						

a. R Squared = .028 (Adjusted R Squared = .024)

b. Computed using alpha = .05

These results indicate that among this sample of survivors of CSA, those who report that more than 20 years have passed since the event are more likely to experience higher levels of PTG, as opposed to survivors who report that less than 20 years have passed since the event who are more likely to experience less PTG at this time in their lives.

Furthermore, the analyses revealed that the 10% of the variability in PTG is accounted for by identification as spiritual or religious. There was a statistically significant difference at the  $p < .000$  level in PTG scores for the two categories of spiritual/religious identification (yes [ $n = 202$ ]; no [ $n = 71$ ]):  $F(1, 273) = 28.609, p < .000$ . The effect size, calculated using partial eta squared, was .095. Tables 27 and 28 contain the results of the ANOVA for the relationship between posttraumatic growth and spiritual/religious identification.

Table 27

*Descriptive Statistics: Posttraumatic Growth (PTG) and Spiritual/Religious Identification*

Do you identify as spiritual or religious?	Mean	Std. Deviation	N
Yes	68.7228	22.77125	202
No	51.5775	24.51277	71
Total	64.2637	24.38426	273

Table 28

*Results of ANOVA: Posttraumatic Growth (PTG) and Spiritual/Religious Identification*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
Corrected Model	15443.212 <sup>a</sup>	1	15443.212	28.609	.000	.095	28.609	1.000
Intercept	760291.329	1	760291.329	1408.469	.000	.839	1408.469	1.000
Spiritual	15443.212	1	15443.212	28.609	.000	.095	28.609	1.000
Error	146285.799	271	539.800					
Total	1289172.000	273						
Corrected Total	161729.011	272						

a. R Squared = .095 (Adjusted R Squared = .092)

b. Computed using alpha = .05

These results indicate that survivors of CSA who identify as spiritual and/or religious are more likely to experience higher levels of PTG, as opposed to survivors who do not identify as spiritual and/or religious who are more likely to report lower levels of PTG among this sample.

Lastly, the analyses revealed that there was *not* a statistically significant difference in ECR-S scores for the following demographic variables: gender, history of receiving psychological services, or caregiver support.

Exploratory Research Question 3

Is there a statistically significant difference in adults' perceived impact of their experience with CSA as measured by the IES-R (Weiss & Marmar, 1996) and their reported demographic variables (i.e., gender, age, race, time since event, relationship with caregiver, and history of receiving psychological services)?

The relationship between an adults' perceived impact of their experience with CSA (as measured by the IES-R; Weiss & Marmar, 1996) and their demographic variables was investigated using one-way between-groups analysis of variance (ANOVA). The analyses revealed that the 7% of the variability in trauma is accounted for by time passed since the event. There was a statistically significant difference at the  $p < .000$  level in trauma scores for the two categories of time since the event ( $< 20$  years [ $n = 84$ ]; and  $> 20$  years [ $n = 188$ ]):  $F(1, 272) = 19.713, p < .000$ . The effect size, calculated using partial eta squared, was .068. Tables 29 and 30 contain the results of the ANOVA for the relationship between trauma and time passed since the abuse.

Table 29

*Descriptive Statistics: Trauma and Time Passed Since the Abuse*

Time	Mean	Std. Deviation	N
More than 20 years	31.2340	20.60784	188
Less than 20 years	43.0595	19.56968	84
Total	34.8860	20.98334	272



Table 30

*Results of ANOVA: Trauma and Time Passed Since the Abuse*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
Corrected Model	8119.062 <sup>a</sup>	1	8119.062	19.713	.000	.068	19.713	.993
Intercept	320457.651	1	320457.651	778.073	.000	.742	778.073	1.000
Time	8119.062	1	8119.062	19.713	.000	.068	19.713	.993
Error	111202.405	270	411.861					
Total	450355.000	272						
Corrected Total	119321.467	271						

a. R Squared = .068 (Adjusted R Squared = .065)

b. Computed using alpha = .05

These results indicate that survivors of CSA who report that more than 20 years have passed since the event are more likely to experience lower levels of trauma symptomology (*not* indicative of PTSD), as opposed to survivors who report that less than 20 years have passed since the event who are more likely to experience trauma symptomology indicative of a probable PTSD diagnosis among this sample.

Additionally, the analyses revealed that the 2% of the variability in trauma is accounted for by having a history of receiving psychological services. There was a statistically significant difference at the  $p < .05$  level in trauma scores for the two categories of history of psychological services received (yes [ $n = 243$ ]; no [ $n = 29$ ]):  $F(1, 272) = 4.771, p < .05$ . The effect size, calculated using partial eta squared, was .017. The

results of the ANOVA for the relationship between trauma and having a history of receiving psychological services are contained in Tables 31 and 32.

Table 31

*Descriptive Statistics: Trauma and History of Psychological Services*

Have you ever received psychological services (e.g., counseling) for your experience with childho...			
	Mean	Std. Deviation	N
Yes	35.8395	20.83314	243
No	26.8966	20.88804	29
Total	34.8860	20.98334	272

Table 32

*Results of ANOVA: Trauma and History of Psychological Services*

Source	Type III	df	Mean Square	F	Sig.	Partial		
	Sum of Squares					Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
Corrected Model	2072.037 <sup>a</sup>	1	2072.037	4.771	.030	.017	4.771	.586
Intercept	101969.389	1	101969.389	234.813	.000	.465	234.813	1.000
PSYSERV	2072.037	1	2072.037	4.771	.030	.017	4.771	.586
Error	117249.430	270	434.257					
Total	450355.000	272						
Corrected Total	119321.467	271						

a. R Squared = .017 (Adjusted R Squared = .014)

b. Computed using alpha = .05

These results indicate that survivors of CSA who experience trauma symptomology indicative of a probable PTSD diagnosis also have a history of receiving psychological services, as opposed to those who experience trauma symptomology *not* indicative of a probable PTSD diagnosis who have no history of receiving psychological services among this sample. As such, these results infer that survivors of CSA who experience trauma symptomology indicative of a probable PTSD diagnosis are more likely to seek psychological services, as opposed to those who do *not* experience trauma symptomology indicative of a probable PTSD diagnosis who are less likely to seek psychological services among this sample.

Lastly, the analyses revealed that there was *not* a statistically significant difference in ECR-S scores for the following demographic variables: gender, age, race, spiritual or religious identification, or caregiver support.

### Summary

Chapter 4 presented the results of the data analyses procedures which included: (a) descriptive analysis, (b) structural equation modeling, (c) analysis of variance, and (d) Pearson's Correlations (two-tailed). Chapter 5 presents a discussion of the results, offering implications for counselor working with survivors of CSA, counselor educators, and areas for future research.

## CHAPTER 5 SUMMARY, DISCUSSION, AND RECOMMENDATIONS

### Introduction

In this chapter, the results presented in Chapter 4 will be compared to the research findings presented in chapter two. Specifically, the results of the primary research hypothesis and the exploratory questions are discussed and explained. Additionally, this chapter provides (a) a review of the limitations of the study (e.g., research design, sampling, and instrumentation); (b) recommendations for future research; and (c) implications for counselors working with survivors of CSA, the delivery of counselor education, and instrument development.

### Summary of the Study

The purpose of this research study was to investigate the directional relationship between adults' attachment styles and perceived impact of CSA with their experience of posttraumatic growth. This investigation tested the theoretical model that adults' attachment styles (as measured by the *Experiences in Close Relationships-Short Form* [ECR-S] Wei et al., 2007) serve as a mediator between trauma resulting from experience of CSA (as measured by the *Impact of Event Scale-Revised* [IES-R] Weiss & Marmar, 1996) and posttraumatic growth (as measured by the *Posttraumatic Growth Inventory* [PTGI] Tedeschi & Calhoun, 1996). The goals of the research were to: (a) contribute to the counseling literature by investigating the relationship between CSA, attachment style, and PTG, (b) better understand if adult attachment style serves as a mediator between

trauma and PTG, and (c) better understand the relationship between the constructs investigated (CSA, attachment style, and PTG) and reported demographic variables.

### Theoretical Constructs

Three primary constructs served as the theoretical framework for the research study: (a) posttraumatic growth (PTG), (b) trauma, and (c) attachment style. The construct of PTG refers to the ways in which people are positively transformed by the experience of surviving significant adversity (Tedeschi & Calhoun, 2004). The instrument used to measure PTG in this study was the PTGI, which uses the following subscales: relating to others, new possibilities, personal strength, spiritual change, and appreciation of life. Tedeschi and Calhoun (1996) suggested that positive growth can occur in three distinct areas: (a) changes in self, (b) changes in relationships, and (c) changes in philosophy of life. Changes in self refers to changes in how one perceives themselves (Tedeschi & Calhoun, 1996). Changes in relationships refers to a strengthening of relationships, or a greater appreciation of relationships with loved ones (Tedeschi & Calhoun, 1996). Lastly, changes in philosophy of life refers to becoming more appreciative of one's own existence following a significant adversity (Tedeschi & Calhoun, 1996).

The second construct, trauma, was included in this study as CSA has been identified as a traumatic event, even if threatened or actual violence or injury is not involved (Briere, 2006). Trauma refers to an experience that produces physical injury and/or psychological distress (Merriam-Webster, 2016). In this study, trauma as a result of a history with CSA was investigated. The instrument used to measure this construct

(i.e., IES-R) assessed trauma in terms of perception of trauma related to symptomology that corresponds with diagnostic criteria for PTSD (DSM-IV, 2000). The IES-R includes three subscales: intrusion, avoidance, and hyperarousal. Intrusions refers to intrusive distressing memories of the traumatic event (DSM-IV, 2000). Avoidance refers to avoidance of stimuli (e.g., distressing memories, thoughts, or feelings) associated with the traumatic event (DSM-IV, 2000). Lastly, hyperarousal refers to marked alterations in arousal and reactivity associated with the traumatic event (DSM-IV, 2000).

The final construct, attachment style, was included as attachment styles have been found to influence psychological adjustment and coping following traumatic events such as CSA (Canton-Cortes et al., 2015; Mikulincer & Florian, 2004). Ainsworth and colleagues (1978) identified three attachment styles: secure, ambivalent/anxious, and avoidant. Both ambivalent/anxious attachment and avoidant attachment are considered insecure attachment styles. The ECR-S measured attachment style using the following subscales: anxious and avoidant. Attachment style was measured in the present study in terms of adult attachment style.

Each of these constructs show relationships with one another when looking at this population. The literature consistently reports that individuals must report having experienced a traumatic or highly challenging event in order for PTG to be possible. Likewise, previous research shows that attachment styles influence adjustment following a traumatic event as well as the development of PTG. The current study found that adult survivors of CSA who reported their experience as traumatic, and who also reported

having a secure attachment style experienced greater PTG than those who reported having an insecure attachment style.

### Participants

Three online support networks (i.e. RAINN, Aftersilence.org, and Stop It Now!), which are dedicated to survivors of CSA, were contacted to participate in this study. Of these groups, two different groups (i.e., RAINN and Aftersilence.org) committed to participate in data collection. Amongst the two groups, it is estimated that around 1,600 individuals received an invitation to participate in this study. Of those invitations to participate, following the elimination of unusable data, a total of 292 (18.25%) surveys were completed.

The majority of participants were female, compared to those who identified as male or self-identified as something other than female or male. Participants were between the ages of 18-71 years ( $M = 41.64$ ,  $SD = 12.67$ ). Additionally, the majority of participants were Caucasian/White, compared to those who identified as African/African American/Black, Hispanic/Latino(a), Biracial/Multiracial, Asian/Asian/American. Furthermore, many of the participants in this study were married/partnered, compared to those who were single, divorced, in a committed relationship, engaged, or separated.

In looking to demonstrate how representative the sample was, the researcher found that participant demographics were similar to others studies that examined attachment and PTG among adults with a history of CSA (e.g., Godbout & Sabourin, 2009; Shakespear-Finch & De Dassel, 2009; Woodward & Joseph, 2003). However, differences exist with the age range of participants in the present study and that of a

similar study that examined attachment style as a mediating factor between sexual assault and PTG (Gwynn, 2009). Gwynn's study consisted of participants between the ages of 18-25 years of age, whereas the present study consisted of participants between the ages of 18 – 71 years of age. The results of Gwynn's study, regarding attachment style as a mediating factor, are different from the results of the present study; thus, a comparison of results with respect to age differences among samples is discussed later in this chapter.

In regards to participants' ( $N = 292$ ) experience with CSA, the majority of participants reported that more than 20 years had passed since they experienced CSA ( $n = 188$ , 64.4%), compared to 34 (11.6%) who reported that 11-15 years had passed; 32 (11%) reported 16-20 years had passed; 13 (4.5%) reported 6-10 years had passed; five (1.7%) reported 1-5 years had passed; and 20 (6.8%) participants did *not* report how many years had passed since they experienced CSA. Again, looking for representativeness, these values are similar to other studies that examined PTG among survivors of physical and sexual assault (Grubaugh & Resick, 2007; Ullman, 2014) and CSA (McMillen et al., 1995); with results indicating that the time passed since the abuse may influence the experience of PTG. A comparison of results, with respect to time passed since the abuse, among samples is discussed later in this chapter.

Among the participants, 202 (69.2%) identified as spiritual or religious, compared to 71 (24.3%) who did not identify as being spiritual or religious, and 19(6.5%) participants who chose *not* to identify whether or not they were spiritual or religious. Again looking for representativeness, these values are similar to other studies that



examined PTG among physical assault victims (Kliem & Ehlers, 2009) as well as sexual assault survivors (Ahrens et al., 2010), with results indicating that spiritual or religious identification may influence the experience of PTG.

Many of these sample characteristics are consistent with similar research in the area, as well as characteristics of the population of those with a history of CSA. The similarities between sample characteristics found in this study and other studies examining attachment style and PTG among CSA survivors provides support that this sample is representative of the greater population of adults with a history of CSA.

### Discussion of Findings

This section provides a review and discussion of the results presented in Chapter 4. Results are discussed in the order they were presented in Chapter 4, beginning with the primary hypothesis, followed by the exploratory hypotheses. Outcomes of the study are discussed as well as the theory and research relating to the results.

#### Primary Hypothesis Discussion

*H:* The influence of adults' perceived impact of their experience with childhood sexual abuse (as measured by the IES-R; Weiss & Marmar, 1996) on their experience of posttraumatic growth (as measured by the PTGI; Tedeschi & Clalhoun, 1996) is mediated by their attachment style (as measured by the ECR-S; Wei et al., 2007).

The hypothesized structural model is graphically presented in Figure 1, and the complete SEM model is presented in Figure 9. The overall composite indicated that trauma experienced by adult survivors of CSA (as measured by intrusion, avoidance, and hyperarousal) contributed to 39% of the variance in the attachment style ( $p < .000$ ) of

adult survivors of CSA (standardized coefficient = .63). While the mediating effect of attachment style, contributed to 8% of the variance in the presence of PTG ( $p < .05$ ) among adult survivors of CSA (standardized coefficient -.31). Therefore, adult survivors of CSA scoring higher in trauma also have higher levels of insecure attachment. In addition, adult survivors of CSA scoring higher in insecure attachment have lower levels of PTG. However, trauma scores among survivors of CSA showed to have no significant influence on the presence of PTG in this sample ( $p = .756$ ). In conclusion, the primary hypothesis was accepted, as results revealed that attachment style served as a mediator between trauma and PTG among this sample.

Results from this study provide new insight into the relationship between trauma related to CSA, adult attachment style, and PTG, as attachment style served as a mediating factor with this sample. The relationship between CSA, attachment style, and psychological outcome has been explored (Shapiro & Levendosky, 1999; Roche et al., 1999; Aspelmeier et al., 2007); however, the present study is unique in that CSA, attachment style, and PTG were examined. The results of this study support other research that shows (a) higher levels of trauma are linked to an insecure attachment style (Aspelmeier et al., 2007; Canton-Cortez et al., 2015; Roche et al., 1999; Shapiro & Levendosky, 1999); (b) a secure attachment style is linked to PTG (Salo et al., 2005; Schmidt et al., 2012); and (c) attachment style serves as a mediator between CSA and psychological outcome (Shapiro & Levendosky, 1999; Roche et al., 1999). Additionally, the findings of the present study offer new evidence to the field of counseling, showing that attachment style serves as a mediator between CSA, attachment style, and PTG.

### Attachment Style to PTG

The theory of PTG does not account for attachment style as an influential factor; however, Calhoun and Tedeschi (2006) have suggested that an individual's culture influences, such as relationships with family members (e.g., primary caregiver) may influence a person's posttraumatic journey. Calhoun and Tedeschi describe such cultural influences as *primary reference groups*, meaning those who that have an influence over an individual and affect the individual's behavior. Calhoun and Tedeschi suggest that individuals typically do not experience the aftermath of a crisis as socially isolated, but rather individuals' experiences are influenced by their primary reference groups. As such, Calhoun and Tedeschi assert that it seems reasonable that growth in the aftermath of trauma will be influenced by the views and responses of the individual's culture or primary reference group (e.g., primary caregiver). As attachment style is developed out of the relationship with the primary caregiver (Ainsworth & Bowlby, 1991) and can remain consistent throughout adulthood (Crowell et al., 2002; Shaver & Fraley, 2000; Zeifman & Hazan, 2008), the researcher expected to find that attachment style influences PTG. McElheran and colleagues (2012) have argued that attachment style should be considered as an influential factor to understanding PTG, and Shakespeare-Finch and Dassel (2009) have suggested that exploring attachment style in relationship with CSA and PTG may further illuminate aspects of distress and growth among CSA survivors. The results of the present study support the suggestions for inclusion of attachment style found within the literature. The results of the present study are also consistent with other research that shows that attachment style influences psychological adjustment and growth following

CSA (Salo et al., 2005; Schmidt et al., 2012). For example, Schmidt and colleagues (2012) also examined the relationship between attachment style and PTG, and found that among the participants ( $N = 54$ ), a secure attachment style was significantly linked to PTG, accounting for 8.3% of the variance in PTG, as opposed to an insecure attachment style, which was not linked to PTG. In addition, Schmidt and colleagues found that religion as a coping strategy may mediate the relationship between secure attachment style and PTG, which is similar to the results of the current study that revealed that insecure attachment was linked to less PTG in the spiritual change domain. These results infer that attachment style should be considered as an influential factor in the conceptual model of PTG.

#### PTG following CSA

Participants from the present study reported moderate PTG levels ( $M = 64.28$ ,  $SD = 23.71$ , range = 7-105; based on total score), suggesting that on average, participants were experiencing a moderate degree of growth following a history of CSA. The researcher expected these results, given that the sample consisted of members of support networks. As seeking social support may be indicative of growth (Calhoun & Tedeschi, 1998; 2006) an argument could be made that members of support networks (a form of social support) may experience more growth than those who do not seek social support. Few studies have explored PTG among survivors of CSA; however, the reported mean score of PTG in this study is fairly consistent with similar studies that explored PTG among adults with a history of CSA. For example, Lev-Wiesel and colleagues (2005) found that among their sample of non-clinical female survivors of CSA ( $N = 93$ )

participants, on average, experienced a moderate degree of growth ( $M = 3.23$ ,  $SD = 1.20$ ; based on scores per item) following a history of interfamilial CSA. The interesting comparison between the results of Lev-Wiesel and colleague's study and that of the present study is among the samples utilized. Lev-Wiesel and colleagues (2005) used a non-clinical random sample of university students, while the present study consisted of support group members, yet both studies showed moderate levels of PTG among participants. One explanation of these similar findings could be that both studies utilized a self-report questionnaire to measure PTG (i.e., PTGI; Tedeschi & Calhoun, 1996). As such, the Hawthorne effect (i.e., participants reporting more growth simply because they know they are being studied) may have influenced the results. Future research should consider adding a social desirability measure to account for social desirability in their results.

#### Trauma to Attachment Style

The finding that trauma influenced attachment style in this sample of CSA survivors was expected, as trauma experienced as a result of CSA has been found to influence attachment style. For example, Shapiro and Levendosky (1999) examined attachment style among adolescent females ( $N = 80$ ) with a history of CSA, and found that CSA was negatively related to secure attachment. Similarly, Roche and colleagues (1999) also examined the relationship between CSA, adult attachment style, and psychological outcome among female adults ( $N = 307$ ). Results revealed that attachment style mediates the relationship between CSA and psychological adjustment. Women with a history of CSA developed a less secure attachment style than women without such a

history, indicating that adult attachment style is influenced by having a history of CSA. These results are similar to the current study, which revealed that higher levels of trauma from CSA were linked to higher levels of insecure attachment. Additionally, when the effects of CSA were controlled for, attachment style continued to predict adjustment. These results are also similar to the current study, which revealed that when trauma was controlled for, attachment style continued to predict PTG. One explanation for these results is that CSA can disrupt one's sense of trust in others and distort one's sense of personal boundaries (Herman, 1992; 1997), leading to a disruption in the attachment system.

It is important to note that each study described here utilized different assessments to measure the constructs studied. For example, for trauma related to CSA, Shapiro and Levednosky (1999) utilized the Childhood Trauma Questionnaire (CTQ; Bernstein et al., 1994), Roche and colleagues utilized the Trauma Symptom Inventory (TSI; Briere, 1995); and the present study utilized the Impact of Event Scale-Revised (IES-R; Weiss & Marmar, 1996). For attachment style, Shapiro and Levednosky (1999) utilized the Adult Attachment Scale (AAS, Modified version; Collins & Read, 1990), Roche and colleagues utilized the Relationship Questionnaire (RQ; Bartholomew & Horowitz, 1991), and the present study utilized the Experiences in Close Relationships (ECR-S; Wei et al., 2007). Interestingly, each study produced similar results, supporting the idea that trauma resulting from CSA influences attachment style.

### Trauma to PTG

The finding that trauma scores among survivors of CSA had no statistically significant influence on the presence of PTG in this sample was surprising. Although a similar study by Ullman (2014) found that CSA was not significantly related to greater PTG, other research shows such traumas might relate to greater PTG (McMillen, Zuravin, & Rideout, 1995; Wright et al., 2007). One explanation for the inconsistency in results may be due to the selective sample of all adult survivors of CSA utilized in the present study. The results of the present study are also inconsistent with other researchers who found that higher levels of trauma were related to higher levels of PTG, suggesting that PTSD and PTG coexist (e.g., Alisic et al., 2008; Tang, 2007). The reported correlation between trauma and PTG in this study was inconsistent with previous research that explored PTG among adult survivors of CSA. For example, Lev-Wiesel and colleagues (2005) found that among their sample of female survivors of CSA ( $N = 93$ ) high correlations between PTSD and PTG were present, suggesting that PTSD and PTG coexist. One explanation for the findings of the present study may be that the instrument used to measure trauma (IES-R) did not capture accurate levels of trauma experienced by participants as the instrument is designed to measure distress experienced in the past seven days related to the traumatic event (i.e., CSA). Conversely, Alisic and colleagues utilized the Children's Response to Trauma Inventory to assess trauma, while Lev-Wiesel and colleagues (2005) utilized the PTSD-Scale adapted from Horowitz, Wilner and Alvarez (1979). Further examining the difference in results among studies, it should be noted that Alisic and colleagues measured trauma among children; thus, trauma was

assessed closer to the actual event of abuse as opposed to the present study. As such, Alisic and colleagues may have been able to capture a more accurate representation of trauma related to CSA than the present study.

#### Trauma, Attachment Style, and PTG

Finally, the results of the current study are inconsistent with a similar study that examined sexual assault, attachment style, and PTG (Gwynn, 2009). Gwynn examined adult attachment and PTG among adult female survivors of sexual assault ( $N = 151$ ) that experienced the sexual assault between the ages of 14 and 25 years. Results revealed that adult attachment style did *not* serve as a mediator for the effects of PTG in survivors of sexual assault. These results are different from the current study which reveals that attachment style served as a full mediator between trauma and PTG among adult survivors of CSA.

One explanation for the difference in results could be due to the difference in experiences of sexual assault. Whereas Gwynn's sample consisted of adults who experienced sexual assault during adolescence or early adulthood, the sample from the current study consisted of adults who experienced CSA that occurred during childhood. These notable differences among samples may be the reason for differences in mediating effects of attachment style between studies. For example, people who experience sexual assault during adolescence or early adulthood may have a different experience with disclosure, social support, and response from their primary caregiver than people who experience sexual abuse during childhood (i.e., CSA); thus the impact of the abuse on their attachment system would be different. Another possible explanation for the



differences in results between Gwynn's study and the present study may be explained by other factors that were not included in either study (e.g., coping styles or subsequent traumas).

One final explanation for the difference in results could be due to the samples utilized. Gwynn's sample consisted of adult survivors of sexual assault between 18 and 25 years of age, whereas the sample from the current study consisted of adults between 18 and 71 years of age. These notable differences among samples may be the reason for differences in mediating effects of attachment style. For example, as the period between 18-25 years of age (i.e., emerging adulthood) is a time when individuals explore life's possibilities, their role in the world and world view (Arnett, 2000); participants in Gwynn's study may still be in the process of exploring and redefining themselves, relationship, and beliefs, and may not have reached their full potential in the area of PTG; whereas, participants in the present study were much older on average ( $M = 41.64$ ), and thus have had more time to reach their full potential in the area of PTG. Although there is a notable difference in samples utilized between these two studies, both studies used the ECR-S to measure attachment, and the PTGI to measure PTG. However, different measures were utilized to assess participants' experience with sexual assault and CSA. Gwynn utilized the Sexual Experiences Survey (SES; Koss & Gidycz, 1985) to assess the severity of sexual assault, whereas the present study utilized the Impact of Event Scale-Revised (IES-R; Weiss & Marmar, 1996) to assess trauma. Ultimately, two different experiences were being assessed (i.e., CSA and sexual assault) in these studies; however, given that there are several different definitions of CSA used across the U.S., and age

ranges described among such definitions, it is worthwhile to compare the results of these two studies. Further research is needed to explore the differences described in these studies, and enhance our understanding of the role of attachment style as mediating factor between CSA and PTG.

It is worth noting that Shakespear-Finch and DeDassel (2009) examined distress as well as a potential for growth among adult survivors of CSA ( $N = 40$ ) which revealed that participants evidenced similar amounts of PTG whether they were children or adolescents at the time of the trauma (CSA). As such, it appears that further research is needed to investigate PTG among survivors of sexual assault and CSA, with respect to age and time since the event to clear up the differences among these studies. Furthermore, replication of the current investigation is warranted with another sample of adult survivors of CSA to test the primary research question utilizing different measures.

#### Exploratory Hypothesis 1 Discussion

*H:* There is a statistically significant difference in attachment styles of adult survivors of CSA as measured by the ECR-S (Wei et al., 2007), and their reported demographic variables (i.e., gender, age, race, relationship status, time since event, identification as spiritual/religious, and history of receiving psychological services)?

The relationship between adults' attachment (as measured by the ECR-S; Wei et al., 2007) and their demographic variables was investigated using one-way between-groups analysis of variance (ANOVA). The analyses revealed that 10% of the variability in Attachment was accounted for by relationship status. There was a statistically significant difference at the  $p < .000$  level in ECR-S scores for the four categories of

relationship status (Single; Engaged/In a committed relationship; Married/Partnered; Divorced/ Separated). Post-hoc comparisons using Tukey HSD test revealed a statistically significant difference in ECR-S scores between married/partnered and separated/divorced participants. Married/Partnered participants scored in the secure attachment range, while separated/divorced participants scored in the insecure attachment range of the ECR-S. There was no statistically significant difference in ECR-S scores between the other groups. These results indicate that survivors of CSA who are married or partnered are more likely to have a secure adult attachment style, while survivors who are separated or divorced have an insecure attachment style in this sample.

These results infer that relationship status may have an influence on adult attachment style. For example, those who are married/partnered may have a more secure attachment style because their marriage or partnership may serve as a secure base, whereas those who are separated or divorced may have a more insecure attachment style due to failed relationships that did not serve as a secure base for them. These results provide support for other research that has examined the relationship between attachment style and relationship status. For example, Crowell and colleagues (2002) explored the attachment style prior to, and following marriage among couples ( $N = 157$ ), and found that marriage was related to secure attachment, whereas divorce and separation was related to insecure attachment among couples. These results infer that relationship status may have an influence on attachment style, and that change in attachment classification was associated with feelings and cognitions about the relationship.

## Exploratory Hypothesis 2 Discussion

*H:* There is a statistically significant difference in experiences of PTG among adult survivors of CSA as measured by the total score of the PTGI (Tedeschi & Calhoun, 1996), and their reported demographic variables (i.e., gender, age, ethnicity, time since event, and history of receiving psychological services)?

The relationship between PTG among adult survivors of CSA (as measured by the PTGI; Tedeschi & Calhoun, 1996) and their demographic variables was investigated using one-way between-groups analysis of variance (ANOVA). The analyses revealed that 4% of the variability in PTG was accounted for by race. There was a statistically significant difference at the  $p < .05$  level in PTG scores for the two categories of race (Caucasian/White [ $n = 205$ ]; and Minority [ $n = 60$ ]). These results indicate that minority groups who have a history of CSA are more likely to experience higher levels of PTG, as opposed to Caucasian/White survivors among this sample.

These results were expected, as there is some evidence in the literature that shows greater PTG among minority groups compared to Caucasian sexual assault survivors (Ahrens, Abeling, Ahmad, & Hinman, 2010; Frazier et al., 2004; Kennedy, Davis, & Taylor, 1998; Ullman, 2014). One explanation for this finding is that minority groups may be more resilient due to having a history of experiencing more adversity throughout their lifetime than majority group participants. Given the significance of these results, it is important to further examine race in relationship to PTG among CSA survivors. Further research should explore why minority groups report greater PTG, as one

explanation could be that they may have different trauma histories or coping responses associated with better growth.

Additionally, the analyses revealed that 3% of the variability in PTG was accounted for by time passed since the event. There was a statistically significant difference at the  $p < .05$  level in trauma scores for the two categories of time since the event ( $< 20$  years [ $n = 84$ ]; and  $> 20$  years [ $n = 188$ ]). These results indicate that among this sample of survivors of CSA, those who report that more than 20 years have passed since the event are more likely to experience higher levels of PTG, as opposed to survivors who report that less than 20 years have passed since the event. These results are not surprising as Calhoun and Tedeschi (2006) have suggested that the passage of time may be a predictor of PTG. For example, when some people initially experience a traumatic event they may engage in cognitions of questioning why they experienced such an event (Calhoun & Tedeschi, 2006). As such individuals engage in strategies to manage the distress of the event as well as the distress from caused from questioning why this has happened to them (Calhoun & Tedeschi, 2006). As a result, ruminative thinking becomes more conscious and purposeful, leading to meaning making and growth (Calhoun & Tedeschi, 2006). Furthermore, these results are similar to other studies that examined PTG among survivors of physical and sexual assault (Grubaugh & Resick, 2007; Ullman, 2014) and CSA (McMillen et al., 1995), indicating that with more time that has passed since the abuse has allowed for more time for PTG to occur. In contrast, Easton and colleagues (2013) found that time since the abuse was not related to PTG among men with a history of CSA. One explanation for the inconsistency in results between the

present study and Easton's (2013) results could be due to samples utilized. Although both studies obtained their samples from online support networks, the present study utilized a sample of both male and female participants (although, primarily female), Easton's (2013) study only involved male survivors ( $N = 487$ ). Future research should examine the differences between male and female survivors' experience of PTG in relation to time passed since the abuse more closely to help illuminate the differences which may influence the development of PTG. For instance, emphasis should be placed on what survivors think and do overtime, not simply on the length of time since the abuse, as experiences with disclosure, social support, and coping strategies may be different among genders and thus influence the development of PTG.

Furthermore, the analyses revealed that the 10% of the variability in PTG was accounted for by identification as spiritual or religious. There was a statistically significant difference at the  $p < .000$  level in PTG scores for the two categories of spiritual/religious identification (yes [ $n = 202$ ]; no [ $n = 71$ ]). These results indicate that survivors of CSA who identify as spiritual and/or religious are more likely to experience higher levels of PTG, as opposed to survivors who do not identify as spiritual and/or religious among this sample. These results are not surprising, as the theory of PTG indicates that through the process of rebuilding one's assumptive world, people reevaluate many aspects of their lives and might recognize growth in areas such as spirituality (Tedeschi & Calhoun, 1996). Additionally, other researchers have also found a positive relationship between spiritual/religious identification and PTG among physical assault victims (Kliem & Ehlers, 2009) as well as sexual assault survivors (Ahrens et al.,

2010). The results of the present study infer that spirituality or religiosity may help survivors of CSA find meaning in their experience and thus lead to PTG. Future research should explore spirituality and religiosity further among CSA survivors to investigate specific areas that may help facilitate PTG.

### Exploratory Hypothesis 3 Discussion

*H:* There is a statistically significant difference in adults' perceived impact of their experience with CSA as measured by the IES-R (Weiss & Marmar, 1996) and their reported demographic variables (i.e., gender, age, ethnicity, time since event, and history of receiving psychological services)?

The relationship between adults' perceived impact of their experience with CSA (as measured by the IES-R; Weiss & Marmar, 1996) and their demographic variables was investigated using one-way between-groups analysis of variance (ANOVA). The analyses revealed that the 7% of the variability in trauma is accounted for by time passed since the event. There was a statistically significant difference at the  $p < .000$  level in trauma scores for the two categories of time since the event ( $< 20$  years [ $n = 84$ ]; and  $> 20$  years [ $n = 188$ ]). These results indicate that survivors of CSA who report that more than 20 years have passed since the event are more likely to experience lower levels of trauma symptomology (*not* indicative of PTSD), as opposed to survivors who report that less than 20 years have passed since the event who are more likely to experience trauma symptomology indicative of a probable PTSD diagnosis among this sample.

These results are not surprising as Calhoun and Tedeschi (2006) have suggested that over the passage of time many individuals engage in strategies to manage the distress

of the event as well as the distress from caused from questioning why this has happened to them (Calhoun & Tedeschi, 2006). As a result, ruminative thinking becomes more conscious and purposeful, leading to meaning making and growth (Calhoun & Tedeschi, 2006), and perhaps less distress. McElheran and colleagues (2012) suggested that the impact of CSA comes years later when understanding of the social and cultural context of the trauma becomes part of one's consciousness. As CSA can cause a psychic need to recreate the traumatic event in an attempt to gain mastery and control over the experience (Herman, 1992; 1997), once an individual begins to process the impact of the trauma, cognitive patterns such as ruminative thinking are likely to influence the process of PTG (McElheran et al., 2012), perhaps leading to a decrease in distress as well.

Few studies have examined time since the abuse in relation to trauma associated with CSA, and the results of the present study are inconsistent with similar research. For example, O'Leary (2009) examined time since the abuse in relationship with psychological functioning among adult males with a history of CSA ( $N = 147$ ), and found that time since the abuse did not have a statistically significant influence on psychological functioning. One explanation for the difference in results between these studies could be that the present study specifically examined the relationship between time since the abuse and trauma, whereas O'Leary (2009) examined psychological functioning, not specifically trauma. As such, the present study utilized an instrument designed to explore PTSD among participants (i.e., IES-R; Weiss & Marmar, 1996), while O'Leary (2009) utilized a psychiatric screening instrument (i.e., General Health



Questionnaire; Goldberg & Hillier, 1979) designed to measure emotional distress and possible psychiatric disorders. Thus, results between studies are inconsistent.

Another explanation could lie with the sample utilized. For example, the present study included both male and female (although, primarily female) participants, whereas O'Leary's (2009) study utilized only male participants. Although many of the effects of CSA are similar for both males and females (Banyard, Williams, & Siegel, 2004; Young, Harford, Kinder, & Savell, 2007), males also experience effects specific to their gender, such as shame around masculine identity, withdrawal and suppression (Dhaliwal, Gauzas, Antonowicz, & Ross, 1996; Mendel, 1995; Spataro, Moss, & Wells, 2001); as such, men with a history of CSA may report less distress than women with such a history. Another possible explanation, regarding sample, for the differences in results between the present study and O'Leary's (2009) study could be cultural factors. For example, the present study consisted of participants who reside in the United States, whereas, O'Leary's sample consisted of Australian participants. As such, there could be unknown cultural differences regarding coping strategies, disclosure, and distress that could help explain the differences between results.

Additionally, the analyses revealed that the 2% of the variability in trauma is accounted for by having a history of receiving psychological services. There was a statistically significant difference at the  $p < .05$  level in trauma scores for the two categories of history of psychological services received (yes [ $n = 243$ ]; no [ $n = 29$ ]). These results indicate that survivors of CSA who experience trauma symptomology indicative of a probable PTSD diagnosis also have a history of receiving psychological

services, as opposed to those who experience trauma symptomology *not* indicative of a probable PTSD diagnosis who have no history of receiving psychological services among this sample. As such, these results infer that survivors of CSA who experience trauma symptomology indicative of a probable PTSD diagnosis are more likely to seek psychological services, as opposed to those who do *not* experience trauma symptomology indicative of a probable PTSD diagnosis who are less likely to seek psychological services among this sample. These results were expected as many people who experience symptomology consistent with PTSD seek psychological services.

#### Limitations of the Study

Some notable limitations existed within this study, which included the (a) research design, (b) sample, and (c) instrumentation. The results of this study should be interpreted while considering the explained limitations. Additionally, identification of these limitations will help guide future research methodology.

#### Research Design Limitations

Efforts were made to limit threats to construct, internal, and external validity within this descriptive, correlational research study; however, not all threats could be mitigated. For the purpose of high external validity, the sample was taken directly from the population of interest. However, given that the variables were studied as they naturally occur and are not manipulated by experimentation, internal validity is low. For this study, the importance of understanding participants in their natural setting outweighed the importance of internal validity. As such, a descriptive, correlational study was appropriate. Another threat to internal validity for this study was characteristic

correlations (Fraenkel et al., 2011), which suggests that a correlation between variables is not explained by the specific constructs being studied, but because of other characteristics of individual participants. The research design did not establish a way to specifically include participants who had limited posttraumatic growth or high levels of trauma. Additionally, correlational research does not imply causality.

### Sampling Limitations

The sample utilized in the present study was a convenience sample as the study utilized participants from support networks dedicated to survivors of CSA that the researcher could conveniently access for the purpose of this study. Additionally, the study required that participants have the criterion of (a) being at least 18 years of age, having a history of CSA, and (c) being a resident of the U.S. Further, specific scales and subscales were utilized, and many participants were deleted due to missing cases. The researcher sought to utilize three online support networks dedicated to survivors to obtain participants; however, only two network participated in the study. As a requirement for SEM, larger sample sizes are necessary to reduce the chances of Type I or II errors (Kline, 2011). Although the researcher was only able to obtain participants from two networks, the minimum sample size needed to reduce the chance of Type I or II errors was obtained. The response rate for the current study was low (18.25%) compared to a previous study that utilized online support networks (Easton et al., 2013). An effort was made to follow Dillman's (2000) *Tailored Design Method*, and an incentive was provided to increase the response rate. Participants all belonged to an online support network in the

United States, suggesting that the results may not be generalized with adult survivors of CSA do not belong to a support network, or live outside of the U.S.

An additional limitation is that the researcher did not provide a definition of CSA for participants to decide whether or not the study applied to them; the researcher only asked if they had ever experienced CSA. The lack of definition may have left some potential participants to question whether or not they were appropriate to participate in the survey. Moreover, self-selection bias is a significant threat to validity for the current study because of the specific constructs being studied. Self-selection bias refers to the individuals who chose to participate in the study who may have characteristics that may be different and significant from those who did not choose to participate, meaning that it cannot be generalizable (Dillman et al., 2009). Specifically, adult survivors of CSA who have not experienced any personal growth, have not disclosed their abuse, or have high levels of avoidant attachment may have chosen not to participate. Furthermore, those who have experienced personal growth or who are more secure in their attachment may be likely to choose to participate. As such, there is potential for limited variance within the data collected. Given that a majority of participants belonged to the RAINN Speakers Bureau (i.e., a group of CSA survivors who are willing to share their story), the results revealing moderate PTG among the sample were expected, as seeking support is indicative of growth; therefore these results are not generalizable to all survivors of CSA (e.g., survivors who do not belong to a support network). Moreover, moderate PTG could be due to the Hawthorne effect among this sample.

Another limitation of this study is the limited variance between the constructs of trauma and attachment. The lack of variance identified may suggest that adult survivors of CSA who are more securely attached are more likely to complete surveys about their experience with CSA. Furthermore, the results revealing that trauma scores had no statistically significant influence on the presence of PTG in this sample may be due to the selective sample of all adult survivors of CSA who belong to support networks utilized in the present study. Lastly, sampling bias is a limitation to the present study as random sampling was not utilized. It is noteworthy that the sample in this study was over-representative of White/Caucasian women, and those who belonged to the RAINN Speakers Bureau. Therefore, more research needs to be done utilizing a more diverse and random sample to generalize the results to all individuals who have experienced CSA.

#### Instrumentation Limitations

The primary limitation of the current study regarding instrumentation was the ECR-S and the PTGI. The ECR-S provided some limitation to the current study, as there were low item factor loadings on the Avoidant factor for these data. Utilizing a different attachment measure, or adding an additional attachment measure may have been beneficial. The PTGI also provided some limitation for the current study, as there were low item factor loadings related to the Appreciation of Life and Relating to Others factors for these data. Adding an additional measure of PTG, or qualitative data related to PTG may have been beneficial. An additional instrument limitation was with the IES-R, which measures distress experienced over the past seven days related to a traumatic event (defined by the researcher). As the IES-R consists of general trauma related questions

related to PTSD symptomology, and is not specifically designed to assess for trauma related to CSA, it may not have captured the accurate level of trauma experienced. Furthermore, subsequent traumas were not accounted for that may have influenced current trauma symptomology. Measurement error of the instruments (e.g., difference between measured value and true value; Graziano & Raulin, 2004) was accounted for in the data. Additionally, participants' responses on one instrument may have influenced their response to another instrument in the current study. Furthermore, data collection instruments were all self-report in this study. As such, there may be bias with participants' responses, such as the Hawthorne effect (i.e., participants reporting more growth simply because they know they are being studied) that may have influenced the results of the study. Interpretation of the results of this study should be done so cautiously, and future research should add a social desirability measure to account for social desirability in their results. Despite the identified limitations of the current study, the study contributed to the current trauma counseling, counselor education, and instrument development literature. Some instruments have room for improvement, and other instruments may measure better.

#### Recommendations for Future Research

The limitations presented in the current literature should be considered with future research. Based on the findings of this study, future research can be used to provide more information about the relationship between trauma, attachment style, and PTG among survivors of CSA. The next steps for research should be to strengthen external validity through efforts to increase response rate and generalizability of results.

Conducting data collection in person, using paper-pencil approach may be beneficial to increase response rate (Dillman, 2000), or conducting a mail-out data collection approach using Dillman's (2000) *Tailored Design Method*. Additionally, a strategy should be developed to recruit participants who do not belong to a support group, or compare the results of those who belong to a support group versus those who do not. Given that the results of the current study are limited to those who belong to support networks, and not generalizable to the greater population of adult survivors of CSA, consideration should also be made for utilizing random sampling to increase generalizability of results.

Similar to other studies, minority groups among this sample were found to report more PTG than White/Caucasian. As one explanation could be that they may have different trauma histories or coping responses associated with better growth, further research is needed to explore why minority groups report greater PTG. Additionally, spirituality and religiosity among CSA survivors should be explored further to investigate specific areas that may help facilitate PTG. Moreover, examining the number of CSA occurrences that participants have experienced may be beneficial, as perpetrator identity (e.g., family member or stranger) and subsequent traumas experienced may influence the constructs examined.

As the present study did not provide a definition of CSA in the description of the study, potential participants may have decided not to participate due to confusion about their appropriateness to participate in the study. As such, researchers exploring experiences of CSA survivors should provide a definition of CSA to allow potential

participants the opportunity to decide if their experience was considered CSA; thus better informing them of their appropriateness to participate in the study. Furthermore, providing a definition of CSA as well as the corresponding age range to be considered CSA, would be beneficial, as researchers would be better able to compare and explain results.

In regards to instrumentation, future research should consider including additional measures of attachment since the ECR-S does not directly account for secure attachment, despite Wei and colleagues (2007) suggesting this possibility. Researchers may also consider utilizing an alternative instrument to assess trauma, as the IES-R measures trauma symptomology experienced within the past seven days of taking the assessment, and may not fully capture the true experience of trauma among adult survivors of CSA. Moreover, the addition of a social desirability measure may be beneficial to account for social desirability in results and detect a possible Hawthorne Effect. Researchers may also consider conducting a qualitative inquiry to gain further understanding of trauma experienced as a result of CSA, attachment style, and posttraumatic growth. Future research investigating the relationship between CSA, attachment style, and posttraumatic growth within the counseling field is warranted as there is limited research surrounding the relationship between these constructs together. Additionally, investigating these constructs among children and adolescents would provide insight of a younger demographic and allow researchers to examine these constructs close to the time of the abuse.



As the researcher of the present study plans to move forward with her research agenda, the limitations of the present study as well as the identified recommendations for future research will be taken into consideration. For example, the researcher plans to replicate this study utilizing a more diverse and random sample for generalizability purposes. Additionally, the researcher will utilize different instruments to assess trauma and attachment and add a qualitative inquiry to gain further understanding of trauma experienced as a result of CSA, attachment style, and posttraumatic

### Implications

The contribution of the findings of the present study to the counseling literature provide: (a) insight into the experience of trauma among adult survivors of CSA as they relate to survivors' attachment styles, (b) insight into the experience of trauma among adult survivors of CSA and the presence of PTG, and (c) awareness of the relationship between the attachment style of adult survivors of CSA and the experience of PTG. The relationship between the constructs of trauma, attachment, and PTG are clarified, addressing an identified gap in the counseling literature. Additionally, assessing trauma, attachment, and PTG among adult survivors of CSA supports the psychometric properties of the measures used in this study. The implications for professional counselors, the inclusion of trauma content in counselor education, and direction for instrument development are discussed further in the following sections.

### Counselor Implications

As CSA continues to be a widespread problem (Wurtele, 2009) that causes major psychological difficulties among survivors such as depression, anxiety, suicidality, and

PTSD (Berliner & Elliott, 2002; Finkelhor, 1993; Paolucci et al., 2001; Tyler, 2002), there is a continued need to not only help survivors recover from the experience but also to thrive in the aftermath, that is, help them to experience PTG. Attachment systems have been found to influence psychological adjustment and coping following traumatic experiences such as CSA (Canton-Cortes et al., 2015), and have been linked to PTG (Salo et al., 2005; Schmidt et al., 2012). Therefore, counselors should assess clients' attachment styles as they have been found to influence how survivors of CSA will adjust in the aftermath, and their potential to experience PTG. Exploring attachment styles would assist clients in the self-awareness process as it relates to their coping and adjustment after CSA. Additionally, identifying attachment styles among adult survivors of CSA may be beneficial for counselors working with survivors of CSA, as this may provide insight into areas to explore and address in counseling in order to help clients achieve posttraumatic growth. For example, if a client with a history of CSA is struggling with psychological distress related to their experience with CSA, and having difficulty finding meaning from the experience, the counselor could assess the client's attachment style and explore their attachment system to better understand the client's experience and recovery process. As such, the counselor will be better equipped to help the client reconstruct their world view, repair their attachment system if necessary, and enhance social support that may lead to an increased attachment security; thus improving the client's chance of achieving PTG. Additionally, if such a client was found to have an insecure attachment style, the counselor could potentially serve as a secure base from which the client could safely explore their experiences, redefine beliefs shattered by trauma, and to rebuild their

assumptions about themselves, others, and the world. In the process of rebuilding one's assumptive world, people reexamine many aspects of their lives and might recognize growth in areas like their personal strength, relationships with others, appreciation of life, spirituality, and new possibilities (Tedeschi & Calhoun, 1996); thus leading to PTG.

Additionally, the results of the present study indicate that adult survivors of CSA who are married or partnered are more likely to have a secure adult attachment style, while survivors who are separated or divorced have an insecure attachment style. These results infer that relationship status may have an influence on adult attachment style. For example, those who are married/partnered may have a more secure attachment style because their marriage or partnership may serve as a secure base, whereas those who are separated or divorced may have a more insecure attachment style due to failed relationships that did not serve as a secure base for them. As attachment style has been found to influence psychological adjustment and coping following traumatic experiences, counselors should take a client's relationship status into consideration, and seek to explore who or what serves as a secure base for them. If a client lacks a secure base from which to explore their experiences, the counselor may need to serve as such a base to enhance the client's chance of achieving PTG.

Furthermore, the results of the present study indicate that minority groups who have a history of CSA are more likely to experience higher levels of PTG, as opposed to Caucasian/White survivors among this sample. As one explanation for this findings is that minority groups may be more resilient due to having a history of experiencing more adversity throughout their lifetime than majority group participants, counselors may

consider exploring clients' cultural influences on how they experience traumatic events. Additionally, counselors may consider (a) assessing clients' resiliency with a validated resilience instrument, (b) exploring client's history of traumatic experiences, and (c) examine clients' coping mechanisms to better understand their clients' experiences and approach to adjustment following CSA.

Moreover, results of the present study revealed that those who reported that more than 20 years have passed since the event were more likely to experience lower levels of trauma symptomology and higher levels of PTG, as opposed to survivors who report that less than 20 years have passed since the event. These results are consistent with PTG theory, as Calhoun and Tedeschi (2006) have suggested that the passage of time may be a predictor of PTG. Overtime, individuals may begin to engage in strategies to manage distress and engage in ruminative thinking; thus leading to meaning making and growth (Calhoun & Tedeschi, 2006). As such, the more time that has passed, the more time for PTG to occur. Counselors should consider the amount of time that has passed since their client's experience with CSA, as client's who experienced CSA within the past 20 years may still be struggling to find effective ways to manage distress, engage in reflective ruminative thinking, and find meaning in their experiences. Thus, counselors should consider the passage of time since their client's experience with CSA, and explore the client's adjustment overtime. An awareness of where a client is in the healing process will help counselors better understand what the client needs (e.g., to manage distress, engage in reflective ruminative thinking, or find meaning) to enhance the client's chances of achieving PTG.

Lastly, the results of the present study indicate that survivors of CSA who identify as spiritual and/or religious are more likely to experience higher levels of PTG, as opposed to survivors who do not identify as spiritual and/or religious among this sample. These results are reflective of PTG theory which indicates that through the process of rebuilding one's assumptive world, people reevaluate many aspects of their lives and might recognize growth in areas such as spirituality (Tedeschi & Calhoun, 1996). As the results of the present study infer that spirituality or religiosity may help survivors of CSA find meaning in their experience and thus lead to PTG, counselors should explore client's spiritual and/or religious beliefs. An exploration of such beliefs could help counselors identify the role that spirituality or religion has in their client's recovery process, and thus, understand specific areas that may help facilitate PTG.

#### Counselor Education Implications

As statistics show that one in four girls and one in six boys will experience CSA by the age of 18 years (NAASCA, 2015; Schober, 2012), there is a need for counselors to be prepared to help such individuals recover from their experience and thrive beyond the trauma. Therefore, based on the results of the current study, indicating that attachment style may influence PTG, counselor educators should teach developing counselors about the tenets of attachment style. Additionally, counselor educators should not limit their lessons regarding attachment styles to infants and caregivers, but to how attachment styles are also important to understand in adulthood, as attachment styles may remain constant throughout life (Hazan & Shaver, 1987), and have been found to influence relationships even in adulthood (Crowell et al., 2002).

Furthermore, counselor educators should address how to assess client's attachment styles, and discuss the significant role of attachment style in clients' adjustment following traumatic events. The internal working models of attachment have been found to influence both illness and mental health (Muris, Meesters, & van den Berg, 2003), and attachment style has also been found to outweigh abuse characteristics in determining psychological adjustment (Cantón-Cortés, 2013; McElheran, et al., 2012). Specifically, secure attachment qualities have been related to better emotion regulation in the aftermath of traumatic events (Mikulincer & Florian, 2004), thus leading to better psychological and emotional health. Conversely, an insecure attachment style leads to an unproductive and excessive focus on negative emotions, or turning away from feelings of distress, leading to inappropriate emotional regulation (Moran, Neufeld, Gleason, Deoliveira, & Pederson, 2008). As such, counselor educators should encourage future counselors to understand the role of attachment in clients' lives, and be prepared to address attachment style among survivors of CSA to help clients experience more positive adjustment following such traumatic events.

The Council for Accreditation of Counseling and Related Educational Program (CACREP, 2016) has established standards to promote a unified counseling profession. These standards "require that graduates demonstrate both knowledge and skill across the curriculum as well as professional dispositions." Additionally, CACREP Standards speak to the need for counselors to be better prepared to deal with trauma. In addition to ensuring that graduates establish a strong professional identity, CACREP Standards are also meant to allow graduates the opportunity to specialize in one or more areas. Among

such specialty areas, the Marriage, Couple, and Family Counseling (MCFC) area is important to understand as it relates to the present study.

The CACREP Standards related to MCFC emphasizes that students planning to specialize as marriage, couples, and family counselors possess the knowledge and skills necessary to address a variety of issues related to relationships and families. Specifically, CACREP (2016) Section 5: Specialty area-Marriage, couple, and family counseling; highlights the knowledge and skills necessary for counselors working with couples and families in regards to (a) foundational knowledge, (b) contextual dimensions, and (c) practice. As the present study investigated constructs related to marriage, couple, and family issues, it is important to understand how the findings of this study provide implications for counselor education.

In regards to CACREP (2016) Section 5: subsection 1. F (Foundations [b, d, and e]) highlights that students preparing to specialize as marriage, couple, and family counselors are expected to gain knowledge of theories and models of family systems and dynamics, sociology of the family and family of origin theories, and principles and models of assessment and case conceptualization from a systems perspective. Additionally, subsection 2 (Contextual Dimensions [c, f, g, and m]) emphasize knowledge and skill of family assessments, including psychoeducation and personality assessments; intergenerational influences and related family concerns; impact of crisis and trauma on marriage, couples, and families; and cultural factors related to marriage, couples, and family functioning. Furthermore, subsection 3 (Practice [a, b, c, and d]) emphasize knowledge and skill of assessment and evaluation for working with

individuals, couples, and families from a system perspective; fostering family wellness; techniques and interventions with marriage, couples, and family counseling; and conceptualizing and implementing treatment and intervention strategies with marriage, couples, and family counseling.

As such, counselor educators are responsible for sharing research related to relationship and family concerns related to trauma and attachment and their implications for counseling with their students. In addition, the findings of the present study revealing that higher levels of trauma contribute to higher levels of insecure attachment, while higher levels of insecure attachment contribute to lower levels of PTG is important for counselor educators to share with developing counselors, as these findings highlight potential exploration points of client case conceptualization (Mohr, Gelso & Hill, 2005; Pistole & Watkins, 1995). Furthermore, counselor educators should support developing counselors by sharing the results of the current study indicating that attachment style is influenced by trauma, and PTG is influenced by attachment style. Understanding the influence of trauma and attachment on psychological outcome following CSA may help counselors help their clients achieve posttraumatic growth.

Additionally, counselor educators should support developing counselors by sharing the results of the current study indicating that relationship status may influence attachment style. Understanding the influence of relationship status on attachment style may help counselors become more aware of when they may need to serve as a secure base for clients to explore their experiences and rebuild their assumptions about



themselves, others, and the world. As such, the counselor may enhance the client's chance of achieving PTG.

In regard to the findings related to PTG in this study, counselor educators should further support developing counselors by sharing the results indicating that significant differences were found in relation to race, time passed since the abuse, and spiritual/religious identification. For example, as minority groups have been found to experience greater PTG than White/Caucasian individuals, counselor educators should encourage counselors to explore cultural influences in a client's life, and how such influences affect how the client experiences traumatic events.

Additionally, counselor educators should share the results of the present study indicating that time passed since the experience of CSA may influence both the trauma experienced as well as the experience of PTG. As the results of the present study revealed that those who reported that more than 20 years have passed since the abuse were more likely to experience lower levels of trauma symptomology and higher levels of PTG, compared to survivors who report that less than 20 years have passed since the abuse, counselor educators should encourage developing counselors to explore how much time has passed since their client experienced CSA. An increased awareness of how time passed may help developing counselors better understand where a client is in the healing process as well as what the client needs (e.g., to manage distress, engage in reflective rumative thinking, or find meaning) to enhance the client's chances of achieving PTG.

Furthermore, counselor educators should share the results of the present study indicating that spiritual/religious identification may influence PTG. As the results of the

present study infer that spirituality or religiosity may help survivors of CSA find meaning in their experience and thus lead to PTG, counselor educators should encourage counselor's to explore client's spiritual and/or religious beliefs. An exploration of such beliefs could help counselors identify the role that spirituality or religion has in their client's recovery process, and thus, understand specific areas that may help facilitate PTG.

### Theoretical Significance

The present research has implications for the theory of posttraumatic growth, as results reveal that attachment style serves as a mediator between trauma related to CSA and PTG with this sample. The theory of PTG does not account for attachment style as an influential factor; however, Calhoun and Tedeschi (2006) have suggested that an individual's culture influences, such as relationships with family members (e.g., primary caregiver) may influence a person's posttraumatic journey. It has been presented in the literature surrounding PTG that attachment style should be considered as an influential factor to understanding PTG (McElheran et al., 2012), and explored in relationship with CSA (Shakespeare-Finch & Dassel, 2009) to further illuminate aspects of both distress and growth among CSA survivors. The results of the present study support the suggestions for inclusion of attachment style in understanding the process of PTG. As such, the researcher suggests that adult attachment style should be considered as an influential factor in the process of PTG, especially among adults with a history of CSA.

### Instrument Development Implications

The present study identified and supported measurement models for the IES-R, ECR-S, and the PTG. Specifically, the IES-R identified three factors, consistent with (Weiss & Marmar, 1996); however, high correlations among factors (Intrusion and Avoidance = .78; Avoidance and Hyperarousal = .83, and Intrusion and Hyperarousal = .94) were observed in subscales with this sample leading to a second-order CFA. Additionally, the ECR-S identified two factors, consistent with Wei and colleagues (2007); however, low factor loadings were observed in the avoidance subscale with this sample and moderate correlation among subscales (Anxiety and Avoidance) leading to a second-order CFA. The PTGI identified five factors, consistent with Tedeschi & Calhoun (1996); however, high correlations were observed among factors (Relating to Others and New Possibilities = .77; New Possibilities and Personal Strength = .89; Relating to Others and Appreciation of Life = .81; New Possibilities and Appreciation of life = .94; and Personal Strength and Appreciation of Life = .90) with this sample leading to a second order CFA. As such, future researchers should consider CFA for each instrument to examine appropriateness with their sample.

### Summary

Chapter 5 reviewed and compared study results from the current investigation with existing research in the counseling field. The results of the study supported the hypothesized theoretical model, as results revealed that attachment style served as a mediator between trauma and PTG among this sample. These results provide new insight into the relationship between trauma related to CSA, adult attachment style, and PTG;

and support other research that shows attachment style serves as a mediator between CSA and psychological outcome (Shapiro & Levendosky, 1999; Roche et al., 1999).

Additionally, the findings of the present study offer new evidence to the field of counseling, showing that attachment style serves as a mediator between CSA, attachment style, and PTG. These results imply that exploring attachment styles would assist clients in the self-awareness process as it relates to their coping and adjustment after CSA.

Additionally, identifying attachment styles among adult survivors of CSA may be beneficial for trauma counselors working with survivors of CSA, as this may provide insight into areas to explore and address in counseling in order to help clients achieve posttraumatic growth.

Although the results of this study provide new insight into the relationship between trauma related to CSA, adult attachment style, and PTG, these results should be interpreted with caution due to the limitations of the study (i.e., research design, sampling, instrumentation). For example, the entire sample consisted of people with a history of CSA who belong to a support network; thus, these results cannot be generalized to the greater population. Additionally, the researcher sought to obtain participants from three online support networks; however, only two networks were responsive to the study, and the researcher was not able to directly provide the assessment survey to potential participants. Instead, the researcher was required to send an invitation to participate to the communications coordinator of one of the groups to be dispersed among network members, and post an invitation to the other network's website. Furthermore, there was a lack of diversity in this sample, as the majority of participants

were White/Caucasian women; thus results may be different among a more diverse sample. Moreover, among the instruments utilized in this study, the IES-R may be a limitation to the present study. As the IES-R consists of general trauma related questions related to PTSD symptomology, and is not specifically designed to assess for trauma related to CSA, it may not have captured the scope of trauma experienced among this sample.

Despite limitations, the present study contributes to the literature on counseling and counselor education by providing: (a) insight into the experience of trauma among adult survivors of CSA as they relate to survivors' attachment styles; (b) insight into the experience of trauma among adult survivors of CSA and the presence of PTG; and (c) awareness of the relationship between the attachment style of adult survivors of CSA and the experience of PTG.

APPENDIX A  
COMMUNICATIONS WITH PARTICIPANTS

## **EXPLANATION OF RESEARCH**

**Title of Project:** The Contribution of Adult Attachment Style on the Experience of Posttraumatic Growth among Adult Survivors of Childhood Sexual Abuse

**Principal Investigator:** Kristina Nelson

**Other Investigators:** N/A

**Faculty Supervisor:** Dr. W. Bryce Hagedorn

Dear Potential Research Participant,

You are being invited to take part in a research study. Whether you take part is up to you.

The purpose of this research investigation is to explore the influence of attachment style and perceived impact of abuse on the experience of posttraumatic growth among survivors of childhood sexual abuse. The objective is to identify how these constructs relate and contribute to one another.

If you wish to participate, you will complete a set of questions related to your attachment style, perception of the abuse you experienced, and personal adjustment in adulthood. Additionally, you will be providing some general demographic information. Any information you provide, will remain free of identifying information, and your participation in this study will remain anonymous.

Completion of this questionnaire should take no longer than 20 minutes.

You must be 18 years of age or older to take part in this research study.

Your participation in this research project is voluntary. You do not have to participate. You do not have to answer any questions that you do not wish to answer. Please be advised that you may choose not to participate in this study, and may withdraw from the study at any time without consequence.

For each completed survey contributed to this study, a one dollar donation to The Rape, Abuse, and Incest, National Network (RAINN) will be made up to 500 dollars. RAINN is the nation's largest anti-sexual assault organization that serves to provide support for survivors of rape, abuse, and incest. The RAINN organization aligns with the study's

focus on supporting the understanding and treatment of survivors of childhood sexual abuse.

**Study contact for questions about the study or to report a problem:**

If you have questions, concerns, complaints, or comments about this research, please contact Kristina Nelson at (386) 624-5688; [kmnelson@knights.ucf.edu](mailto:kmnelson@knights.ucf.edu), University of Central Florida, College of Education and Human Performance, Counselor Education Program, Orlando, FL.

**IRB contact about your rights in the study or to report a complaint:** Research at the University of Central Florida involving human participants is carried out under the oversight of the Institutional Review Board (UCF IRB). This research has been reviewed and approved by the IRB. For information about the rights of people who take part in research, please contact: Institutional Review Board, University of Central Florida, Office of Research & Commercialization, 12201 Research Parkway, Suite 501, Orlando, FL 32826-3246 or by telephone at (407) 823-2901.



## **RECRUITMENT EMAIL**

From: Kristina Nelson [knnelson@knights.ucf.edu] (through Qualtrics)  
To: Recipient  
Subject: Initial Request for Participation in a Research Study  
[1/4/2016]

Dear Potential Research Participant:

I am writing to request your assistance with a significant study being conducted at the University of Central Florida to understand the contribution of adult attachment style and perceived impact of abuse on the experience of posttraumatic growth among survivors of childhood sexual abuse.

This study aims to develop an accurate understanding of these unique constructs and their relationships. Therefore, I need to survey a diverse set of adult survivors of childhood sexual abuse to obtain their input. As a member of one of the following support groups/networks (i.e., RAINN, AfterSilence.org, Stop It Now!), you are invited to participate in this investigation. The requirements to participate include: (a) being 18 years or older, (b) have a history of experiencing childhood sexual abuse, and (c) being a resident of the United States.

Your participation in responses to this survey is very important and will help contribute to a growing body of research on factors that influence life adjustment following childhood sexual abuse. As a part of this study, I am looking for your individual responses to the four instruments and demographic form. Your input is an integral part of this research.

This is a short questionnaire that should take you no longer than 15 minutes to complete. Please click the link below (or copy and paste the survey link into your internet browser) to go to the survey website and begin the survey.

### **Survey Link:**

[http://ucf.qualtrics.com//SE/?SID=SV\\_cZx3OUECUP6CA4d](http://ucf.qualtrics.com//SE/?SID=SV_cZx3OUECUP6CA4d)

Your participation in this survey is voluntary and all of your responses will be confidential.

No personally identifiable information will be associated with your responses in any reports of this data. Should you have any questions or comments, please feel free to contact me at [knnelson@knights.ucf.edu](mailto:knnelson@knights.ucf.edu) or 386-624-5688. This study has been reviewed and approved by the University of Central Florida Institutional Review Board, and if you

have any questions about your rights as a participant in this study, you may contact them by telephone at 407-823-2901.

For each completed survey contributed to this study, a one dollar donation to The Rape, Abuse, and Incest, National Network (RAINN) will be made up to 500 dollars.

I appreciate your time and consideration in completing the survey. It is only through the help of participants like you that I can provide information to help guide the development of research regarding the counseling profession.

Thank you!

Kristina Nelson  
Principal Investigator  
University of Central Florida  
College of Education  
4000 Central Florida Blvd.  
Orlando, FL 32816

## REMINDER EMAIL

From: Kristina Nelson [knnelson@knights.ucf.edu] (through Qualtrics)  
To: Recipient  
Subject: Research survey on Attachment, Abuse, and Growth.  
[1/11/2016]

Dear Potential Research Participant:

We recently asked for your participation in a survey that we are conducting with adult survivors of childhood sexual abuse. We are asking participants to complete a set of online questionnaires concerning attachment styles, perceptions of abuse, and adjustment following abuse.

This is a short set of questionnaires, and should take you no longer than 15 minutes to complete. If you have already completed the survey, we appreciate your participation! If you have not responded to this survey, we encourage you to take a few minutes and complete the survey.

Please click the link below (or copy and paste the survey link into your internet browser) to access the survey website and begin the survey.

**Survey Link:**

[http://ucf.qualtrics.com//SE/?SID=SV\\_cZx3OUECUP6CA4d](http://ucf.qualtrics.com//SE/?SID=SV_cZx3OUECUP6CA4d)

***Your participation in this survey is voluntary and all of your responses will be confidential.***

It is only through the help of participants like you that I can provide information to help guide the development of research regarding the counseling profession. Thank you for your assistance in this study!

For each completed survey contributed to this study, a one dollar donation to The Rape, Abuse, and Incest, National Network (RAINN) will be made up to 500 dollars.

With much appreciation,

Kristina Nelson  
Principal Investigator  
University of Central Florida  
College of Education  
4000 Central Florida Blvd.  
Orlando, FL 32816

## FINAL REMINDER EMAIL

From: Kristina Nelson [knnelson@knights.ucf.edu] (through Qualtrics)  
To: Recipient  
Subject: Research survey on Attachment, Abuse, and Growth.  
[1/25/2016]

Dear Potential Research Participant:

This time of year can be a busy time, and I understand how valuable your time is, I am hoping you may be able to give about 15 minutes of your time to help us collect information pertaining to attachment style, perception of abuse, and adjustment following abuse, among adult survivors of childhood sexual abuse.

If you have already completed the survey, we appreciate your participation! If you have not yet responded to this survey, we would like to urge you to complete the questionnaires.

I plan to end the study soon, so I wanted to send this reminder to all potential participants who have not responded to make sure they had a chance to contribute.

Please click the link below (or copy and paste the survey link into your internet browser) to go to the survey website and begin the survey.

**Survey Link:**

[http://ucf.qualtrics.com//SE/?SID=SV\\_cZx3OUECUP6CA4d](http://ucf.qualtrics.com//SE/?SID=SV_cZx3OUECUP6CA4d)

Thank you in advance for completing this survey. Your response is important and anonymous!

For each completed survey contributed to this study, a one dollar donation to The Rape, Abuse, and Incest, National Network (RAINN) will be made up to 500 dollars.

Many Thanks,

Kristina Nelson  
Principal Investigator  
University of Central Florida  
College of Education  
4000 Central Florida Blvd.  
Orlando, FL 32816

## THANK YOU EMAIL

From: Kristina Nelson [kmmnelson@knights.ucf.edu] (through Qualtrics)  
To: Recipient  
Subject: Thank You for Your Time  
[2/12/2016]

Dear Research Participant:

Thank you so much for your time and contribution to my study! Your feedback is very much appreciated. If you have any questions or comments about this research, please contact me (Kristina Nelson, [kmmnelson@knights.ucf.edu](mailto:kmmnelson@knights.ucf.edu)) or my faculty advisor Dr. Bryce Hagedorn (bryce.hagedorn@ucf.edu).

Sincerely,

Kristina Nelson  
Principal Investigator  
University of Central Florida  
College of Education  
4000 Central Florida Blvd.  
Orlando, FL 32816

APPENDIX B  
INSTITUTIONAL REVIEW BOARD APPROVAL



University of Central Florida Institutional Review Board  
Office of Research & Commercialization  
12201 Research Parkway, Suite 501  
Orlando, Florida 32826-3246  
Telephone: 407-823-2901 or 407-882-2276  
[www.research.ucf.edu/compliance/irb.html](http://www.research.ucf.edu/compliance/irb.html)

### Approval of Exempt Human Research

From: **UCF Institutional Review Board #1**  
**FWA00000351, IRB00001138**

To: **Kristina Michelle Nelson**

Date: **December 07, 2015**

Dear Researcher:

On 12/07/2015, the IRB approved the following activity as human participant research that is exempt from regulation:

Type of Review:	Exempt Determination
Project Title:	The Contribution of Adult Attachment Style on the Experience of Posttraumatic Growth among Adult Survivors of Childhood Sexual Abuse.
Investigator:	Kristina Michelle Nelson
IRB Number:	SBE-15-11815
Funding Agency:	
Grant Title:	
Research ID:	N/A

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these changes affect the exempt status of the human research, please contact the IRB. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

In the conduct of this research, you are responsible to follow the requirements of the [Investigator Manual](#).

On behalf of Sophia Dziegielewski, Ph.D., L.C.S.W., UCF IRB Chair, this letter is signed by:

Signature applied by Joanne Muratori on 12/07/2015 11:32:39 AM EST

IRB Manager

APPENDIX C  
PSYCHOLOGICAL RESOURCES



## **PSYCHOLOGICAL RESOURCES**

Thank you for taking the time to complete this survey. We understand the sensitive nature of the topic, and appreciate your participation. If you experience any distress as a result of participating in this survey, and need psychological services, please see the list referral sources below to help guide you in finding the right help:

### **Psychology Today**

<https://www.psychologytoday.com/>

### **Find-A-Therapist.com**

<http://www.find-a-therapist.com/>

### **MentalHealth.gov**

<http://www.mentalhealth.gov/about-us.html>

### **National Suicide Prevention Lifeline**

1-800-273-TALK (8255)

### **National Sexual Assault Hotline**

800-656-HOPE (4673) or [online.rainn.org](http://online.rainn.org)

APPENDIX D  
GENERAL DEMOGRAPHIC QUESTIONNAIRE

## GENERAL DEMOGRAPHIC QUESTIONNAIRE

**Directions: Please complete the following questions:**

A. What gender do you identify with?

- ☐ Male
- ☐ Female
- ☐ Transgender
- ☐ Other, please specify: \_\_\_\_\_

B. What is your age? \_\_\_\_\_

C. What is your race?

- ☐ African/African American/Black
- ☐ Asian/Asian American
- ☐ Caucasian/White
- ☐ Hispanic/Latino(a)
- ☐ Native American
- ☐ Pacific Islander
- ☐ Biracial/Multiracial
- ☐ Other \_\_\_\_\_

D. How many years have past since you experienced childhood sexual abuse?

- ☐ 1-5 years
- ☐ 6-10 years
- ☐ 11-15 years
- ☐ 16-20 years
- ☐ More than 20 years

E. Have you ever received psychological services (e.g., counseling) for your experience with childhood sexual abuse?

☐ Yes

☐ No

F. Your primary caregiver/parent was (choose all that apply):

☐ Mother

☐ Father

☐ Other \_\_\_\_\_

G. Your primary caregiver/parent was:

with ☐ Supportive (i.e. believed the abuse, reported the abuse, ceased contact the offender).

☐ Unsupportive (i.e. did not believe the abuse, did not report the abuse, maintained contact with the offender)

☐ The offender

H. What is your relationship status

☐ Single

☐ Engaged

☐ In a committed relationship

☐ Married/Partnered

☐ Divorced

☐ Separated

☐ Other \_\_\_\_\_

I. Do you identify as Spiritual or Religious?

☐ Yes

☐ No

Thank you for your time.

APPENDIX E  
ADVERSE CHILDHOOD EXPERIENCES SCALE

### Finding Your ACE Score

**While you were growing up, during your first 18 years of life:**

1. Did a parent or other adult in the household **often or very often**...  
Swear at you, insult you, put you down, or humiliate you?  
**or**  
Act in a way that made you afraid that you might be physically hurt?  
Yes No If yes enter 1 \_\_\_\_\_
2. Did a parent or other adult in the household **often or very often**...  
Push, grab, slap, or throw something at you?  
**or**  
**Ever** hit you so hard that you had marks or were injured?  
Yes No If yes enter 1 \_\_\_\_\_
3. Did an adult or person at least 5 years older than you **ever**...  
Touch or fondle you or have you touch their body in a sexual way?  
**or**  
Attempt or actually have oral, anal, or vaginal intercourse with you?  
Yes No If yes enter 1 \_\_\_\_\_
4. Did you **often or very often** feel that ...  
No one in your family loved you or thought you were important or special?  
**or**  
Your family didn't look out for each other, feel close to each other, or support each other?  
Yes No If yes enter 1 \_\_\_\_\_
5. Did you **often or very often** feel that ...  
You didn't have enough to eat, had to wear dirty clothes, and had no one to protect you?  
**or**  
Your parents were too drunk or high to take care of you or take you to the doctor if you needed it?  
Yes No If yes enter 1 \_\_\_\_\_
6. Were your parents **ever** separated or divorced?  
Yes No If yes enter 1 \_\_\_\_\_
7. Was your mother or stepmother:  
**Often or very often** pushed, grabbed, slapped, or had something thrown at her?  
**or**  
**Sometimes, often, or very often** kicked, bitten, hit with a fist, or hit with something hard?  
**or**  
**Ever** repeatedly hit at least a few minutes or threatened with a gun or knife?  
Yes No If yes enter 1 \_\_\_\_\_
8. Did you live with anyone who was a problem drinker or alcoholic or who used street drugs?  
Yes No If yes enter 1 \_\_\_\_\_
9. Was a household member depressed or mentally ill, or did a household member attempt suicide?  
Yes No If yes enter 1 \_\_\_\_\_
10. Did a household member go to prison?  
Yes No If yes enter 1 \_\_\_\_\_

**Now add up your "Yes" answers: \_\_\_\_\_ This is your ACE Score.**

092406RA4CR

APPENDIX F  
POSTTRAUMATIC GROWTH INVENTORY



## **Assistance to PTG Researchers**

We provide to researchers this information about the measures we have published in relation to posttraumatic growth (PTG). You may note that the PTGI was first published and the term first used by us (Tedeschi & Calhoun) in the 1995 book *Trauma and Transformation*. However, the version we have used was published with a revised response format in *Journal of Traumatic Stress* in 1996. Other measures have been published since then in order to research PTG in children, and to provide a measure of both positive and negative outcomes on the aftermath of trauma, and to assess other variables that are central to our model of PTG processes. That model is also reproduced here. The references that follow are a selected list that includes some work with researchers outside our department with whom we collaborate, and our students in our research lab.

### **In Reciprocation**

There is no charge for the PTGI and these other measures, and there is no charge for the reproduction of the scale for use in research.

We welcome the use of our scales in not-for-profit research. However, these inventories are not to be reproduced for any kind of general distribution and may not be used in for-profit enterprises.

In reciprocation, we would like you to send us a gratis copy of any manuscripts, theses, dissertations, research reports, preprints, and publications you prepare in which our materials, or any version of them, is used. Both R. G. Tedeschi and L.G. Calhoun can be contacted at: **Department of Psychology - UNC Charlotte - Charlotte, NC 28223 USA. Email to [rtedesch@unc.edu](mailto:rtedesch@unc.edu).**

### **Posttraumatic Growth Inventory**

Indicate for each of the statements below the degree to which this change occurred in your life as a result of your crisis [**or researcher inserts specific descriptor here**], using the following scale.

- 0= I did not experience this change as a result of my crisis.
- 1= I experienced this change to a very small degree as a result of my crisis.
- 2= I experienced this change to a small degree as a result of my crisis.
- 3= I experienced this change to a moderate degree as a result of my crisis.
- 4= I experienced this change to a great degree as a result of my crisis.
- 5= I experienced this change to a very great degree as a result of my crisis.

- 1. I changed my priorities about what is important in life. (V)
- 2. I have a greater appreciation for the value of my own life. (V)
- 3. I developed new interests. (II)
- 4. I have a greater feeling of self-reliance. (III)
- 5. I have a better understanding of spiritual matters. (IV)
- 6. I more clearly see that I can count on people in times of trouble. (I)
- 7. I established a new path for my life. (II)
- 8. I have a greater sense of closeness with others. (I)
- 9. I am more willing to express my emotions. (I)
- 10. I know better that I can handle difficulties. (III)
- 11. I am able to do better things with my life. (II)
- 12. I am better able to accept the way things work out. (III)
- 13. I can better appreciate each day. (V)
- 14. New opportunities are available which wouldn't have been otherwise. (II)
- 15. I have more compassion for others. (I)

16. I put more effort into my relationships. (I)  
17. I am more likely to try to change things which need changing. (II)  
18. I have a stronger religious faith. (IV)  
19. I discovered that I'm stronger than I thought I was. (III)  
20. I learned a great deal about how wonderful people are. (I)  
21. I better accept needing others. (I)

Note: Scale is scored by averaging all responses. Factors are scored by adding responses to items on each factor. Items to which factors belong are not listed on form administered to participants.

**PTGI Factors**

Factor I: Relating to Others  
Factor II: New Possibilities  
Factor III: Personal Strength  
Factor IV: Spiritual Change  
Factor V: Appreciation of Life

Tedeschi, R.G., & Calhoun, L.G. (1996). The Posttraumatic Growth Inventory: Measuring the positive legacy of trauma., *Journal of Traumatic Stress*, 9, 455-471.

APPENDIX G  
EXPERIENCES IN CLOSE RELATIONSHIPS SCALE SHORT FORM

### Experiences in Close Relationship Scale-Short Form (ECR-S)

**Instruction:** The following statements concern how you feel in romantic relationships. We are interested in how you generally experience relationships, not just in what is happening in a current relationship. Respond to each statement by indicating how much you agree or disagree with it. Mark your answer using the following rating scale:

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree

**1. It helps to turn to my romantic partner in times of need.**

2. I need a lot of reassurance that I am loved by my partner.

3. I want to get close to my partner, but I keep pulling back.

4. I find that my partner(s) don't want to get as close as I would like.

**5. I turn to my partner for many things, including comfort and reassurance.**

6. My desire to be very close sometimes scares people away.

7. I try to avoid getting too close to my partner.

**8. I do not often worry about being abandoned.**

**9. I usually discuss my problems and concerns with my partner.**

10. I get frustrated if romantic partners are not available when I need them.

11. I am nervous when partners get too close to me.

12. I worry that romantic partners won't care about me as much as I care about them.

Scoring Information:

Anxiety = 2, 4, 6, 8 (reverse), 10, 12

Avoidance = 1 (reverse), 3, 5 (reverse), 7, 9 (reverse), 11

Wei, M., Russell, D. W., Mallinckrodt, B., & Vogel, D. L. (2007). The experiences in Close Relationship Scale (ECR)-Short Form: Reliability, validity, and factor structure. *Journal of Personality Assessment*, 88, 187-204.

APPENDIX H  
IMPACT OF EVENT SCALE-REVISED

## APPENDIX I: IMPACT OF EVENT SCALE- REVISED

**INSTRUCTIONS:** Below is a list of difficulties people sometimes have after stressful life events. Please read each item, and then indicate how distressing each difficulty has been for you **DURING THE PAST SEVEN DAYS** with respect to your experience with sexual abuse, which occurred during childhood. How much were you distressed or bothered by these difficulties?

Not at all = 0	A little bit = 1	Moderately = 2	Quite a bit = 3	Extremely = 4
----------------	------------------	----------------	-----------------	---------------

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

© 1995; Daniel S. Weiss & Charles R. Marmar

<b>trouble breathing, nausea, or a pounding heart.</b>					
<b>20. I had dreams about it.</b>	0	1	2	3	4
<b>21. I felt watchful and on-guard</b>	0	1	2	3	4
<b>22. I tried not to talk about it.</b>	0	1	2	3	4

Citations: Weiss, D.S. & Marmar, C.R. (1997). The Impact of Event Scale-Revised. In J.P. Wilson, & T. M. Keane (Eds.), *Assessing Psychological Trauma and PTSD: A Practitioner's Handbook*. (pp. 399-411). New York: Guilford.  
Weiss, D. S. (2004). The Impact of Event Scale-Revised. In J. P. Wilson, & T. M. Keane (Eds.), *Assessing psychological trauma and PTSD: A practitioner's handbook* (2<sup>nd</sup> ed., pp. 168-189). New York: Guilford Press.

APPENDIX I  
APPROVAL EMAILS FOR USE OF INSTRUMENTATION



## ECR-S EMAIL APPROVAL

Re: ECR-S use and purchase  
KMNelson  
Tue 10/13/2015 12:18 PM  
To: Wei, Meifen [PSYCH] <wei@iastate.edu>;

Thank you so much, Dr. Wei!

**Kristina Nelson, MA**  
*Registered Mental Health Counselor Intern*  
*Doctoral Candidate*  
*Counselor Education*  
*University of Central Florida*  
*Phone: 386-624-5688*  
*Email: kmnelson@knights.ucf.edu*

---

**From:** Wei, Meifen [PSYCH] <wei@iastate.edu>  
**Sent:** Tuesday, October 13, 2015 8:00 AM  
**To:** KMNelson  
**Subject:** Re: ECR-S use and purchase

Please feel free to use it. This scale is free of use.

Best wishes for your study!  
Meifen

Meifen Wei, Ph.D.  
Professor of Psychology  
W112 Lagomocino Hall  
Iowa State University  
515-294-7534 (office)  
515-294-6424 (fax)  
<http://wei.public.iastate.edu>

---

**From:** KMNelson <KMNelson@knights.ucf.edu>  
**Sent:** Monday, October 12, 2015 10:03 PM  
**To:** Wei, Meifen [PSYCH]  
**Subject:** ECR-S use and purchase

Dear Dr. Wei,

I am a doctoral student at the University of Central Florida working towards developing a dissertation study regarding posttraumatic growth and attachment style among adult survivors of childhood sexual abuse (CSA). I plan to use the Experiences in Close Relationships- Short Form, but would like to administer the assessment online. How do I go about purchasing this assessment, and being able to use it online?

Any assistance you could offer would be greatly appreciated!

Thank you!

**Kristina Nelson, MA**

*Registered Mental Health Counselor Intern*

*Doctoral Candidate*

*Counselor Education*

*University of Central Florida*

*Phone: 386-624-5688*

*Email: kmnelson@knights.ucf.edu*

## IES-R EMAIL APPROVAL

Re: IES-R use and purchase  
KMNelson  
Tue 9/22/2015 5:52 PM  
To: Weiss, Daniel <Daniel.Weiss@ucsf.edu>;  
Thank you so much, Dr. Weiss! This is very helpful!

With much appreciation,

**Kristina Nelson, MA**  
*Registered Mental Health Counselor Intern*  
*Doctoral Candidate*  
*Counselor Education*  
*University of Central Florida*  
*Phone: 386-624-5688*  
*Email: [kmnelson@knights.ucf.edu](mailto:kmnelson@knights.ucf.edu)*

**From:** Weiss, Daniel <Daniel.Weiss@ucsf.edu>  
**Sent:** Tuesday, September 22, 2015 4:28 PM  
**To:** KMNelson  
**Subject:** RE: IES-R use and purchase

please see attached files

---

Daniel S. Weiss, Ph.D.  
Editor in Chief, *Journal of Traumatic Stress*  
Professor of Medical Psychology  
Department of Psychiatry  
University of California San Francisco  
San Francisco, CA 94143-0984  
P: 415 476 7557  
F: 415 476 7552  
Mail Code: UCSF Box 0984-F

**From:** KMNelson [mailto:KMNelson@knights.ucf.edu]  
**Sent:** Tuesday, September 22, 2015 10:32  
**To:** Weiss, Daniel  
**Cc:** Sosa, Hugo  
**Subject:** IES-R use and purchase

Dear Dr. Weiss,

I am a doctoral student at the University of Central Florida working towards developing a dissertation study regarding posttraumatic growth among survivors of childhood sexual abuse (CSA). I plan to use the Impact of Event Scale-Revised, but would like to administer the assessment online. How do I go about purchasing this assessment, and being able to use it online?

Any assistance you could offer would be greatly appreciated!

Thank you!

**Kristina Nelson, MA**  
*Registered Mental Health Counselor Intern*  
*Doctoral Candidate*  
*Counselor Education*  
*University of Central Florida*  
*Phone: 386-624-5688*  
*Email: [kmnelson@knights.ucf.edu](mailto:kmnelson@knights.ucf.edu)*

## **PTGI EMAIL APPROVAL**

Re: PTGI use and purchase

KMNelson

Sat 9/26/2015 2:30 PM

To: Posttraumatic Growth <posttraumaticgrowth@uncc.edu>;

Thank you so much! I greatly appreciate you!

**Kristina Nelson, MA**

*Registered Mental Health Counselor Intern*

*Doctoral Candidate*

*Counselor Education*

*University of Central Florida*

*Phone: 386-624-5688*

*Email: kmnelson@knights.ucf.edu*

---

**From:** Posttraumatic Growth <posttraumaticgrowth@uncc.edu>

**Sent:** Friday, September 25, 2015 9:35 PM

**To:** KMNelson

**Subject:** Re: PTGI use and purchase

Hello Kristina,

Attached you will find copies of all of our scales, including the PTGI, and we hope they will be of use to you! Thank you for your interest.

Warm regards,

On Wed, Sep 23, 2015 at 11:29 AM, KMNelson <[KMNelson@knights.ucf.edu](mailto:KMNelson@knights.ucf.edu)> wrote:

Thank you so much, Dr. **Tedeschi**! This is very helpful!

With much appreciation,

**Kristina Nelson, MA**

*Registered Mental Health Counselor Intern*

*Doctoral Candidate*

*Counselor Education*

*University of Central Florida*

*Phone: 386-624-5688*

*Email: kmnelson@knights.ucf.edu*

On Wed, Sep 23, 2015 at 7:57 AM, Tedeschi, Rich <rtedesch@uncc.edu> wrote:

Dear Ms. Nelson

I have attached all the measures we have developed for PTG research in this package, including the PTGI. You can use a system such as Qualtrics to gather data online. I am sure your faculty are familiar with it.

Best,

R. Tedeschi

On Tue, Sep 22, 2015 at 1:20 PM, KMNelson <[KMNelson@knights.ucf.edu](mailto:KMNelson@knights.ucf.edu)> wrote:

Dear Dr. Tedeschi,

I am a doctoral student at the University of Central Florida working towards developing a dissertation study regarding posttraumatic growth among survivors of childhood sexual abuse (CSA). I plan to use the Posttraumatic Growth Inventory, but would like to administer the assessment online. How do I go about purchasing this assessment, and being able to use it online?

Any assistance you could offer would be greatly appreciated!

Thank you!

**Kristina Nelson, MA**  
*Registered Mental Health Counselor Intern*  
*Doctoral Candidate*  
*Counselor Education*  
*University of Central Florida*  
*Phone: [386-624-5688](tel:386-624-5688)*  
*Email: [kmnelson@knights.ucf.edu](mailto:kmnelson@knights.ucf.edu)*

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