The Association Between Attachment and Posttraumatic Growth in a Sample of U.S. College Students

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THE ASSOCIATION BETWEEN ATTACHMENT AND POSTTRAUMATIC GROWTH IN A SAMPLE OF U.S. COLLEGE STUDENTS

A Thesis

Submitted to the Graduate Faculty of the
Louisiana State University and
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ABSTRACT

The purpose of this study is to examine the association between attachment and posttraumatic growth. Previous literature has suggested that securely attached individuals show more positive methods of coping with stress by activating their attachment system and facing the distress of a traumatic event. On the other hand, insecurely attached individuals display more negative methods of dealing with stress. Those with insecure attachment may avoid the distress of a traumatic event or not successfully activate the attachment system. Thus, it is expected that securely attached individuals will demonstrate higher levels of posttraumatic growth, or positive reactions to the experience of a traumatic event. In this study, 128 undergraduate and graduate students were sampled in a correlational study of attachment and posttraumatic growth. Results indicated a significant link between attachment and posttraumatic growth. Conclusions from this study add to both the posttraumatic growth and attachment literature by providing future directions in research and providing direction for future therapeutic practice and interventions.

Keywords: personality, posttraumatic growth, attachment, trauma
CHAPTER 1
INTRODUCTION

Traumatic events are often described as profoundly frightening events that have the potential to impact a person’s life long after the event occurs. The American Psychiatric Association (2013) defines a traumatic event as any event in which the following occurs: (a) experiencing or witnessing an event that involved actual or threatened death or serious injury or threat to self or others and (b) a response involving intense fear, helplessness, or horror. Examples of traumatic events include natural disasters, childhood sexual abuse, loss of a loved one, or witnessing a violent crime. Experiencing one of these traumatic events, or something similar, is more prevalent in today’s society than many people believe and can affect virtually anyone.

Previous studies demonstrate high rates of traumatic events in different populations. College students have been shown to be a particularly vulnerable population due to the increase in daily stressors and increased exposure to potentially traumatic events (Lalande & Bonanno, 2011). Frazier et al. (2009) found that 85% of undergraduate students interviewed reported experiencing a traumatic event in their lifetime. Specifically, evidence has shown that college students are at a higher risk to experience sexual assault (Humphrey & White, 2000) and community violence (Scarp et al., 2002) due to the newfound freedom of college life. In addition to having higher risks of facing trauma, college students are also going through a major life adjustment that can affect the way they respond to stressors and their changing environments.

Previous research has shown that the experience of a traumatic event has the potential to change the way people think and perceive the world around them in ways such as altering their future goals, styles of coping or even personal relationships (Arikan & Karanci, 2012). Much of this research focuses on the potential for negative consequences following trauma, including
depression, generalized anxiety disorder and acute stress disorder or post-traumatic stress disorder (PTSD; Lubin, Johnson & Southwick, 1996; Panova, 2009; Wiley, 2010). However, more recent literature on recovery from traumatic events has shown that people are more resilient than once thought (Bonanno & Mancini, 2008). In fact, people have reported personal growth from a variety of different events, such as cancer (Cordova, Cunningham, Carlson, & Andrykowski, 2001) or a natural disaster (McMillen, Smith, & Fisher, 1997). From this positive perspective, the opportunity to potentially demonstrate personal growth following a traumatic event was introduced. Tedeschi and Calhoun (1996) have coined the term “posttraumatic growth,” meaning the positive changes that occur after the experience of a traumatic event. Although similar, posttraumatic growth differs from constructs such as hardiness and resiliency. These terms imply someone’s ability to get through or bounce back from stressful or traumatic events, as opposed to the alternative of developing psychopathology or psychological problems. Instead, posttraumatic growth refers to the ability to face the negative impact of trauma and experience positive changes from that struggle. According to Tedeschi and Calhoun (2004), this means “not simply a return to baseline- it is an experience of improvement that for some persons is deeply profound” (p. 2). Studies have shown the types of growth people demonstrate fall within three categories: changes in one’s sense of self, changes in one’s spirituality, and changes in one’s relationships with others (Tedeschi & Calhoun, 1996).

Much of the literature on posttraumatic growth has been focused on developing possible pathways to growth following traumatic events based on individual factors and other environmental factors. Schaefer and Moos (1997) proposed a comprehensive model of growth that included various clusters of pretrauma, peritrauma and postrauma variables that impact the recovery process. Factors that impact a person before the traumatic event include their personal
characteristics (e.g. socioeconomic status, self-efficacy, personality traits) and environmental situation (e.g. social support, living situation). Peritrauma conditions, or factors related to the traumatic event, include the timing, duration and time that has passed since. And finally, postrauma factors include coping resources and cognitive appraisals. There is current empirical evidence demonstrating the impact of trauma-related factors as well as many individual differences such as level of optimism, self-efficacy, and access to social supports contributes to posttraumatic growth (Schaefer & Moos, 1997).

The purpose of this paper is to contribute to the existing body of research on pathways to posttraumatic growth by investigating the impact of environmental factors and event factors in a sample of U.S. college students. At the level of the individual, a specific focus will be the role that attachment plays in the experience of growth following an extremely stressful life event.

As previously stated, college students are at high risk of exposure to some specific traumatic events. Research has shown a prevalence rate ranging between 67% - 84% of college students experiencing a potentially traumatic event (Read et al., 2011). Such a wide range exists due to many studies defining a traumatic event in different ways, thus some may count events not always considered traumatic. Recently, Read et al. found that the most common traumatic events experienced in a college population were life-threatening illness (35%) and sudden death of a loved one (34%). Students also reported experiencing an accident/natural disaster/fire (26%), physical violence (24%), other events (20%), sexual assault (7%) and combat (1%). In addition to exposure to stressful life events, the transition to college life presents more obstacles than just adjusting to new academic standards, greater autonomy and less structure. New students must also learn to manage a new social atmosphere, separate from family and friends, as well as take on new roles and responsibilities (Crede & Niehorster, 2012). With their continuously
changing environment, college students rely more on their personal and environmental characteristics to handle and adapt to stress. These factors can include relationships with a parent(s), strength of social support network and individual coping methods. Many of these same factors contribute to the recovery process following a traumatic event.

According to Bowlby (1969), attachment is an instinctive tendency in which one human or other animal forms an affectionate bond with another. As one of the most significant aspects of human development, attachment leads to the acquisition of lifelong patterns of social behavior through the negotiations of needs with a figure of attachment (Ainsworth, 1992). Typically, this bond is relied upon when faced with a situation of fear or distress in order to seek safety and protection. A child looks to an attachment figure for safety and protection that, when provided, results in a feeling of emotional security. Previous research has investigated the different ways levels of proximity and feelings of security are created within relationships within childhood and adult relationships (Mikulincer & Shaver, 2007). This research has led to the development of numerous approaches to defining the attachment with both typological and dimensional models explaining the various levels of security and methods of regulating affect in close relationships (Aspelmeier, 2007).

Recently, Bartholomew’s (1990) four category typology (secure, dismissing, preoccupied, and fearful) has become popular, specifically with adult attachment. The model classifies attachment based on two dimensions: “model of self” and “model of others.” Additionally, anxiety and avoidance are considered major dimensions of problematic attachment behavioral patterns that have developed over a person’s life course. Those that seek out social support and rely on their attachment source for safety, comfort and support are considered secure (low avoidance, low anxiety). Three forms of insecure attachment reflect combinations of the
anxiety and avoidance dimensions. Dismissing individuals (low anxiety, high avoidance) deny the importance of relationships with others and rely on themselves in times of stress. Those with preoccupied attachment (high anxiety, low avoidance) have high anxiety about the availability of support from attachment figures and thus have higher levels of emotional distress and clinging or proximity seeking behavior with attachment figures they do have. Finally, fearful (high anxiety, high avoidance) is typically associated with the highest level of anxiety due to the inability to fully develop strategy for negotiating proximity and use of a caregiver.

Those with stable insecure attachment are potentially more vulnerable to the development of psychopathology and symptomology across the lifespan, especially following a negative life event (Elwood & Williams, 2007). Much of the research has shown a link between those with insecure attachment and negative symptomology such as PTSD (Mikulincer & Shaver, 2007), higher levels of anxiety (Williams & Riskind, 2004) and depression (Williams & Riskund, 2004). In addition, trauma studies have shown that those with insecure attachments show higher levels of distress than those with secure attachments (Fraely, Fazzuri, Bonnano, & Dekel, 2005). It is likely that the experience of a traumatic event causes a person to activate their attachment system in the style in which they are accustomed. Thus, those with avoidant attachment would be likely to repress and avoid the trauma (Mikulincer, Florian, & Weller, 1993). On the other hand, those with secure attachment have shown that ability to demonstrate posttraumatic growth (e.g. Salo et al., 2005; Dekel, 2007).

The purpose of this paper is to extend both the literature on traumatic events as well as posttraumatic growth. First, a descriptive study will provide further support for the frequency of experiencing a traumatic event within a sample of students at a large southeastern U.S. university. In addition, the study will investigate the relationship between attachment style and
the amount of posttraumatic growth demonstrated in hopes of helping to clarify the potential predictors of a positive recovery from trauma. The following chapter will further detail the relevant literature associated with this study and its main research questions. The discussion will include how individuals respond to stress, specifically traumatic stress and the potential to positively recover from a traumatic event.
CHAPTER 2
LITERATURE REVIEW

Stress is a part of everyday life. This strain can stem from many different sources including finances, work, family, and even prolonged exposure to demanding circumstances. In order to help people move through and adapt to these situations it is important to gain an understanding of how they assess and evaluate these events in addition to the resources they utilize to recover. Thus far, science is unable to provide a definitive answer on the factors that lead to the recovery from extreme adverse situations (Linley & Joseph, 2004). Previous research showed that there is a wide variance in how individuals recover from disasters and potentially traumatic events (Bonnano, 2004; Lating, Sherman, & Peragine, 2006; Linley & Joseph, 2004). Thus, it is important to continue studying why some individuals are able to adapt following these demanding situations and why others are less successful (Norris, Friedman, & Watson, 2002).

The following is a literature review relevant to the purposes and research questions of the current study that provides a summary of the literature on recovery from traumatic events.

Stress

Although difficult to define, most present research defines stress as a “relationship between the person and the environment that is appraised by the person as taxing… and endangering his or her well-being” (Lazarus & Folkman, 1984, p. 19). Previous research focuses on the negative aspects of stress due to the well-documented impacts of stress on health, well-being, and work performance. However, stress is a necessary part of life that is unavoidable and could potentially result in beneficial outcomes as well as negative ones (Selye, 1973). When stress is handled appropriately, it can become energizing, stimulating, and growth producing as abilities are extended (Gardener & Fletcher, 2006). A stressor can be perceived as a challenge,
which can influence a person to be more flexible and adaptive toward a problem situation (Esch, 2002).

Selye (1974) was the first to introduce the term *eustress*, or “healthy stress.” This term refers to the positive psychological response to a stressor indicated by positive psychological states. Distress, on the other hand, refers to the negative psychological response to a stressor indicated by negative psychological states (Simmons & Nelson, 2001). There is agreement within the literature that stress is viewed as a process or interaction between the person and the demands of his or her environment and the individual’s ability to handle these demands (Sulsky & Smith, 2005). When facing daily stress the individual activates their stress response system in order to assess the threat and adapt accordingly.

**Stress Response**

Selye (1956) was the first to develop a physiological definition of the concept of stress response system and presented a widely accepted stress theory. Selye’s theory of stress stated that the physiological response to stress is a fundamental aspect of the experience. This physiological model of “stress response” is comprised of activation of the sympathetic nervous system (SNS), a parasympathetic withdrawal, and increased activity of the hypothalamic-pituitary-adrenal (HPA) axis. Selye’s intention was to define the body’s general reaction to significant psychological and biological demands (Selye, 1975).

The stress response begins with a stressor, defined as any real or imagined event, situation, or stimulus that triggers the human stress response system as a result of a perceived threat (Everly & Lating, 2002). Further, Everly and Lating (2002) differentiate between two types of potential stressors: *psychosocial* and *biogenic*. The psychosocial dimension of stress derives from a cognitive interpretation of an event, meaning the way the event is perceived,
especially in terms of cause and proximity, and the meanings that are assigned to it (Everly & Lating, 2002). This interpretation of an event can range from no perceived harm to apprehension of extreme adversity potentially affecting the individual’s well-being or even survival (Lazarus & Folkman, 1984). Biogenic stressors occur without the thoughts, cognitions or appraisals to produce the same physiological stress response. Thus, these stem from body reactions to toxins, substances, or environmental conditions (Everly & Lating, 2002).

The determination of the ways in which some situations are psychologically stressful, and for whom this may be so, is problematic (Lazarus, 1999). A stressful event becomes classified as a psychological stressor when the individual reacts based on cognitions that the event would adversely affect his or her well-being. As previously mentioned, this appraisal process is the key component in the definition of a psychosocial stressor (Everly & Lating, 2002). Oftentimes various psychological influences can activate the “fight-or-flight” response in humans (Cannon, 1953). The “fight-or-flight” response is thought to be a mobilization of body to prepare for muscular activity in response to a perceived threat (Cannon, 1953). From an evolutionary perspective, the purpose of the stress response is to improve physiological and mental functioning in order to meet imminent demands to ensure survival (Sapolsky, 1996). For example, one outcome from stress is the recruitment of attentional resources to increase the speed in which the brain processes information (Hancock & Weaver, 2005). Furthermore, hormones released with the stress response can boost memory and performance on cognitive tasks (Cahill, Gorski, & Le, 2005). Thus, when utilized appropriately the stress response can be beneficial, putting the brain and body in position to perform at a high level (Crum, Salovey, & Achor, 2013).
As part of his theory on stress response, Selye (1974) introduced the idea in which the individual finds a balance in eustress and distress. Selye stated that as stress increased, health and performance as well as general well-being would increase with it. However, as the stress increases there is an eventual maximum point reached in which the level of stress becomes deleterious for the individual. Selye referred to this point as the optimal stress level for the individual and hypothesized that this point is impacted by genetic, biological, and psychological factors (Everly & Lating, 2002).

A traumatic event overwhelms the stress response system by significantly surpassing the optimal stress level. Research shows that people from different backgrounds and social situations face incidents of posttraumatic stress (Mathieu & Ivanoff, 2006). Experiencing trauma requires the individual to access all sources of support and coping mechanisms. The following section will detail more specifically the obstacles presented when overcoming traumatic stress and the pathways of recovery following a traumatic event.

**Traumatic Stress**

Traumatic life events are more common than many people think. Research shows that a majority of people are exposed to one or even several traumatic events during childhood, adolescence and/or adulthood (Engelkemeyer & Marwit, 2008). These types of potential stressful events can include natural or manmade disasters, victim or witness of crime, or traumatic loss (Engelkemeyer & Marwit, 2008). These traumatic experiences have the potential for both long term and short-term psychological effects (Goldenberg & Matheson, 2005).

The experience of a traumatic event leads the individual to become traumatized when their immediate ability to cope and respond to the perceived threat is overwhelmed (Bassuk et al., 2006; Levine, 2008). These traumatic events typically include the threat of loss of life or
harm to oneself, or a close encounter with extreme violence or death (Herman, 1992). The experience of a traumatic event can leave a person feeling overwhelmed with feelings of helplessness, terror and loss of control (Herman, 1992). This traumatization can occur from the conscious or unconscious perception of any event as life threatening (Levine, 2008).

Horowitz (1990, 1991) developed a theoretical model of trauma which associates traumatic events with information overload of the individual’s cognitive system. Janoff-Bulman (1992) and Epstein (1991) added that three “fundamental assumptions” are potentially shattered by the experience of a traumatic event. These fundamental assumptions include: 1) world as benevolent or the perception that people are helpful and caring, our destiny is good and the world is a good and safe place to live; 2) world as meaningful meaning the world is a just, predictable and controllable place to live; 3) self as worthy or the individual’s feelings of competence, of being a good person and feelings that one can be loved.

Traumatic events provide information that does not fit the information contained within the core cognitive schemata, which are fixed in the individual’s mind (Dudek & Szymczak, 2011). This core cognitive schemata refers to the representation of the self and world, such as people’s belief that the world is safe, fair and controllable, that he or she is competent enough to cope with difficult situations, and can manage own emotional problems (McCann & Pearlman, 1990). The cognitive processing of information related to a traumatic event is, by definition, incomplete. Individuals exposed to psychological trauma commonly experience intrusive thoughts, avoidance and over-arousal, the core symptoms of the PTSD diagnosis. Horowitz (1990, 1991) proposed that the oscillations between reactions of avoidance and intrusion involve the learning processes of assimilation and accommodation. The integration of information about traumatic experiences into understanding, where reconstruction of a relevant schema occurs,
reflects the process of accommodation. Thus, the coping process following a traumatic event involves reestablishing the individual’s conceptual system (Jind, 2001). McCann and Pearlman (1991) state that “the individual is faced with the task of assimilating new meaning of the trauma into existing schemata, and/or accommodating or changing schemata to integrate reality” (McCann & Pearlman, 1991, p. 7). The fundamental dilemma posed by a traumatic event is that it is so frightening that the integration of information about it is obstructed by the reaction to it, where coping and information processing break down.

The predominant approach to recovery and treatment of psychological trauma begins with the identification of trauma-related psychopathology as described in the Diagnostic and Statistical Manual (DSM-5) under Posttraumatic Stress Disorder (PTSD; Bonanno & Mancini, 2010). These criteria include (a) experiencing or witnessing an event that involved actual or threatened death or serious injury or threat to self or others and (b) a response involving intense fear, helplessness, or horror (APA, 2013). This perspective relies on a binary distinction of trauma, with pathology either present or absent, which can limit research on trauma reactions with respect to change processes across time and variations among individuals (Bonnano & Mancini, 2010).

Bonanno (2004) introduced the term potentially traumatic event or PTE because many people exposed to traumatic events are able to cope remarkably well (Bonanno, 2004,2005; Bonanno & Mancini, 2005). Bonanno further stated that the response to PTEs over time could be illustrated through four prototypical trajectories: chronic, dysfunction, gradual recovery, and resilience. This perspective indicates heterogeneity within the recovery from a potentially traumatic life event, thus placing emphasis on the individual differences people possess in order to help them cope and return to normal functioning. This stands in contrast to the binary view
that implies a homogenous distribution of change over time. This perspective also brings into focus what is for many a heterogeneity of risk and protective factors. Research in the field has indicated clearly that various factors, from individual to socio-cultural influences contribute to or detract from an individual’s ability to adapt successfully following such events (Rutter, 1999; Werner, 1995).

The current project intends to add to this body of literature and investigate further potential protective factors that will lead to a positive recovery. Before exploring the aspects of growth following a traumatic event, it is important to understand how individuals react when coping mechanisms are overwhelmed creating a crisis for that person.

**Crisis Theory**

The word *crisis* refers literally to a breaking or turning point. Decades of mental health research have focused on discovering the impact of psychological distress and the effect of various crises on the general population. This research has helped to build support and extend the original crisis theory introduced by concepts of Erik Erikson and Caplan.

Erikson’s (1959) conceptualization emphasized the developmental course of an individual and the constant interaction of person and their environment. Erickson introduced stages of development in which the individual faced problems that are resolved with varying amounts of success. Caplan (1961) added to this the idea of experiencing isolated traumatic events across the life course. Both of these contributors proposed the idea that, after facing the crisis or distress, there is potential for personality growth and increase in coping abilities.

Crisis theory is based on the idea of homeostasis (Caplan, 1964). Individuals keep a balance of emotional functioning that is maintained by coping methods used to solve problems when facing problems of daily life (Darbonne, 1967). When the individual’s problem is greater
than his or her ability to cope, they move from an emotionally hazardous situation to a crisis (Darbonne, 1967). A crisis refers to the person’s emotional reaction to the situation, and not the situation itself (Darbonne, 1967). Thus, crises are self-defined, but there are some hazardous situations that are known to lead to a crisis in a majority of instances. These include death of a significant other, threat to bodily harm, or loss of job (Darbonne, 1967). Similar to Selye’s concept of the optimal stress level, the individual enters into a crisis state when a maximum threshold of stress is passed. A crisis can be viewed as an opportunity, depending on if the event is successfully resolved emotionally and practically (Reynolds & Turner, 2008). This places the emphasis on how the individual facing the distress is able to overcome or resolve it.

Previous research supports crisis theory by demonstrating its utility in identifying common reactions to crisis events. Turner and Avison (1992) applied crisis theory to depressive symptoms and personal mastery. This study interviewed physically disabled adults about their experience with negative life events and asked them to complete measures on depressive symptomology as well as personal mastery. Findings of the study demonstrated that those events that were resolved, both emotionally and practically, did not add to the overall psychological distress of the individual (Turner & Avison, 1992). This study provided further support to the hypothesis that the experience of a crisis does not add to the overall psychological distress for a person when they are able to overcome it. These findings strengthen one of the central tenets of crisis theory- that a crisis can be seen as an opportunity instead of a negative event. In addition, these results demonstrated that predictable patterns of recovery are present following the experience of a hazardous situation.

Reynolds and Turner (2008) further extended this research by interviewing 1,200 adults in Miami Dade County about experiences with negative life events. The study intended to
provide further support to the mental health impact of major life events. Reynolds and Turner (2008) furthered previous research in two ways. First, the researchers asked participants what was the most negative life event they had experienced, allowing the study to capture more options of major life events as opposed to limiting the participants to a select few potential hazardous situations. In addition, the researchers asked participants if they considered the negative life event as a crisis. Because a crisis is largely self-defined, it was important to know that these events were perceived in this way for the individuals. Regression analysis comparing the crisis response with crisis resolution indicated that those who resolved the crisis demonstrated fewer symptoms of depression. The results of this study provide support for the basic tenets of crisis theory and suggest the utility of crisis theory in studying the differential response to traumatic life events in individuals (Reynolds & Turner, 2008). Further research is required to determine the various types of responses possible for major life events and the personal characteristics that are important for a positive recovery. The central tenet of crisis theory of most interest to the research proposed here is that crisis presents both the possibility of distress and psychopathology as well as the potential for growth.

Posttraumatic Growth

As previously stated, Caplan (1964) indicated the potential in growth following a stressful situation when describing the principles of crisis theory. He described how a life crisis could upset the psychological equilibrium of the individual. Using the terminology of basic systems theory, Caplan proposed that following psychological disequilibrium, an individual naturally seeks to return to a state of homeostasis. Through this process, an individual may benefit by discovering new personal resources and better coping strategies. Over the past two decades, systematic attempts have been made to study the potential positive changes that occur
following adversity. This common factor of struggling with adversity has led all these positive changes to be collectively called *adversarial growth* (Linley & Joseph, 2004). Other terms found in the literature for these positive changes include *posttraumatic growth*, *stress-related growth*, or *perceived benefits* among others. This paper will use the term posttraumatic growth when referring to the positive changes following a traumatic event.

The term posttraumatic growth was coined by Tedeschi and Calhoun (1995, 2004) and refers to the positive changes, particularly with respect to strengthened coping capacities, following a stressful life event. As explained by Tedeschi and Calhoun (2004), although the word traumatic is used its meaning can be extended to be broader and more inclusive than the criteria used in the DSM. The growth occurs when the individual rebuilds and designs a more resistant coping structure to potential events in the future, after having experienced a stressful event that challenged one’s perceptions of the world (Tedeschi & Calhoun, 2004). In addition, the literature indicates that posttraumatic growth is a subjective perception, referring to an individual’s self-perceived growth (Zoellner & Maercker, 2006).

The perceived growth can occur within five different components and include relating to others, new possibilities, personal strength, spiritual change, and appreciation of life (Tedeschi & Calhoun, 2004). First, relating to others can include an increase in compassion or altruism or a greater sense of closeness in relationships. Second, an individual can develop a new path or opportunities in life following the traumatic event. Third, greater sense of personal strength can refer to an increase in self-reliance or resiliency. Fourth, a spiritual change leads to an increase in appreciation or enhancement of spiritual or religious life. Finally, appreciation of life refers to a complete change in philosophy of life with greater appreciation for each day. Thus, people can demonstrate growth through improved relationships with others or, on a much larger scale, as a
completely altered perception of life. Posttraumatic growth does not simply mean just recovering from a stressful life event, but rather the development of higher levels of adaptive functioning than were present before the occurrence of the event (Dolbier, Jaggars, & Steinhardt, 2009). In fact, Tedeschi and Calhoun (2004) have proposed that the struggle following the stressful event is the source for the potential growth, thus for growth to take place a certain level of psychological distress is necessary.

Research has shown growth taking place following a variety of traumatic events, including bereavement (Davis, Nolen-Hoeksema, & Larson, 1998), medical illness (Maercker & Langner, 2001), and even sexual abuse or assault (Frazier, Conlon, & Glaser, 2001). In addition, previous research has explored many factors that may influence PTG. Schaefer and Moos (1998) introduced a model of PTG that organized the predictors of growth into four clusters including: a) environmental system; b) personal characteristics of the individual; c) event related factors; and, d) coping response. Much of the literature on coping strategies has demonstrated a positive relationship with PTG (Dolbier, et al., 2009). Both the environmental system and personal characteristics of the individual refer to pre-trauma characteristics. Environmental system factors include life stressors such as, social coping resources or chronic physical illness. Personal characteristics refer to the relatively stable personality traits such as self-efficacy or coping resources. Event related factors refer specifically to the nature of the traumatic event, such as duration of the event or intensity of event, that effect the recovery process. Finally, coping response is the reaction of the individual following the traumatic event and can range from avoidance to problem-focused coping. Studies have demonstrated the importance of individual characteristics such as, self-esteem (Tedeschi & Calhoun, 1996), optimism (Updegraff, Taylor, Kemeny, & Wyatt, 2002), and self-efficacy on the amount of growth demonstrated following a
traumatic event (Abraido-Lanza, Guier, & Colon, 1998). In addition, gender has been shown to play a role in growth reported, with women being more likely to report more posttraumatic growth (Solomon, 2006). This study hopes to add to the existing literature on individual factors by exploring the specific relationship between PTG and a person’s history of attachment relationships.

**Attachment**

The theory of human attachment was first introduced in the work of Bowlby and Ainsworth (Bowlby, 1969, 1982; Ainsworth, 1991). Attachment can be defined as an emotional bond to someone perceived to be more powerful and protective. This emotional connection can be demonstrated through proximity seeking, feelings of security in presence of the person, and protest or anxiety when separated from the attachment figure (Stroebe & Archer, 2013). Attachment theory states that in order to enhance survival, humans have a socio-biological need to form these strong affectional, or attachment, bonds (Karantzas, Feeney, & Wilkinson, 2010). The attachment system consists of organized behaviors that are intended to maintain proximity to this primary caregiver during times of distress or threat (Karantzas, 2010). This closeness to their attachment figure then creates comfort and security for the distressed individual. The attachment system is formed over the lifespan through interactions with the attachment figure and creates stable individual differences in mental representations of attachment relationships, which results in an attachment style (Gillath, Shaver, Mikulincer, & Nitzberg, 2005).

These attachment styles have been classified in adulthood as utilizing two dimensions of attachment: *avoidance* and *anxiety*. Attachment-related avoidance refers to discomfort with closeness and dependence on relationships, preference for emotional distance and self-reliance, and utilizing deactivating strategies when faced with insecurity or distress (Mikulincer & Shaver,
Attachment-related anxiety refers to a strong desire for closeness and protection, as well as intense worry of partner availability and use of hyperactivating strategies to deal with insecurity and distress (Mikulincer & Shaver, 2007). Those that score high on avoidance and/or anxiety are said to have an insecure attachment, as opposed to those that score low who are said to be securely attached (Mikulincer & Shaver, 2007). Secure individuals believe that others are generally responsive and predictable and they themselves are worthy (Salo et al., 2005). The three major forms of insecure attachment identified in studies of children include Insecure-Avoidant, Insecure-Resistant, and Disorganized. Those with Insecure-Avoidant attachment deny the importance of attachment relationships, mistrusting others and relying mainly on themselves. Insecure-Resistant attachment indicates people who cling to attachment relationships as well as feeling disappointed and angry often (Collins, 1996; Main, 1996). Disorganized attachment is characterized by variable behavior with people showing contradictory and often clearly disorganized behavior in relationships with others (Stroebe & Archer, 2013).

Rudimentary attachment behaviors are innate for children (i.e. crying when frightened, reaching out to be picked up), but as the child develops and enters more complex social relationships, the behavior motivated by the attachment system must become more flexible and context sensitive (Mikulincer & Shaver, 2007). When reaching adulthood, attachment behavior does not necessarily require proximity seeking behavior as is characteristic of childhood. Instead, adults utilize mental representations of previous and current relationship partners who regularly provide care and protection. In this way, adults are able to create a sense of safety and protection, which then assists them in coping with threats or distress (Mikulincer & Shaver, 2004). Feeney (1999) found that childhood attachment styles demonstrate reasonable stability and influence on
adult behavior, although these do sometimes change if influenced by relationship experiences or traumatic life events.

The literature relating attachment to recovery from traumatic events has focused mainly on negative outcomes, such as PTSD (Mikulincer & Shaver, 2007). Individual differences in attachment system play an important role in determining the extent of PTSD symptoms experienced following a traumatic event. An optimally functioning attachment system can allow a severely threatened person to feel safe and secure through the activation of internal representations of attachment figures or even external sources of support to prevent the onset of long term PTSD (Mikulincer & Shaver, 2007). On the other hand, nonoptimal functioning of the attachment system can prohibit the individual from accessing necessary support and resources to recover from emotional distress of a traumatic event, thus increasing the chances of PTSD (Mikulincer & Shaver, 2007).

With the relationship well established between an individual’s attachment system and negative outcomes following a traumatic event, some researchers have hypothesized the possibility that the attachment system can influence a positive adaptation following a traumatic life event. It is possible that attachment theory could help us understand how people perceive the significance of a threat and danger differently. In addition, they could differ in their estimation of availability of help or resources, lead them to rely on different psychological defenses as well as coping methods (Ehlers, Maerker, & Boos, 2000; Kanninen, Punamake, & Quota, 2002). Few empirical studies have investigated this relationship between attachment and posttraumatic growth, most of which involve prisoners of war or an international population. No study has examined the relationship between adult attachment and PTG within a college student population.
at an American University to this researcher’s knowledge. The following study will investigate
the relationship between adult attachment style and posttraumatic growth.

**Implications for Social Work**

As previously stated, a majority of the research in the field of trauma and trauma
recovery places an emphasis on the negative outcomes and diagnoses. With growing support of
the idea that people are more resilient than once thought and have the potential to grow from the
experience of all different types of life events, social workers need to be on the forefront of this
positive approach to treatment. Dignity and worth of a person as well as importance of human
relationships are two of the core competencies that all social workers are obligated to include in
their practice (NASW, 2012). Both of these core values ensure social workers are aiming to
assist individuals in a way that promotes their responsibility for self-determination as well as to
enhance their capacity and opportunity to change their own needs. Many social workers utilize
the strengths-based model when engaging with clients. The strengths-based model encourages
social workers to cultivate and enhance the strengths of clients (Norman, 2000). In addition, the
strengths-based model has social workers look for the resources in the environment and within
the individual (Miley et al., 2007). This study will help identify potential areas of strength for
social workers to utilize during the course of treatment for those individuals who have faced a
traumatic event. By investigating the potential predictors of posttraumatic growth, new
perspectives towards treatment as well as possible new interventions could be developed to assist
with trauma and crisis counseling.
CHAPTER 3
METHODS

This study uses a correlational design to investigate the association between adult attachment style and posttraumatic growth. Adult attachment style will be measured utilizing the self-report measure Adult Style Questionnaire. The total score on the self-report measure, Posttraumatic Growth Inventory, will operationalize posttraumatic growth. Finally, a history of experience with traumatic events will be collected via the Traumatic Events Questionnaire. Specifically, the following three research questions will be explored:

R1: What types of traumatic events and with what frequency does a sample of U.S. college students face in their lifetime?

R2: Is there a correlation between the five sub scales of the Attachment Style Questionnaire and posttraumatic growth, as measured by the Posttraumatic Growth Inventory?

R3: Is there an association between attachment security, attachment avoidance, and attachment anxiety with posttraumatic growth?

It is hypothesized that people who have been exposed to traumatic events with high attachment avoidance would disregard the threat as important. People with this high-level attachment avoidance would become overwhelmed by the threat unlike those with high attachment security, who would react in an appropriate and mature manner by facing the distress and turning to adaptive coping strategies and social support networks. In addition, those with secure attachment would readily accept the help and support from others, and be able to make sense of the overwhelming emotions. On the other hand, individuals with high attachment anxiety would question the support from others and deny any help. Because posttraumatic growth involves gaining insight and making meaning of the trauma, it can be hypothesized that
those with high attachment security will demonstrate higher levels of growth following a traumatic event. Each of these dimensions will be assessed by the instruments below.

**Participants**

The participants in this study were 128 students enrolled at a large southeastern public university. The sample was 80% female \(n = 103\) and 18% male \(n = 23\), with two participants opting not to answer. In addition, the sample had an age range of 18 to 38 \(M = 21.62; SD = 3.73\). In terms of race/ethnicity, 74% identified as White, 11% Black, 7% Hispanic, 6.3% Multicultural, 5% Asian and 2% Other, with 2 participants selecting not to answer. Participants for this study were recruited using three different recruitment strategies. Clinicians at the on campus counseling center recruited some of the participants. In addition, professors of undergraduate Social Work classes allowed students the opportunity to participate during class. Finally, a link to an online version of the survey was sent to students asking them to participate in the study. All subjects participated in the study voluntarily.

**Measures**

**Attachment Style Questionnaire (ASQ).** The Attachment Style Questionnaire (Feeney, Noller, & Hanrahan, 1994) is a 40-item scale that measures the individual differences in attachment style. Respondents rate each item on a 6-point Likert scale from 1 (totally disagree) to 6 (totally agree). The measure has five sub-scales including confidence (in self and others), discomfort with closeness, need for approval and confirmation by others, preoccupations with relationships, and viewing relationships as secondary (to achievement in various domains). Additionally, attachment can be measured on the three dimensions: avoidance, anxiety, and security. The security variable combines the scales for attachment avoidance and attachment anxiety to create dimensional variable for attachment security. Because this variable is created
with the two negative aspects of attachment, higher scores reflect higher insecurity and thus less of a secure attachment style. Researchers have utilized the ASQ in many samples of adolescents and adults, providing evidence of reliability and validity (Mikulincer & Shaver, 2007). Feeney et al. (1994) reported stability coefficients of .67 to .78 across a 10-week period within a sample of undergraduates. In addition, alpha coefficients for the five factors were reported from .76 to .84 in a large sample of undergraduates (Feeney, Noller, & Hanrahan, 1994).

**Posttraumatic Growth Inventory (PTGI).** The Posttraumatic Growth Inventory (Tedeschi & Calhoun, 1996) is a 21-item scale that measures the degree of positive changes experienced following a traumatic experience. The measure contains five subscales: Relating to Others, New Possibilities, Personal Strength, Spiritual Change, and Appreciation for Life. Each item is measured using a 6 point Likert scale from 0 (*I did not experience this change as a result of my crisis*) to 5 (*I experienced this change to a very great degree as a result of my crisis*). Subscale and total scores can be calculated. High internal consistency with (Cronbach’s coefficient of .90) and good test-retest reliability (Cronbach’s coefficient of .71) have been reported. Construct validity has been demonstrated by comparing results of normal event to those of extremely traumatic event. The scores of those who had experienced trauma were higher than the other stressful situations (Tedeschi & Calhoun, 1996).

**Traumatic Events Questionnaire (TEQ).** The Traumatic Events Questionnaire (Vrana & Lauterback, 1994) is a self-report measure that assesses 10 types of traumatic events. Respondents rate each event for (a) severity of injury, (b) the extent to which they felt their lives were endangered and how traumatic they perceived the event to be (c) at the time of event as well as (d) the present time. The number of events experienced is summed to provide a score of total occurrence and a trauma intensity score can be calculated by adding the responses of the
worst event. The TEQ has shown strong psychometric properties with Cronbach’s alphas of .81 and good construct validity. Results of the TEQ showed very high agreement rates to the results of structured interviews with trained clinicians (Vrana & Lauterback, 1994).

**Demographics.** General demographics including gender, age, and ethnicity were collected. In addition, information about current level of education, major of study and grade point average were gathered.

**Procedure and Statistical Analyses**

After being recruited to participate through the various methods mentioned above, participants were provided with Informed Consent that reviewed what would be involved with their participation. After reading and signing the informed consent, detailed directions for completing the study were provided. Participants completed a survey that included four questionnaires: the Traumatic Events Questionnaire, Attachment Style Questionnaire, Posttraumatic Growth Inventory and a brief demographics questionnaire (i.e. Race, Gender, Year in School, etc.). Participants completed all four measures within 30 minutes. Different measurement sequences were used to control for order effects. No personal identifying information was collected from participants during the course of the study. Upon completion of the study, participants were provided a list of community and campus resources available to them if they experienced any discomfort from recalling traumatic events during participation.

Basic frequencies were calculated for the various traumatic events experienced by the sample. In addition, Pearson’s correlations were run for all variables. This included the five factors of the ASQ and the PTGI as well as the trauma occurrence score and trauma intensity score. In addition, both the five-factor and three-factor solution of the Attachment Style Questionnaire will be calculated. In order to measure attachment security, a continuous
A dimensional variable will be calculated for attachment security by combing the attachment avoidance and attachment anxiety scales. Finally, linear regression analyses were conducted to control for selected demographics variables in the examination of the association of attachment and posttraumatic growth.
CHAPTER 4
RESULTS

Frequency and Types of Traumatic Events

Overall, 96% of the sample experienced a traumatic event of some sort. Table 1 shows the frequency of reporting of each traumatic event as well as the frequency of how often each event was reported as the most distressing. The most common event experienced by participants was a natural disaster with 73% \((n = 93)\) of subjects having experienced a natural disaster of some sort (most often hurricane). The second most common reported traumatic event was the unexpected death of a loved one with 50% \((n = 64)\) of the sample. The other traumatic events were reported as follows: 27% experienced/witnessed a serious accident, 22% were in danger of losing their life or severely injured, 16% experienced an abusive relationship as an adult, 13% experienced child abuse, 12% experienced a violent crime (i.e. robbery, assault), 12% reported experiencing an event they would rather not share, 9% reported experiencing some other type of traumatic event, 9% experienced an unwanted sexual encounter, 5% witnessed someone being killed or seriously injured (See Table 1).

In addition, participants indicated which event they experienced as the most traumatic for them. Table 1 lists the frequency and percentages of how many times each event was indicated as the most traumatic for an individual. The largest percentage of the sample indicated the unexpected loss of a loved one as the most traumatic event with 24% \((n = 31)\). The second most distressing event for participants was a natural disaster with 16% \((n = 21)\) of the sample. The number of traumatic events experienced by participants ranged from 0 to 7 events, with two events being most commonly reported by 32% \((n = 41)\) of the sample. One event and three events were close as the second most reported, with 22% \((N = 29)\) and 20% \((N = 26)\) of the sample respectively. See Figure 1 for further frequencies.
Table 1
Prevalence of Experienced Traumatic Events and Most Distressing Events

<table>
<thead>
<tr>
<th>Event</th>
<th>Experienced Event</th>
<th>Most Distressing*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Natural Disaster</td>
<td>93</td>
<td>72.70</td>
</tr>
<tr>
<td>Unexpected death of a loved one</td>
<td>64</td>
<td>50.00</td>
</tr>
<tr>
<td>Witnessed Serious Accident</td>
<td>35</td>
<td>27.30</td>
</tr>
<tr>
<td>Danger of losing life</td>
<td>29</td>
<td>22.70</td>
</tr>
<tr>
<td>Abusive Relationship</td>
<td>21</td>
<td>16.40</td>
</tr>
<tr>
<td>Child Abuse</td>
<td>16</td>
<td>12.50</td>
</tr>
<tr>
<td>Confidential Answer</td>
<td>15</td>
<td>11.70</td>
</tr>
<tr>
<td>Victim of Violent Crime</td>
<td>15</td>
<td>11.70</td>
</tr>
<tr>
<td>Unwanted Sexual Experience</td>
<td>11</td>
<td>8.60</td>
</tr>
<tr>
<td>Other Event</td>
<td>11</td>
<td>8.60</td>
</tr>
<tr>
<td>Witnessed someone killed/injured</td>
<td>6</td>
<td>4.70</td>
</tr>
</tbody>
</table>

*Note: Participants could report more than one traumatic event.
*: N = 103

Descriptive Analysis

A score for occurrence of traumatic events was calculated from the Traumatic Events Questionnaire, as well as an intensity score of the participant’s most traumatic event. The mean for Occurrence score was, $M = 2.47$ ($SD = 1.46$) and the mean for Intensity score was, $M = 12.89$ ($SD = 4.72$). Independent $t$ – test indicated a significant differences in the mean intensity score for males and females, $t(124) = -2.22 , p = .028$. This indicates that female participants rated their most traumatic event as more intense on average than males.
Figure 1
Frequencies of Number of Traumatic Events Experienced
The mean level of the dependent variable, or total posttraumatic growth, reported by the sample was $M = 58.37$ ($SD = 25.43$). The means and standard deviations for the five subscales of the Posttraumatic Growth Inventory were also calculated (See Table 2): Relating to Others, $M = 19.35$ ($SD = 9.48$); New Possibilities, $M = 11.85$ ($SD = 6.98$); Personal Strength, $M = 12.44$ ($SD = 5.34$); Spiritual Change, $M = 4.62$ ($SD = 3.79$); Appreciation of Life, $M = 10.11$ ($SD = 4.28$).

There was no evidence of a significant difference in amount of growth shown by males and females, $t(119) = -.947, p = .346$.

Means and standards deviations for both the five-factor solution and three-factor solution of attachment can be seen in Table 2 as well. Means for the five-factor solution were as follows: Confidence, $M = 3.78$ ($SD = 0.98$); Discomfort with Closeness, $M = 3.78$ ($SD = 1.23$); Relationships as Secondary, $M = 2.34$ ($SD = 0.90$); Need for Approval from Others, $M = 3.29$ ($SD = 1.06$); Preoccupation with Relationships, $M = 3.54$ ($SD = 0.93$).

The skewness of all variables was examined in order to check for normality in distributions for further statistical analysis. The Personal Strength and Appreciation subscales of the Posttraumatic Growth Inventory, as well as the Discomfort with Closeness, Relationships as Secondary, Avoidance Attachment, and Attachment Security subscales of the Attachment Style Questionnaire were found to be slightly skewed. Square root and log transformations were used to correct variables and meet normality assumption for further statistical analysis.

Table 2
Descriptive Statistics of Trauma, Posttraumatic Growth, and Attachment

<table>
<thead>
<tr>
<th></th>
<th>M (range)</th>
<th>SD</th>
<th>Cronbach’s α</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trauma Occurrence</td>
<td>2.47 (0-7)</td>
<td>1.46</td>
<td></td>
</tr>
<tr>
<td>Trauma Intensity</td>
<td>12.89 (4-28)</td>
<td>4.72</td>
<td></td>
</tr>
<tr>
<td>Posttraumatic Growth</td>
<td>58.37 (0-105)</td>
<td>25.43</td>
<td>.95</td>
</tr>
</tbody>
</table>
(Table 2 Continued)

<table>
<thead>
<tr>
<th></th>
<th>M (range)</th>
<th>SD</th>
<th>Cronbach’s α</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relating to Others</td>
<td>19.35 (0-35)</td>
<td>9.48</td>
<td>.89</td>
</tr>
<tr>
<td>New Possibilities</td>
<td>11.85 (0-25)</td>
<td>6.97</td>
<td>.85</td>
</tr>
<tr>
<td>Personal Strength</td>
<td>12.44 (0-20)</td>
<td>5.33</td>
<td>.80</td>
</tr>
<tr>
<td>Spiritual Change</td>
<td>4.62 (0-10)</td>
<td>3.80</td>
<td>.91</td>
</tr>
<tr>
<td>Appreciation of Life</td>
<td>10.11 (0-15)</td>
<td>4.28</td>
<td>.85</td>
</tr>
<tr>
<td>Confidence</td>
<td>3.78 (1-6)</td>
<td>0.98</td>
<td>.85</td>
</tr>
<tr>
<td>Discomfort with Closeness</td>
<td>3.78 (1-12)</td>
<td>1.23</td>
<td>.87</td>
</tr>
<tr>
<td>Relationships as Secondary</td>
<td>2.34 (1-6)</td>
<td>0.90</td>
<td>.80</td>
</tr>
<tr>
<td>Need for Approval</td>
<td>3.29 (1-6)</td>
<td>1.06</td>
<td>.82</td>
</tr>
<tr>
<td>Preoccupation</td>
<td>3.54 (1-6)</td>
<td>0.93</td>
<td>.75</td>
</tr>
<tr>
<td>Avoidance Attachment</td>
<td>3.34 (1-8)</td>
<td>0.91</td>
<td>.87</td>
</tr>
<tr>
<td>Attachment Anxiety</td>
<td>3.36 (1-6)</td>
<td>0.81</td>
<td>.79</td>
</tr>
<tr>
<td>Attachment Security</td>
<td>1.82 (1-6)</td>
<td>0.20</td>
<td>.89</td>
</tr>
</tbody>
</table>

**Bivariate Correlations**

Table 3 displays a correlation matrix of all seventeen continuous variables pertaining to demographics, trauma, posttraumatic growth and, attachment. No significant correlations were found between age and the other variables. Both standardized measures, the Posttraumatic Growth Inventory and Attachment Style Questionnaire, were highly correlated within subscales.

There were some significant correlations of note between posttraumatic growth and attachment. Posttraumatic growth was significantly and positively correlated with Confidence, \( r = 0.43 \). This positive correlation indicates that as scores on the confidence subscale increased so
<table>
<thead>
<tr>
<th></th>
<th>Demographics</th>
<th>Trauma</th>
<th>Posttraumatic Growth</th>
<th>Attachment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>1. Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Trauma Occurrence</td>
<td>.074</td>
<td>.064</td>
<td>.092</td>
<td>.046</td>
</tr>
<tr>
<td>3. Trauma Intensity</td>
<td>.064</td>
<td>.42**</td>
<td>.32**</td>
<td>.093</td>
</tr>
<tr>
<td>4. Posttraumatic Growth</td>
<td>-.121</td>
<td>.15</td>
<td>.31**</td>
<td>.11</td>
</tr>
<tr>
<td>5. Relating to Others</td>
<td>-.081</td>
<td>.05</td>
<td>.98**</td>
<td>.027</td>
</tr>
<tr>
<td>6. New Possibilities</td>
<td>-.092</td>
<td>.12</td>
<td>.42** .86**</td>
<td>-.096</td>
</tr>
<tr>
<td>7. Personal Strength</td>
<td>-.157</td>
<td>.11</td>
<td>.32** .75** .54** .68**</td>
<td>.106</td>
</tr>
<tr>
<td>8. Spiritual Change</td>
<td>-.166</td>
<td>.18*</td>
<td>.18* .69** .55** .48** .36**</td>
<td>.115</td>
</tr>
<tr>
<td>9. Appreciation of Life</td>
<td>-.086</td>
<td>.11</td>
<td>.18 .78** .65** .55** .51** .51**</td>
<td>.118</td>
</tr>
<tr>
<td>10. Confidence</td>
<td>-.078</td>
<td>-.002</td>
<td>-.08 .43* .49** .26** .22** .34** .34**</td>
<td>.119</td>
</tr>
<tr>
<td>11. Discomfort with Closeness</td>
<td>.037</td>
<td>.14</td>
<td>.13 -.26** -.41** -.11 -.12 -.16 -.21** -.63**</td>
<td>.120</td>
</tr>
<tr>
<td>12. Relationships as Secondary</td>
<td>.027</td>
<td>.02</td>
<td>-.079 -.22* -.33** -.07 -.05 -.15 -.14 -.31** .48**</td>
<td>.121</td>
</tr>
<tr>
<td>13. Need for Approval</td>
<td>.093</td>
<td>-.10</td>
<td>.12 -.16 -.22** -.028 -.040 -.23* -.178 -.47** .45** .48**</td>
<td>.122</td>
</tr>
<tr>
<td>14. Preoccupation</td>
<td>-.086</td>
<td>.011</td>
<td>.22* .04 -.055 .16  .055 -.006 -.02 -.36** .43** .36** .68**</td>
<td>.123</td>
</tr>
<tr>
<td>15. Avoidance Attachment</td>
<td>.046</td>
<td>.16</td>
<td>.12 -.33* -.49** -.15 -.13 -.19* -.26** -.70** .95** .61** .46** .42**</td>
<td>.124</td>
</tr>
<tr>
<td>16. Attachment Anxiety</td>
<td>.024</td>
<td>-.06</td>
<td>.18* -.12 -.18 .02  -.06 -.15 -.19* -.58** .47** .39** .89** .85** .49**</td>
<td>.125</td>
</tr>
<tr>
<td>17. Attachment Security</td>
<td>.05</td>
<td>.08</td>
<td>.17 -.28** -.41** -.09 -.12 -.19** -.27** -.75** .86** .59** .74** .69** .90** .81**</td>
<td>.126</td>
</tr>
</tbody>
</table>

*p < .05; **p < .01; based on two-tailed tests.
did the amount of posttraumatic growth. In addition, posttraumatic growth was negatively correlated to subscales of the five factor solution of attachment, including Discomfort with Closeness ($r = -.26$), and Relationships as Secondary ($r = -.22$). These negative correlations indicate inverse relationships between these two variables, meaning as scores of Discomfort with Closeness and Relationships as Secondary increased the amount of posttraumatic growth decreased. Finally, posttraumatic growth was negatively correlated with two of the three factor solution subscales of attachment, Attachment Avoidance ($r = -.33$) and Attachment Security ($r = -.28$).

Positive correlations were also found between Confidence (in attachment) and all five subscales of posttraumatic growth: Relating to Others ($r = .49$), New Possibilities ($r = .26$), Personal Strength ($r = .22$), Spiritual Change ($r = .34$), and Appreciation of Life ($r = .34$). Negative correlations were found between many of the attachment subscales and posttraumatic growth subscales. Discomfort with closeness ($r = -.41$) as well as Relationships as secondary ($r = -.33$) and Need for approval ($r = -.22$) were all negatively correlated with Relating to others. The spiritual change subscale was negatively correlated with both the Need for approval ($r = -.23$) and the Attachment avoidance ($r = -.19$).

**Prediction of Posttraumatic Growth**

In order to test the prediction of posttraumatic growth by attachment a hierarchical linear regression was used with gender and aged entered as the first step and the three-factor solution of attachment entered as the next three steps. Measures of multicollinearity indicated too much overlap in the three attachment variables, thus three separate regression equations were found using the three attachment variables separately. Thus, Gender and age were entered as the first step for all three equations with either attachment security, attachment anxiety, or attachment
avoidance added as the second step. Results indicated no further explanation of variance by the addition of gender and age with any of the attachment variables. For this reason the analysis was not included.
CHAPTER 5
DISCUSSION

Research of positive recovery following traumatic events has focused on the pathways to
growth and various variables that predict positive growth. There are gaps in the literature for
posttraumatic growth and the importance of adult attachment and the relationship between these
two constructs. To this researcher’s knowledge, no previous study has examined the association
between attachment and posttraumatic growth in a college-aged population. This cross-sectional
study intended to investigate potential predictors of posttraumatic growth by examining various
dimensions of attachment. Expected associations between posttraumatic growth and attachment
were partially confirmed. Attachment avoidance, for example, was significantly associated
(negatively) with the amount a growth experienced by an individual.

In addition, the study hopes to add further evidence of the rates of trauma exposure
within a college student population. The results of this study indicated a higher rate of exposure
to traumatic events than previous research in a college student population. Frazier, et al. (2009)
found an exposure rate of 85% in their sample of college students, whereas in this study the
percentage was 96%. In addition, the most common event reported differed from previous
studies. The following includes a discussion of these results and implications for practitioners
and future areas of research.

Frequency of Traumatic Events

There are many possible reasons for the differences in frequencies found for the
traumatic events experienced. First, the sample was created with a clinical population, those
students seeking treatment at the campus-counseling center. Thus, it is possible that those
students demonstrate a higher occurrence of exposure to trauma, which has led to them seeking
treatment. In addition, this study took place in the southeastern portion of the country, in a state
that is frequently affected by hurricanes. This could explain not only the number of overall participants indicating trauma exposure, but also why natural disaster was the highest occurring traumatic event reported. Not only does the geography have significance on the rates of exposure, but also because hurricanes are more common for this sample of college students they may not find the experience as traumatic as others experiencing the event would. This interpretation of lower intensity could minimize the overall impact of these events and limit the amount of growth they display. It is possible that the sample had not experienced enough varied traumatic events to demonstrate consistent levels of growth (Kashdan & Kane, 2010).

The newfound freedoms in college life make the college student population more vulnerable to the experience of traumatic events, specifically sexual assault (Humphrey & White, 2000) and community violence (Scarp et al., 2002). In addition, college students are reaching the age period when it is typical to experience the loss of a loved one for the first time (Read et al., 2011). This trend of high reporting of loss of a loved one continued with this sample of college students, with 50% of the sample having experienced this. Additionally, loss of a loved one was the most commonly endorsed as the most distressing event experienced. This provides further support of this being a common occurrence within the college-aged population. Victim of sexual assault and victim of violent crime were not as highly reported within this sample of college students. It is possible that these are more sensitive experiences to report, thus many participants could have chosen not to share this information causing it to be underreported.

These findings have major implications for the field of clinical social work, especially for those working directly in college mental health. It is important to have an understanding and expectation for what challenges those students entering college have experienced or may experience while at school. The college years are a crucial developmental phase for many
individuals and either working through a previous trauma or experiencing a new trauma could affect their academic success as well as their overall maturation from adolescent to adult. With this knowledge, practitioners can be more aware of the challenges being faced by this population and bring awareness to them over the course of treatment. In addition, practitioners can prepare their clients for situations that could have severe consequences and help guide them through this new phase of development.

**Posttraumatic Growth and Attachment**

Overall, total growth was significantly correlated with subscales on both the five-factor solution and the three-factor solution of the attachment measure. Specifically, posttraumatic growth was positively correlated with the confidence in self and relationships subscale and negatively correlated with discomfort with closeness, relationships as secondary, and avoidance attachment.

The direction of these correlations matches the hypothesized outcomes of the relationship between attachment and posttraumatic growth. Those individuals who indicate more confidence in themselves and relationships could have a stronger support system and a strong belief the support system will be there for them in times of need. Thus, when facing the distress of trauma, the individual is able to make meaning of the experience leading to a positive, growth-oriented outcome. On the other hand, those that experience higher levels of discomfort with closeness, or place relationships as secondary, may not have the same support or belief in ability to grow from the experience of trauma, thus would demonstrate lower levels of overall growth.

In addition, the three-factor solution attempts to examine the main dimensions of attachment (i.e. Secure, Insecure-Avoidant, and Insecure-Resistant) by looking at the attachment avoidance, security, and anxiety. The results of this study only demonstrated a significant
negative correlation with attachment avoidance and not anxiety. Also, a significant relationship between attachment security and posttraumatic growth was shown in a negative direction. Because higher scores on the security attachment variable indicate lower levels of security, those with higher levels of insecurity as measured by this variable displayed lower levels of posttraumatic growth. This significant negative association supports the hypothesis that individuals with higher security would experience higher levels of growth.

Overall, these preliminary findings indicate that attachment avoidance plays more of a role in experiencing a positive recovery from traumatic events than attachment anxiety. Attachment avoidance refers to a person’s lack of comfort with closeness and placing less emphasis or importance on relationships as opposed to attachment anxiety, which refers to having a strong desire for closeness and relationships and worrying about their availability in times of need. When thinking about these two dimensions, attachment anxiety places the individual in a vulnerable position wanting the comfort of others around them, but having doubts and concerns that they will not be there when they want them. On the other hand, those with high avoidance just do not seek out the support of others and rely on themselves when trying to cope. It is possible that those with high attachment anxiety do seek out the support of others after a traumatic event, but do not have the same confidence that those people will be there for them, limiting the amount of growth they experience. In other words, they activate the attachment system but experience difficulties regulating its activation, whereas those with high attachment avoidance do not even turn to those around them.

Further evidence of the relationship between posttraumatic growth and attachment can be found within the relationships between dimensions of both concepts. Specifically, the confidence subscale showed a clear relationship with all elements of growth demonstrating significant
positive correlations with all subscales. The strongest correlation found was between the confidence in self and relationships and the relating to others subscale of posttraumatic growth. This again demonstrates the potential importance of a strong support system and confidence that they will be available during times of need when facing a traumatic event. Additionally, the relating to others subscale of posttraumatic growth was negatively correlated with discomfort with closeness, relationships as secondary, and need for approval. Again, it would be unlikely for those individuals who do not value relationships or closeness with others to demonstrate growth with higher levels of relating to others after experiencing trauma.

**Implications**

This research has many implications for the field of social work, among others. As previously stated, much of the previous trauma research traditionally focuses on the negative effects and outcomes of traumatic events (Dolbier, Jaggars, Steinhardt, 2009). Typically, this negative approach leads to a deficit-oriented approach to treatment, which can limit the view of individuals and the range of possible outcomes and responses (Tedeschi & Kilmer, 2005). As research about posttraumatic growth becomes stronger, it is possible to bring a new perspective to treatment. Instead of talking to clients about imminent negative outcomes, clinicians can come from a place of positivity and work with clients to grow from the experience. Working from the strengths-based model, social workers can help to identify sources of resiliency and help to enhance those (Norman, 2000). Research on posttraumatic growth and the pathways to growth provides clinicians further insight into the types of individual and environmental factors to focus on when working with a client recovering from a traumatic event.

This positive philosophy fits with the mission and values of the social work profession. Social Workers hope to empower their clients and often pull from the strengths perspective when
working with people. Thus, social workers should be on the forefront of this positive movement working to frame the recovery in a positive way to encourage growth. In order to move to more positive frameworks of treatment it is crucial to have a complete understanding of the concept of posttraumatic growth and the many characteristics that could predict growth. This study specifically examined the individual characteristic of attachment to see what role a person’s life experiences and importance of people around them play in their life. If clinicians are aware of the role attachment plays, they could not only work to address how a client is engaging the attachment system post trauma, but if an attachment injury occurred early in life a clinician could work with the client on that as well to promote a positive recovery.

Additionally, many times trauma occurs in the context of a crisis, thus leaving many clinicians very little time to react and assess when serving as first responders. Lewis and Roberts (2001) described a crisis assessment strategy for mental health professionals that placed an emphasis on individual-level factors. These can include the individuals’ perception of the stressor, coping efficacy, as well as their appraisal of psychosocial variables, and resource availability. This type of assessment can provide clinicians with needed information quickly to provide brief supportive, crisis intervention. By continuing to research which individual level factors can serve as predictors of growth or positive recovery, clinicians could learn to focus on these strengths when providing supportive therapy in hopes of empowering individuals from the first stages of crisis recovery.

Bowlby (1980) discussed early on the advantages of secure attachment when facing distressing or traumatic events. Specifically, he notes abilities to experience a range of emotions and allow emotions such as anger, sadness, or fear to flow freely without causing disorientation. Because of this ability, securely attached individuals are able to “work through” by facing the
suffering and reorganizing their mental representations of attachment figures and make sense of the negative experiences, while moving forward. Tedeschi and Calhoun (1995) emphasize the importance of the individual experiencing the “struggle” following a traumatic event in order to display growth. Having more knowledge about this ability for securely attached individuals to emote effectively could influence treatment and interventions of those working with victims of traumatic events. Future interventions could place a focus on working with clients to get in touch with their emotions in a positive way so they are able to face the struggle of experiencing traumatic events in a healthy and appropriate way.

Furthermore, attachment theory discusses the importance of attachment figures serving a “safe haven” and “secure base” for individuals as they experience risks and challenges. The mental representations of these relationships are what people refer back to when facing a traumatic event to help with coping and overcoming dissonance. It is possible that the same benefits received from good relationships with attachment figures could also come from good relationships with skilled psychotherapists. This idea could place an emphasis for treatment on the relationship between client and therapist and the development of an environment of “unconditional positive regard” (Rogers, 1961). Therapeutic frameworks or interventions should utilize interpersonal theories, which focus on the relationship between client and therapist. In this way, the therapist could attempt to provide the client with a corrective attachment experience in order to have some of the benefits of a secure attachment figure.

**Limitations**

There are some limitations of the present study that could influence the findings and conclusions. First, the sample consisted of undergraduate and graduate students attending a large university in Louisiana. This limits the potential diversity of sample and ability to generalize the
results to other populations. In addition, the study utilized a convenience sampling technique, thus lacking a broader representation of participants with regard to types of trauma experienced or types of attachment history. Furthermore, all subjects in this study voluntarily participated, thus could have had other motives, such as the experience of an exceptionally traumatic event, for completing the survey. Secondly, due to the design of the study, growth was only assessed at one time. There was a lack of control in how much time had passed since the traumatic event or any longitudinal data on how growth may have changed over time. Perhaps the amount of time that has passed since the traumatic experience could affect the amount of growth participants demonstrated. Additionally, the variance in time elapsed could have an influence on how much the traumatic event influences participants’ everyday lives. Finally, the study utilized self-report measures only for participants’ attachment styles, experience with traumatic events, as well as the amount of posttraumatic growth they experienced. Data collection from a single source introduces the possibility of systematic measurement error across all measures. For example, findings could have been influenced by inclinations to withhold information or to exaggerate desirable characteristics.

**Future Research**

The current study made important contributions to the literature of both posttraumatic growth and attachment by examining the link between these two constructs. This study found significant results for the association between posttraumatic growth and attachment that could be further investigated with empirical research. There are many other potential ways to operationalize the construct of attachment. It could be that a different measurement of this concept would demonstrate a different relationship with attachment. There is also still some debate over how posttraumatic growth can be operationalized. It would be interesting to compare
other measures of positive outcomes to the attachment variables. Furthering the evidence for a relationship between the positive outcomes of trauma recovery and attachment is important, but it would also be interesting to compare how attachment variables influence the occurrence of negative outcomes. In this way, clinicians could not only help provide a positive framework for the recovery, but also utilize knowledge about attachment to reduce any negative side effects.

With the establishment of an association between these two variables, there are also many questions that could be asked about other influences on the relationship like mediators or moderators. The results of this study indicate the activation of the attachment system as a crucial aspect of the process to a positive recovery, so it could be that a person’s perceived social support also plays a role in this relationship. Additionally, as indicated by the significance of attachment avoidance and the lack of significance of attachment anxiety, it is possible that not only the activation of the attachment system alone, but also more broadly constructed coping methods that one uses based on previous relationships are relevant to how an individual recovers from experiencing a traumatic event. Further research should be done to investigate these potential relationships to help guide clinical practice in the future.

Finally, as the concept of posttraumatic growth continues to gain support in the literature it is important to investigate the many factors that could lead to the pathways of growth. Future studies can further investigate not only associations between posttraumatic growth and attachment, but also other connections between personality and posttraumatic growth. Moreover, many developing models of posttraumatic growth include other important variables like pretrauma and peritrauma factors. This could lead to further research about the nature of the traumatic event, how traumatic the victim perceives the event to be, or even how often the event occurs. Future studies could compare the levels of growth while controlling for the traumatic
event itself, to see if specific aspects of certain events lead to outcomes that are more positive. Lastly, amount of growth could be influenced by the person’s mindset. Evidence of the influence of mindset has already started to be investigated and could be further supported with future studies. The concept of posttraumatic growth has major implications for how mental health practitioners approach the treatment of people with a number of negative life experiences. As the empirical evidence continues to grow, the knowledge about positive outcomes could greatly affect the way clinicians approach and treat victims of trauma.
REFERENCES


DIRECTIONS: This questionnaire is comprised of a variety of traumatic events which you may have experienced. For each of the following “numbered” questions, indicate whether or not you experienced the event. If you have experienced one of the events, circle “Yes” and complete the “lettered” items immediately following it that ask for more details. If you have not experienced the event, circle “No” and go to the next “numbered” item.

<table>
<thead>
<tr>
<th>No</th>
<th>Yes</th>
<th>1. Have you been in or witnessed a serious industrial, farm, or car accident, or a large fire or explosion?</th>
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<tr>
<td></td>
<td></td>
<td>a. How many times? Once ☐ twice ☐ three + ☐</td>
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<td></td>
<td></td>
<td>b. How old were you at that time(s)? 1st _____ 2nd _____ 3rd _____</td>
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<td></td>
<td></td>
<td>c. Were you injured?</td>
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<td></td>
<td></td>
<td>Not at all                      Severe</td>
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<td></td>
<td></td>
<td>1 2 3 4 5 6 7</td>
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<td></td>
<td></td>
<td>d. Did you feel your life was threatened?</td>
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<td></td>
<td></td>
<td>Not at all                      Extreme</td>
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<td>e. How traumatic was this for you at that time?</td>
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<td></td>
<td></td>
<td>Not at all                      Extreme</td>
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<td>1 2 3 4 5 6 7</td>
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<td></td>
<td>f. How traumatic is this for you now?</td>
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<td>Not at all                      Extreme</td>
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<td></td>
<td></td>
<td>1 2 3 4 5 6 7</td>
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<td></td>
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<td>g. What was the event?</td>
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</table>

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<thead>
<tr>
<th>No</th>
<th>Yes</th>
<th>2. Have you been in a natural disaster such as a tornado, hurricane, flood or major earthquake?</th>
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<tr>
<td></td>
<td></td>
<td>a. How many times? Once ☐ twice ☐ three + ☐</td>
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<td></td>
<td></td>
<td>b. How old were you at that time(s)? 1st _____ 2nd _____ 3rd _____</td>
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<td></td>
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<td>c. Were you injured?</td>
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<tr>
<td></td>
<td></td>
<td>Not at all                      Severe</td>
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<td></td>
<td></td>
<td>1 2 3 4 5 6 7</td>
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<td></td>
<td></td>
<td>d. Did you feel your life was threatened?</td>
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<tr>
<td></td>
<td></td>
<td>Not at all                      Extreme</td>
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<td>1 2 3 4 5 6 7</td>
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<td></td>
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<td>e. How traumatic was this for you at that time?</td>
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<td></td>
<td>Not at all                      Extreme</td>
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<td>f. How traumatic is this for you now?</td>
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<td>1 2 3 4 5 6 7</td>
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<tr>
<td></td>
<td></td>
<td>g. What was the event?</td>
</tr>
</tbody>
</table>
3. Have you been a victim of a violent crime such as rape, robbery, or assault?
   a. How many times? Once □ twice □ three + □
   b. How old were you at that time(s)? 1st □ 2nd □ 3rd □
   c. Were you injured?
      Not at all □ Severely □
      1 2 3 4 5 6 7
   d. Did you feel your life was threatened?
      Not at all □ Extremely □
      1 2 3 4 5 6 7
   e. How traumatic was this for you at that time?
      Not at all □ Extremely □
      1 2 3 4 5 6 7
   f. How traumatic is this for you now?
      Not at all □ Extremely □
      1 2 3 4 5 6 7
   g. What was the crime? ________________________________

4. As a child, were you the victim of either physical or sexual abuse?
   a. How old were you when it began? ____
   b. How old were you when it ended? ____
   c. Were you injured?
      Not at all □ Severely □
      1 2 3 4 5 6 7
   d. Did you feel your life was threatened?
      Not at all □ Extremely □
      1 2 3 4 5 6 7
   e. How traumatic was this for you at that time?
      Not at all □ Extremely □
      1 2 3 4 5 6 7
   f. How traumatic is this for you now?
      Not at all □ Extremely □
      1 2 3 4 5 6 7
   g. Was the assailant male or female? Male □ Female □
   h. Check (✓) all categories that describe the experience ...
      □ physical abuse
      □ there was sexual penetration of the mouth, anus or vagina
      □ there was no sexual penetration, but the assailant attempted to force you to complete such an act
      □ there was some other form of sexual contact e.g., touched your sexual organs, or forced to touch assailant’s sexual organs
      □ no sexual contact occurred, however, the assailant attempted to touch your sexual organs, or make you touch his/her sexual organs
5. As an adult, have you had any unwanted sexual experiences that involved the threat or use of force?
   a. How many times? Once □ twice □ three + □
   b. How old were you at that time(s)? 1st ____ 2nd ____ 3rd ____
   c. Were you injured?
     Not at all        Severely
     1 2 3 4 5 6 7
   d. Did you feel your life was threatened?
     Not at all        Extremely
     1 2 3 4 5 6 7
   e. How traumatic was this for you at that time?
     Not at all        Extremely
     1 2 3 4 5 6 7
   f. How traumatic is this for you now?
     Not at all        Extremely
     1 2 3 4 5 6 7
   g. Was the assailant male or female? Male □ Female □
   h. Check (✓) all categories that describe the experience ...
      □ there was sexual penetration of the mouth, anus or vagina
      □ there was no sexual penetration, but the assailant attempted to
        force you to complete such an act
      □ there was some other form of sexual contact e.g., touched your
        sexual organs, or forced to touch assailant's sexual organs
      □ no sexual contact occurred, however, the assailant attempted to
        touch your sexual organs, or make you touch his/her sexual
        organs

6. As an adult, have you ever been in a relationship in which you were abused either physically or otherwise?
   a. How old were you when it began? ____
   b. How old were you when it ended? ____
   c. Were you injured?
     Not at all        Severely
     1 2 3 4 5 6 7
   d. Did you feel your life was threatened?
     Not at all        Extremely
     1 2 3 4 5 6 7
   e. How traumatic was this for you at that time?
     Not at all        Extremely
     1 2 3 4 5 6 7
   f. How traumatic is this for you now?
     Not at all        Extremely
     1 2 3 4 5 6 7
7. Have you witnessed someone who was mutilated, seriously injured, or violently killed?
   a. How many times? Once □ twice □ three + □
   b. How old were you at that time(s)? 1st ____ 2nd ____ 3rd ____
   c. Were you injured?
      Not at all □ Severe □ 1 2 3 4 5 6 7
   d. Did you feel your life was threatened?
      Not at all □ Extremely □ 1 2 3 4 5 6 7
   e. How traumatic was this for you at that time?
      Not at all □ Extremely □ 1 2 3 4 5 6 7
   f. How traumatic is this for you now?
      Not at all □ Extremely □ 1 2 3 4 5 6 7

8. Have you been in serious danger of losing your life or of being seriously injured?
   a. How many times? Once □ twice □ three + □
   b. How old were you at that time(s)? 1st ____ 2nd ____ 3rd ____
   c. Were you injured?
      Not at all □ Severe □ 1 2 3 4 5 6 7
   d. Did you feel your life was threatened?
      Not at all □ Extremely □ 1 2 3 4 5 6 7
   e. How traumatic was this for you at that time?
      Not at all □ Extremely □ 1 2 3 4 5 6 7
   f. How traumatic is this for you now?
      Not at all □ Extremely □ 1 2 3 4 5 6 7
   g. What was the event? ____________________________
9. Have you received news of the mutilation, serious injury, or violent or unexpected death of someone close to you?
   a. How many times? Once □ twice □ three + □
   b. How old were you at that time(s)? 1st ___ 2nd ___ 3rd ___
   c. What relation was this person to you? _____
      Not at all          Severely
      1 2 3 4 5 6 7
   d. Did you feel your life was threatened?
      Not at all          Extremely
      1 2 3 4 5 6 7
   e. How traumatic **was** this for you at that time?
      Not at all          Extremely
      1 2 3 4 5 6 7
   f. How traumatic **is** this for you now?
      Not at all          Extremely
      1 2 3 4 5 6 7

10. Have you ever had any other very traumatic event like these?
   a. How many times? Once □ twice □ three + □
   b. How old were you at that time(s)? 1st ___ 2nd ___ 3rd ___
   c. Were you injured?
      Not at all          Severely
      1 2 3 4 5 6 7
   d. Did you feel your life was threatened?
      Not at all          Extremely
      1 2 3 4 5 6 7
   e. How traumatic **was** this for you at that time?
      Not at all          Extremely
      1 2 3 4 5 6 7
   f. How traumatic **is** this for you now?
      Not at all          Extremely
      1 2 3 4 5 6 7
   g. What was the event? ________________________________
11. Have you had any experiences like these that you feel you can’t tell about (note: you don’t have to describe the event)?

- a. How many times? Once □ twice □ three + □
- b. How old were you at that time(s)? 1st _____ 2nd _____ 3rd _____
- c. Were you injured?
  Not at all □ Severely 1 2 3 4 5 6 7
- d. Did you feel your life was threatened?
  Not at all □ Extremely 1 2 3 4 5 6 7
- e. How traumatic was this for you at that time?
  Not at all □ Extremely 1 2 3 4 5 6 7
- f. How traumatic is this for you now?
  Not at all □ Extremely 1 2 3 4 5 6 7

If you answered “Yes” to one or more of the questions above, which was the MOST traumatic thing to have happened to you? Fill in the number of the question (e.g., #2 for natural disaster).

________________________________________________________________________

Did you answer Yes to more than one question above while thinking about the same event?

Yes □ No □

If yes, which items refer to the same event?

____________________________________________ _____________________________

If you answered “No” to all questions, describe briefly the most traumatic thing to happen to you and answer the questions that follow the blank space in regards to the event.

____________________________________________________________________________________

____________________________________________________________________________________

____________________________________________________________________________________

____________________________________

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____________________________________

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___________________________________________________________________________

a. How many times? Once □ twice □ three + □

b. How old were you at that time(s)? 1st _______ 2nd _______ 3rd _______
c. Were you injured?
   Not at all          Severe
   1    2    3    4    5    6    7

d. Did you feel your life was threatened?
   Not at all          Extremely
   1    2    3    4    5    6    7

e. How traumatic was this for you at that time?
   Not at all          Extremely
   1    2    3    4    5    6    7

f. How traumatic is this for you now?
   Not at all          Extremely
   1    2    3    4    5    6    7
PTGI
(Tedeschi & Calhoun, 1996)

**Directions:** Based on a previous traumatic event, please respond to each item with either: "0" (not at all), "3" (somewhat), or "5" (a great deal).

Because of this event…

1. My priorities about what is important in life have changed
2. An appreciation for the value of my own life
3. I developed new interests
4. A feeling of self reliance
5. A better understanding of spiritual matters
6. Knowing that I can count on people in times of trouble
7. I established a new path for life
8. A sense of closeness with others
9. A willingness to express my emotions
10. Knowing I can handle difficulties
11. I’m able to do better things with my life
12. Being able to accept the way things work out
13. Appreciating each day
14. New opportunities are available which wouldn't have been otherwise
15. Having compassion for others
16. Putting effort into my relationships
17. I’m more likely to try to change things which need changing
18. I have a stronger religious faith
19. I discovered that I’m stronger than I thought I was
20. I learned a great deal about how wonderful people are.
21. I accept needing others

Which event from the TEQ you were thinking about when you completed this questionnaire? Please indicate both the number and event below. (e.g. #2 natural disaster)

____________________________________

____________________________________

57
ASQ  
(Feeney, Noller, & Hanrahan, 1994)

**Directions:** Show how much you agree or disagree with each of the following items by rating them on scale 1 to 6: "1" (not at all), "3" (somewhat), or "6" (a great deal).

1. Overall, I am a worthwhile person.  
   
2. I am easier to get to know than most people.  
   
3. I feel confident that other people will be there or me when I need them.  
   
4. I prefer to depend on myself rather than other people.  
   
5. I prefer to keep to myself.  
   
6. To ask for help is to admit that you’re a failure.  
   
7. People’s worth should be judged by what they achieve.  
   
8. Achieving things is more important than building relationships.  
   
9. Doing your best is more important than getting on with others.  
   
10. If you’ve got a job to do, you should do it no matter who gets hurt.  

11. It’s important to me that others like me.  
12. It’s important to me to avoid doing things that other’s won’t like.  
13. I find it hard to make a decision unless I know what other people think.  
14. My relationships with others are generally superficial.  
15. Sometimes I think I am no good at all.  
16. I find it hard to trust other people.  
17. I find it difficult to depend on others.  
18. I find that others are reluctant to get as close as I would like.  
19. I find it relatively easy to get close to other people.  
20. I find easy to trust others.  
21. I feel comfortable depending on other people.  
22. I worry that others won’t care about me as much as I care about them.  
23. I worry about people getting to close.  
24. I worry that I won’t measure up to other people.  
25. I have mixed feelings about being close to others.  
26. While I want to get close to others, I feel uneasy about it.  
27. I wonder why people would want to be involved with me.  
28. It’s very important to me to have a close relationship.  
29. I worry a lot about my relationships.  
30. I wonder how I would cope without someone to love me.
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<tbody>
<tr>
<td>31. I feel confident about relating to others.</td>
<td>1 2 3 4 5 6</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>32. I often feel left out or alone.</td>
<td>1 2 3 4 5 6</td>
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<td>33. I often worry that I do not really fit with other people.</td>
<td>1 2 3 4 5 6</td>
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<tr>
<td>34. Other people have their own problems, so I don’t bother them with mine.</td>
<td>1 2 3 4 5 6</td>
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<tr>
<td>35. When I talk over my problems with others, I generally feel ashamed or foolish.</td>
<td>1 2 3 4 5 6</td>
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<td>36. I am too busy with other activities to put much time into relationships.</td>
<td>1 2 3 4 5 6</td>
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<tr>
<td>37. If something is bothering me, others are generally aware and concerned.</td>
<td>1 2 3 4 5 6</td>
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<td>38. I am confident that other people will like and respect me.</td>
<td>1 2 3 4 5 6</td>
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<tr>
<td>39. I get frustrated when others are not available when I need them.</td>
<td>1 2 3 4 5 6</td>
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</tr>
<tr>
<td>40. Other people often disappoint me.</td>
<td>1 2 3 4 5 6</td>
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Demographic Information Questionnaire

1. How old are you? _______ Years

2. Please indicate your GENDER: MALE  FEMALE

3. Please indicate the number that best describes your HISPANIC ORIGIN:
   (1) Hispanic or Latino
   (2) Not Hispanic or Latino

4. Please indicate the number that best describes your RACE, or please describe the specific group that you identify with the most:
   (01) American Indian or Alaska Native
   (02) Asian
   (03) Native Hawaiian or Other Pacific Islander
   (04) Black, African-American
   (05) White
   (06) Multicultural Mixed Race
   (07) Not listed, please specify________________________

5. Please circle the number next to your college:
   (1) Agriculture
   (2) Art & Design
   (3) Business, E.J. Ourso
   (4) Coast and Environment
   (5) Continuing Education
   (6) Engineering
   (7) Graduate School
   (8) Human Sciences & Education
   (9) Humanities & Social Sciences
   (10) Mass Communication
   (11) Music & Dramatic Arts
   (12) Science
   (13) University College
   (14) Veterinary Medicine
   (15) Undecided, Undeclared

6. What is your current or expected major? ____________________________________________

7. How many full semesters have you completed at LSU? (do not count the current semester, put 0 if you are a first semester student) ________ semesters

8. Please indicate your undergraduate Grade Point Average on a 4.0 scale:
   (skip this if you don’t have a GPA yet) _________ GPA

9. What are your plans upon graduating from LSU? (graduate school/employment/volunteer work? In what field will you be working?)

   _______________________________________________________________________________

10. Have you ever utilized LSU Mental Health Services for counseling or other offered services? 
    Yes  No

11. Are you a veteran of the U.S. Armed forces? Yes  No

12. What was your city and state of residence prior to enrollment at LSU?

   _______________________________________________________________________________

THANK YOU FOR YOUR PARTICIPATION IN THIS RESEARCH!
APPENDIX B
IRB MATERIALS

ACTION ON PROTOCOL APPROVAL REQUEST

TO: Timothy Page
Social Work

FROM: Robert C. Mathews
Chair, Institutional Review Board

DATE: February 4, 2014
RE: IRB# 3433

TITLE: Relationship between attachment type and posttraumatic growth in college students following a traumatic event


Review type: Full X Expedited _____ Review date: 12/13/2013

Risk Factor: Minimal _____ X Uncertain _______ Greater Than Minimal _______

Approved* X _____ Disapproved _______

Approval Date: 12/13/2013 Approval Expiration Date: 12/12/2014

Re-review frequency: (annual unless otherwise stated)

Number of subjects approved: 500

Protocol Matches Scope of Work in Grant proposal: (if applicable) _______

*Approval Note:

By: Robert C. Mathews, Chairman

PRINCIPAL INVESTIGATOR: PLEASE READ THE FOLLOWING – Continuing approval is CONDITIONAL on:

1. Adherence to the approved protocol, familiarity with, and adherence to the ethical standards of the Belmont Report, and LSU’s Assurance of Compliance with DHHS regulations for the protection of human subjects*
2. Prior approval of a change in protocol, including revision of the consent documents or an increase in the number of subjects over that approved.
3. Obtaining renewed approval (or submittal of a termination report), prior to the approval expiration date, upon request by the IRB office (irrespective of when the project actually begins): notification of project termination.
4. Retention of documentation of informed consent and study records for at least 3 years after the study ends.
5. Continuing attention to the physical and psychological well-being and informed consent of the individual participants including notification of new information that might affect consent.
6. A prompt report to the IRB of any adverse event affecting a participant potentially arising from the study.

8. SPECIAL NOTE:

*All investigators and support staff have access to copies of the Belmont Report, LSU’s Assurance with DHHS, DHHS (45 CFR 46) and FDA regulations governing use of human subjects, and other relevant documents in print in this office or on our World Wide Web site at http://www.fas.lsu.edu/osp/irb
Informed Consent

Protocol Title: The effects of various personality factors on the response to traumatic events.

Please read this consent document carefully before you decide to participate in this study.

Whom to contact if you have questions about the study:
If you have any questions concerning the study, you may contact Keith Morgan (kmorgan44@lsu.edu), Dr. Timothy Page, Department of Social Work, Louisiana State University, Baton Rouge, LA 70803, ph 225-673-1388, tpage@lsu.edu.

Performance Site: Louisiana State University and Agricultural and Mechanical College

Purpose of the research study:
The purpose of this study is to learn about personality factors and experiences related to traumatic events.

What you will be asked to do in the study:
Participation in this study requires you to complete several standard questionnaires about your personality and your experiences with trauma. There are no right or wrong responses to the items on the measures. You do not have to answer any questions you do not want to answer.

Total Time required: Approximately 1 Hour.

Risks and Benefits:
There are no known risks involved in completing the questionnaires, and many participants find that they learn something about themselves from answering the items. There is potential for minor distress when answering self-report measures about traumatic life events. Because these questionnaires have been used previously with the college student population and no major distress have been reported, there is confidence that this discomfort will be minimal. You may benefit by participating in this study through increased awareness and self-understanding. You will also be contributing to knowledge that will help researchers further understand personality factors and reactions to traumatic life events. Nonetheless, if being part of the study makes you feel uncomfortable, you may consider speaking to a counselor who may be able to help you with your reactions. You can contact a counselor through the Louisiana State University Mental Health Services (Infirmary Drive, 225-578-8774). You may also contact the researchers about your reactions during or after participating in this study. If you follow the guidelines for participation, you will receive two credits of research participation or extra credit decided by your instructor.

Confidentiality:
Your identity will be kept confidential to the extent provided by law. Your information will be assigned a code number, and your responses during the study will not be associated with your name or any identifying information. All data files will only be accessible to the principal investigator and his research assistants and will be kept in a password-protected file on the principal investigator’s office. Your name will not be used in any report based on this study.

Voluntary participation:
Your participation in this study is completely voluntary. There is no penalty for not participating.

Right to withdraw from the study:
You have the right to withdraw from the study at any time without consequence. Choosing to participate or not to participate will in no way influence your standing at the Louisiana State University.

Whom to contact about your rights as a research participant in the study:
Any questions or concerns about your rights in this study can be directed to Dr. Robert Mathews, Institutional Review Board, 225-578-6692, irb@lsu.edu, www.lsu.edu/irb.

Agreement:
I certify that I have read the preceding or it has been read to me, that I understand its contents, and that I have freely agreed to participate in this research study. A copy of this consent form has been given to me.

Sign Your Name: ___________________________ Date: _________________

Signature of Investigator: ___________________________ Date: _________________
VITA

Keith Morgan received his Bachelors of Science in Psychology and Bachelors of Arts in Criminology from the University of Florida and is currently a candidate for a Masters of Social Work from Louisiana State University. While completing his MSW, Keith has had the opportunity to improve his clinical skills through internships at Livingston Youth and Family Counseling Center and Louisiana State University Mental Health Services. After graduation, Keith hopes to continue to develop as a Therapist while pursuing his licensure to become a Clinical Social Worker. One day Keith hopes to pursue his Ph.D. in Social Work in order to combine his clinical knowledge with empirical evidence to help create new interventions and positive frameworks for therapy.