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An Examination of the Relationship Between Resilience and Symptoms of Posttraumatic Stress Disorder Among Social Work Students at Florida State University

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AN EXAMINATION OF THE RELATIONSHIP BETWEEN RESILIENCE
AND SYMPTOMS OF POSTTRAUMATIC STRESS DISORDER AMONG
SOCIAL WORK STUDENTS AT FLORIDA STATE UNIVERSITY

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I dedicate this dissertation to all who experience traumatic events.
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ABSTRACT

Resilience has been defined to include the recovery from traumatic experiences (Block & Block, 1980, and Bonanno (2005), but this assumption had not been empirically tested until now. By using the Ego-Resiliency Scale (Klohnen, 1996), the Trauma Recovery Scale (Gentry, 2006), part of the Traumagram Questionnaire (Figley, 1989), and the Impact of Events Scale – Revised (Weiss & Marmar, 1997), this idea was tested in a non-clinical sample of 242 social work students from Florida State University. It was found that resilience and symptoms of posttraumatic stress disorder were inversely related as expected, but not significantly. With a Pearson Product correlation coefficient of -.077, it would only be statistically significant at the .268 level. These findings provide evidence that resilience does not mean recovery from traumatic experiences. This new data will require further research exploration to clarify what is meant by resilience.

Keywords: resilience, resiliency, ego-resiliency, posttraumatic stress disorder, PTSD.
CHAPTER 1
INTRODUCTION, REVIEW, AND THEORETICAL FRAMEWORK OF RESILIENCE

Introduction

There are two Chinese characters that represent the word crisis. The characters mean both opportunity and danger (Aguilera & Messick, 1982). Yet when the neuro-biological system is on alert, the breath quickens, blood pressure is increased, muscles are taut, the heart can be heard beating loudly in the ears, and there is a readiness to fight, flee, or freeze. At that moment opportunity is the last thing to consider. Survival becomes the utmost concern, and all attention is relegated to that biological function. How can such an experience be an opportunity?

Viktor Frankl, whose life is a great example of resilience, has an answer to this question. He has stated that “He who has a why to live for can bear almost any how” (Frankl, 1977, p. 164). He also wrote:

Ultimately, man should not ask what the meaning of his life is, but rather must recognize that it is he who is asked. In a word, each man is questioned by life; and he can only answer to life by answering for his own life; to life he can only respond by being responsible. (p.172)

There is also a Japanese proverb that relates to this universal issue; “Fall seven times, stand up eight” (Quoteland, 2005). All of these ideas have reference to resilience. Resilience is about overcoming the obstacles in life, and each life will have its share of difficulties. No one escapes this world unscathed. Epidemiological studies have found that the majority of Americans have been exposed to at least one seriously traumatic event in their life (Bonanno, 2004).

One often hears amazing stories of incredible survival against extreme odds. Some of these stories center on challenges relating to escape from poverty, sickness, or traumatic events such as natural disasters. Unfortunately, other causes of trauma are created by humans themselves. Resilience sometimes looks like unshaken faith or good humor (Fredrickson, Tugade, Waugh, & Larkin, 2003). But resilience also includes adapting to change, persevering through tough times, and maintaining a positive mental attitude. Resilient individuals are those
who not only survive loss, abuse, and hardship, but find meaning or purpose in their lives in spite of their trials or even because of their biggest challenges.

Wouldn’t it be useful to know if you are the kind of person most likely to recover well after a tragedy strikes? What if you are not that kind of person? Would it be helpful to know that a career filled with traumatic exposure may not be in your best interest, or if it is your desire to work in such a field, wouldn’t it be helpful to know what kinds of interventions will help you cope with such a choice? What if there was a threshold of trauma that any one person can withstand? Would it be helpful to know what that threshold is? What if those who are most resilient often lack the empathy required to be emotionally supportive of others? What if research that showed successful interventions only identified those who are resilient? Would this information be relevant and beneficial? Yes, this information is relevant and would be beneficial, and that is why research on resiliency is so important. Resiliency research can be a significant contribution to the field of social work.

This dissertation research was intended to explore the concepts of resilience and the symptoms of posttraumatic stress disorder. There has apparently been no other research study that has tested both resilience and symptoms of posttraumatic stress disorder. Resilience has been defined in such a way that it is assumed to ameliorate the effects of adversity, stressful events, and even trauma. At the same time, the severity of traumatic events is linked with increased rates of posttraumatic stress disorder. This study examined both concepts as they relate to one another. The definition of resilience has been tested against the extremity of traumatic events, and the severity of traumatic events has been compared to symptoms of posttraumatic stress disorder. If both theoretical concepts showed the expected correlations, then it would be possible to compare the amount of variance each concept is responsible for. If resilient individuals are less prone to posttraumatic stress disorder even with severe traumatic events, then the importance of resilience will become evident. If the severity of traumatic events overcomes the resiliency of individuals, then the limits of this concept will have been found. Either outcome sheds new light in the field of trauma research and resilience research.
Review of Resilience Literature

There is a vast amount of research literature surrounding the topic of resilience and symptoms of posttraumatic stress disorder. A literature review was conducted using several databases supported through the Florida State University library. The on-line system was utilized as well as the on-site computer-based system to conduct searches. Books available on Trauma and crisis intervention were perused at Dirac Library for pertinent research sources as were other topics at Strozier Library, including Freud’s work, self-efficacy, and social learning theory. The law library was also used for article retrieval as were several websites including the International Society for Traumatic Stress Studies at www.istss.org and several PTSD websites including www.ptsd.va.gov. Google and Google Scholar were used at various times. Some of the databases utilized included Psych INFO, MEDLINE, Applied Science & Technology Abstracts, Social Science Citations, Social Services Abstracts, ISI Web of Science, Social Science Full Text, Omnifile Full Text Mega Edition. Literature searches were conducted between the Summer of 2005 and the Spring of 2010 using a combinations of the following keywords: resilience, resiliency, posttraumatic stress disorder, PTSD, traumatic events, trauma, severity, ego-resilience, ego-resiliency scale, Impact of Events Scale, Traumagram Questionnaire, Trauma Recovery Scale, hardness, crisis intervention, emotional intelligence, positive psychology, behavioral theory, adversity, stressful events, broaden and build theory, renegotiation and transformation theory. In addition, the following author’s names were included as search words: Klohnen, Bonanno, Figley, Horowitz, Freud, and Levine. Articles referenced in other articles were also used in the literature search for this research.

Resilience literature is quite varied and often uses imprecise terms. There are many definitions of resilience, several ways of referring to it, and a variety of similar concepts that are assumed to be distinct but are clearly related. It was beyond the purview of this research to test these differentiations; however, they are listed for the benefit of the reader. Resilience or resiliency is also referred to as trait resilience and ego-resiliency in the research literature. These terms are used interchangeably as their definitions vary only slightly. When resilience is referred to as ego-resiliency, it acknowledges its psychodynamic theoretical underpinnings as described in the seminal work of Block and Block (1980) considered later in this text. The term trait-
resilience is also used in the literature to emphasize the belief that resilience is a trait and not a malleable state. Most often resilience has been assumed to be a malleable state when it has been used as a dependent variable in outcome research. More on this topic will also follow.

Ego-resiliency was initially conceptualized in the context of personality development. It has been defined by Block and Block (1980) as the:

Resourceful adaptation to changing circumstances and environmental contingencies, analysis of the “goodness of fit” between situational demands and behavioral possibility, and flexible invocation of the available repertoire of problem-solving strategies (problem solving being defined to include the social and personal domains as well as the cognitive). The opposite end of the ego-resiliency continuum (ego-brittleness) implies little adaptive flexibility, an inability to respond to the dynamic requirements of the situation, a tendency to perseverate or become disorganized when encountering changed circumstances or when under stress, and a difficulty in recouping after traumatic experiences. (p. 48)

Since this definition explicitly states that ego-brittleness includes the inability to recover from traumatic experiences, it is logical to assume that ego-resiliency is, in fact, the ability to recover from traumatic experiences. Bonanno (2004) also included the concept of trauma in his definition of resilience and claimed that ego-resiliency is more than just recovering from a traumatic experience or an absence of psychopathology.

There are many recent definitions of resilience that do not include the word “trauma.” For example, Tugade and Fredrickson (2004) stated that “psychological resilience refers to effective coping and adaptation although faced with loss, hardship or adversity” (p. 320). Ego-resiliency has been defined by Klohnen (1996) as:

The general capacity for flexible and resourceful adaptation to external and internal stressors. More specifically, ego-resiliency is a personality resource that allows individuals to modify their characteristic level and habitual mode of expression of ego-control so as to most adaptively encounter, function in, and shape their immediate and long-term environmental contexts. (p. 1)

According to Block and Kremen (1996), ego-resiliency has to do with ego-control, but “It can be said that the human goal is to be as undercontrolled as possible and as overcontrolled as necessary” (p 351).
Related constructs have included: ego-strength, competence, emotional stability, coping, self-efficacy, hardiness, social intelligence (Klohn, 1996), inner strength (Moghadam, 2006), adjustment (Block and Kremen, 1996), optimism, and humor (Tugade & Fredrickson, 2004). Emotional intelligence as defined by Tugade and Fredrickson (2004) included the ability to monitor the feelings and emotions of self and others, to identify those feelings, and to think and act based on this insight. This concept has often been included as part of ego-resiliency.

According to Bissonnette (1998), hardiness and optimism are internal characteristics that help individuals overcome negative life experiences. Hardiness is a concept from the field of medicine that has been used to mean physical resistance in spite of stress; however, the meaning has now come to include psychological health as well as physical health. Hardiness is considered to be a combination of control, commitment, and challenge. Control is the amount of influence an individual thinks he or she has in life. Commitment includes a person’s ability to feel involved with others and to value themselves and their experiences. Challenge is the ability to see change as an opportunity for growth.

Psychology literature suggests that optimism is an individual’s positive expectation for most situations (Bissonnette, 1998). Optimism is purported to be rooted in the repeated gratification of needs in infancy. Furthermore, having a sense of control is said to lead to feelings of mastery, which in turn leads to optimism. According to Seligman (2002), people that are optimistic tend to see their challenges as temporary, under their control, and specific only to the current situation. Moghadam (2006) has contended that optimism is “the global expectation that good things will be plentiful and that bad things will be scarce” (p.34). Similarly, Block & Block (1980) have stated that coping refers to the internal mechanisms for regulating anxiety as well as to the external behaviors that are adaptive in the face of challenges, frustration, or stress.

Moghadam (2006) has reported that self-efficacy, considered to be confidence in one’s competence, makes up much of resilience. One’s desires, choices and effort all reflect this inner assurance that goals can be accomplished with the use of the skills one has acquired by successfully overcoming obstacles. Also, being inspired by the actions of others and being persuaded, encouraged, or excited by the idea of accomplishment all play a role in the development of self-efficacy. Bandura (1977) considers self-efficacy to be a self-regulatory process in which people directly influence their own behavior while they interact with their environment. How strongly a person believes in his or her own effectiveness determines the
amount of effort and persistence that person will expend when faced with challenges. Successful personal accomplishments reinforce positive expectations of one’s ability to prevail in difficult situations.

Similar to self-efficacy is the concept of internal locus of control, which is an individual’s belief that they are responsible for the attainment of goals and that one’s skills and behavior will have an effect on the outcome of those goals (Moghadam, 2006; Rotter, 1982). According to Rotter (1982), if a person believes in a causal relationship between their actions and a subsequent reward, then they exhibit an internal locus of control. Those who believe that their lives are a result of luck or fate often feel powerless and are generally more passive. They are said to express an external locus of control. An external locus of control can lead to feelings of alienation or can serve the purpose of preserving self-esteem in spite of failure. Extreme internal or external locus of control would be maladaptive and unlikely show the ego-control exhibited in resilient individuals. Similarly, an internal locus of control has been found to protect people from various risk factors that lower resilience (Moghadam, 2006).

Finally, tenacity has also been proposed as a part of resilience (Moghadam, 2006). Tenacity refers to the persistence and determination to see a project to finality. This construct is sometimes referred to as will power. Klohnen (1996) has reported that some of these related concepts probably make up ego-resiliency. Giving us further insight into the concept of resilience are the results of the exploratory factor analysis of the Ego-Resiliency Scale, developed from the California Psychological Inventory. This scale was found to have the following four factors: confident optimism, productive and autonomous activity, interpersonal warmth and insight, and skilled expressiveness. The Ego-Resiliency Scale was used in this research project and will be explored more fully in the methodology section of this text.

Age Related Literature

Resilience in children. Ego-resiliency was originally observed and then studied in children. Bissonnette (1998) stated that in children, resilience “generally refers to the capacity for successful adaptation despite challenging or threatening circumstances and the development of competence under conditions of pervasive and/or severe adversity” (p.3). Ego-resiliency changes as the child develops and is enhanced when protective factors are in place. These
protective factors include intelligence, relaxed temperament, autonomy, ability to get along with others, and good communication skills. Family factors that improve resilience include a predictable routine, caring emotional support, and a connection with at least one caregiver. Support from outside the family can also be helpful. Positive school experiences, friends, and relationships with other adults can serve to enhance ties to a community as well as to reinforce the child’s self-esteem.

Moghadam (2006) stated that additional life challenges can create greater resilience and a better life, and that people are resilient because they have been successfully tested by life and not in spite of life’s trials. When an individual succeeds in spite of severe challenges, that success can build personality characteristics such as optimism, internal locus of control, and self-efficacy, all of which serve the individual in future endeavors.

According to Block and Block (1980), antecedents of ego-resiliency likely include constitutional factors and genetics. Ego-resiliency has been studied in infancy by observation of the ways in which infants respond to the environment. Some characteristics of ego-resilient infants are the abilities to be comforted and to modify waking and sleeping states. Longitudinal data found the mothers of ego-resilient children to be patient, loving, and competent. The parental system in these families freely interacted about their thoughts and feelings, were sexually compatible, agreed on values, and shared concerns for moral and philosophical issues. Ego-brittle children often came from conflicted households with anxious and ambivalent mothers and from families lacking emphasis on intellectual or philosophical issues.

Block and Block (1980) conducted an extensive longitudinal study of children and their families with children ages 3, 4, 5, 7, and 11. Using multiple measures and forms of data, they found ego-resilient children to be more empathic, bright, self-accepting, novelty seeking, appropriate in expressions of emotions, better able to cope with stress, self-reliant, competent, creative, as well as less anxious, suspicious, sulky, imitative, and reassurance seeking. Also, an internal locus of control was found to be necessary in the generation of resiliency.

Huey and Weisz (1997) also conducted longitudinal studies of resiliency. Their findings indicated that ego-resilient children are linked with having secure attachments in infancy and the use of delayed gratification as children and young adults, while ego-brittle children are linked to depression and the use of hard drugs in adolescence.
After an extensive literature review, Moghadam (2006) found risk factors for children to include:

- parental rejection or abandonment,
- poor parent-child attachment,
- parental emotional distance,
- inter-parental conflict or divorce,
- parental criminality or absenteeism,
- maltreatment or neglect,
- poor parental mental health,
- parental psychopathology,
- punitive corporal punishment,
- parent-child violence,
- physical, emotional, or sexual abuse,
- familial adversity, (adversity of) friends and family,
- socio-economic status,
- poverty,
- unsafe or high crime neighborhood,
- exposure to violence,
- crowded living conditions,
- chronic illness,
- and disability. (p. 19)

He reported that as risk factors accumulate, an individual can become overwhelmed, and the probability of positive life outcomes is greatly lessened. He also reported that protective factors are often viewed as such by their ability to counterbalance risk factors. Protective factors lessen an individual’s vulnerability to the risks posed by the life experiences listed above. The personal protective factors identified by Moghadam (2006) include:

- easy-going temperament,
- autonomous,
- optimism,
- hope,
- positive reframing skills,
- self-esteem,
- good self-concept,
- problem-solving skills,
- self-efficacy,
- locus of control,
- communication skills,
- secure attachment,
- and above average IQ,
- coping skills,
- tenacity,
- sense of humor,
- athleticism,
- physical attractiveness,
- body pride,
- decision making skills,
- racial identity,
- parental warmth and support,
- family cohesion and harmony,
- parental involvement,
- parental expectations,
- non-familial non-familial adult support,
- positive peer relationships,
- friendships,
- academic achievement,
- special interests and hobbies,
- areas of high competence,
- and higher socio-economic status. (p.20-22)

Perry (1997) also found that societal experiences, and especially those related to family involvement, have a tremendous influence on a child’s neurodevelopment, and thus the child’s ability to modulate feelings of stress. He stated that children are not resilient but malleable, and that the human brain develops in response to being used as it is needed. When there is a cycle of violence in the family and culture, the brain develops adaptively to that environment. Since most violence in America is committed in the home, child brain development in violent homes can lead to hyper-arousal and deficits in affect regulation, empathy, and attachment to others. Perry also agreed that a supportive caretaker, additional support systems, positive beliefs, and a higher age of the child when violence is experienced all affect the child’s ability to use the higher brain
functions necessary for reasoning and cognition, thus effecting learning and other important
tasks.

This section has highlighted many variables of interest that have shown correlations with
resilience. As with other social science questions, the sequential order of variables is of great
importance. In the case of resilience, it is not always clear which variables are causal and which
are consequential. How these variables interact requires further research. Most interesting in
terms of this study is how many authors find traumatic events as both building resources within
the child’s personality and also risk factors that are correlated with ego-brittleness, even if those
characteristics are adaptive to the home environment.

Resilience in adults. Bonanno (2005) explained that adult resilience is both similar and
different from that of children. Protective factors shared by resilient adults and children include
positive contextual/situational factors and helpful personal attributes. Having supportive
relationships, behavioral flexibility, and greater emotional regulation are some of the helpful
factors for both adults and children. One of the major differences between adult and child
resilience is that most of the traumatic events that the adult encounters are singular events, and
adults tend to have more resilience-promoting factors. In contrast, traumatized children are often
in situations such as long-term physical or sexual abuse or are trying to survive in war-torn
countries without the ability to remove themselves from such environments.

Adults can also exhibit some pragmatic forms of coping that can be effective for a brief,
isolated event that would be maladaptive for an ongoing traumatic situation (Bonanno, 2005).
Narcissistic tendencies are an example of this difference. The narcissist’s ability to maintain an
unrealistic, self-favoring bias can help maintain high self-esteem and positive affect, which in
turn increases resilience. However, long-term narcissistic attitudes are dysfunctional socially, as
people tend to dislike narcissistic individuals.

Tugade and Fredrickson (2004) claimed that ego-resilient adults are optimistic, zestful,
energetic, curious, and open. Such individuals create positive emotions through positive
thinking, relaxation, and humor. Resilient individuals responded to an anxiety promoting speech
preparation task with a more positive mood, including more happiness and interest, even though
the task created equal anxiety in both resilient and non-resilient participants. Higher resilience
was also associated with lower appraisals of threat and less duration of cardiovascular reactivity.
In a study of 133 adults, aged 20-63 with a disability, Moghadam (2006) attempted to predict “resilient successful life outcomes” (p. vi) testing optimism, self-efficacy, internal locus of control, and tenacity. Optimism, internal locus of control, and self-efficacy were all shown to be statistically significant when correlated independently with resilience. Resilience in this study was explained not as invulnerability, but as a healing power to recover from trauma, “an elasticity and flexibility, which allows one to return to homeostasis and wellness consequent to perceived injury” (p.15). This study referred to resilience as an internal trait that develops from the need to overcome an upsetting event and succeed in life regardless of adversity. This study also showed that neither ethnicity nor type of disability was predictive of resilience. It also stated that this trait is “amenable to modification” (p.17) through external interventions, but no research evidence was presented to support this claim. The most questionable aspect of this study; however, was that resilience was not tested using a reliable and valid resilience scale. Instead, data was collected on time spent in various goal-related activities assuming this would adequately assess resilience. No literature was presented to support this assumption.

**Gender Differences**

Using partial correlations, Block and Kremen (1996) found that the personality characteristics of ego-resiliency in both men and women included social poise, gregariousness, cheerfulness, comfort with self, a rich but appropriate emotionality, and an absence of fearfulness and rumination. They found a significant correlation between male ego-resiliency and IQ ($r = .31$ at $p < .05$). This evidence supports the claim that men who are ego-resilient also score higher on IQ tests. They also found that ego-resilient males show a capacity for commitment, responsibility, ethical behavior, and sympathy in caring relationships. The ego-resilient male appeared to be comfortable in the world. The ego-brittle male experiences friction in interpersonal relationships, and feels cheated, irritable, hostile, rebellious, and moody.

Ego-resilient females reported feeling comfortable with themselves and others, being playful and assertive, found meaning in life, and were adaptive in stressful situations (Block and Kremen, 1996). Ego-brittle females were found to feel inadequate, vulnerable, and unable to create satisfying relationships with others whom they could trust. Researchers also found ego-
resilient females to be relatively under-controlled ($r = -0.47, p < 0.001$), but ego-resilient males to be somewhat over-controlled ($r = 0.46, p < 0.002$).

According to Klohnen, Vandewater, and Young (1996), ego-resiliency is a personality resource that has been shown to help women adapt to midlife challenges. This study found that women who were considered ego-resilient showed greater psychological well-being, better romantic relationships, more engagement in the work domain, and higher indicators of physical health and body image. Women that were considered ego-brittle showed an increase in psychological distress and were more likely to report declining health, decreased quality in their relationships, less satisfaction in the work domain, and a more negative body image. More details of this study follows.

**Trait versus State**

One of the questions currently being explored with regard to ego-resiliency is whether or not this concept should be characterized as a trait or as a state. Recent research by Karairmak (2003) has indicated that ego-resiliency is a trait and not a state. The researcher found no correlation between adversity and ego-resiliency across time for college students using both cross sectional and longitudinal data. Ego-resiliency and positive affect were highly correlated despite adversity, and ego-resiliency scores remained the same over time.

Klohnen, Vandewater, and Young (1996) have considered ego-resiliency a personality resource that has been shown to help women adapt to midlife challenges. Longitudinal data collected at ages 43 and 52 showed the ego-resiliency of these women to be close to identical after nine years time. Twenty percent of the 97 individuals tested had exactly the same score on the ego-resiliency measure over a nine-year period. The data collected both times showed almost identical group means with similar standard deviations, and a rank order consistency for the individual women of 0.76 significant at $p < 0.01$. This means that when the women were ranked by their ego-resiliency scores, 76% of them were in the same order.

Another longitudinal study that suggests ego-resiliency is a trait compared ego-resiliency with Intelligence Quotient (IQ) and a variety of personality characteristics (Block & Kremen, 1996). Cross-time correlations, when adjusted for attenuation, were 0.67 and 0.51 for the ego-resiliency measure even though the sample included individuals ages 18-23 which are highly
developmental times psychologically for young adults. Block and Kremen (1996) stated that ego-resiliency is not a temporary or unique quality but an aspect of the general characteristic of the individual. These individuals are invulnerable survivors of difficult challenges who successfully adapt.

It is possible that ego-resiliency may exhibit long-term consistency and still be a state. If an intervention can be shown to change ego-resiliency in adults then the notion that ego-resiliency is a trait could be refuted or challenged. Such evidence exists in the research of Tugade and Fredrickson (2004), where the ego-resiliency of adults was improved with the introduction of positive cognitive models during a stressful situation. This information must be considered with some caution; however, since stress is not trauma. Even if ego-resiliency is a state resembling a trait due to the lack of an intervention, it is still important to know if and how trauma affects ego-resiliency.

Also of interest in the study is that those participants characterized as resilient were equally upset by the stressful situation as the less resilient participants (Tugade & Fredrickson, 2004). What distinguished the resilient participants was simply that they recovered more quickly after the stressful event had concluded.

**Summary**

Resilience is an admirable personality characteristic in that it buffers the effects of trauma, and the desire to understand resilience and to foster resiliency is of great importance. The research to date on resiliency is not clear as to whether it is a trait or a malleable state, and this distinction will have a great impact on how this topic is conceptualized, how the research conducted, and the interventions used. As previously noted, there are a limited number of studies that have researched the definition of resilience directly for adults (Klohnent al., 1996; Block & Kremen, 1996; Tugade & Fredrickson, 2004; Fredrickson, Tugade, Waugh, & Larkin 2003; Moghadam, 2006; Karaimak, 2003). Of these studies, four only looked at resilience from a single event, one of the studies used time spent in various goal related activities as the criteria for resilience, one of the studies measured before and after a stressful task, and another study looked at adversity and not trauma. None of the studies looked at lifetime occurrence of traumatic events.
Theoretical Framework of Resilience

Psychodynamic Theory

Resiliency, and specifically ego-resiliency, has a psychodynamic theoretical base (Block and Block, 1980). Freud divided the human psyche into three ego states: the id, the ego, and the super-ego (Freud, 1948; Thurschwell, 1994). This classification was the beginning of the ego’s representation and its connection to stability and mental health. In Fine’s (1962) analysis of Freud’s work, he finds that the ego is regarded as strong or weak depending on how able the person is at handling internal and external reality.

According to Block and Block (1980), the term ego-resiliency was constructed from the desire to operationalize aspects of psychoanalytic theory. Psychoanalytic theory includes the idea that a maturing person learns to monitor and control impulses. Using a strong cognitive component, humans reluctantly govern their desire for pleasure and avoidance of threat in the pursuit of psychosocial gains. The degree of impulse control or ego-control acquired can be assessed by the degree of delayed gratification, inhibited aggression, and the ability to anticipate the possible consequences of personal actions, and to make changes in those actions because of anticipated consequences.

Accommodations to previously held organizational patterns in the mind are often required when experiences and contextual demands create changing needs for an individual. The ability to tolerate and navigate the anxiety between impulse impingement and impulse expression in order to adapt is considered ego-resiliency. Block and Block (1980) believe the two concepts ego-control and ego-resiliency essentially contain the meaning of ego in psychoanalytic theory. Ego includes motivational control and adaptation to the environment as two enduring structural parts of the personality; ego-control and ego-resiliency.

Broaden and Build Theory of Emotions

The question ‘How does resilience work?’ has been answered theoretically by the Broaden and Build theory of positive emotions created by Barbara Fredrickson and highlighted
by Tugade and Fredrickson (2004). The theory states that positive emotions (including interest, contentment, love, and joy) broaden the thought-action repertoire, thus giving individuals more alternatives for building resources physically, intellectually, and socially. There are fewer positive than negative emotions, and positive emotions are not as differentiated as negative emotions. For example, the positive emotions all share the Duchenne smile (raised lip corners accompanied by muscle contraction around the eyes).

Prior theories of emotions have assumed that each emotion is associated with a specific urge to act in a particular way (Fredrickson, 1998). Fear is associated with the urge to escape, anger with the urge to attack, guilt with the urge to make amends, and disgust with the urge to expel. Positive emotions have not only been linked with the urge to approach others and with creative actions, but with inactivity as well, suggesting that prior theories on emotion do not fit for positive emotions.

Interest, which is one of the positive emotions, includes openness to new ideas and experiences, and has been said to broaden one’s perspectives (Fredrickson, 1998). It has also been said that contentment broadens a person’s sense of self and worldview, love strengthens social bonds and builds attachments, and joy has been found to precede playful activity. Each of these positive emotions have been found to build lasting physical, intellectual, and social skills that can be utilized at a later time. So although it is environmentally adaptive for negative emotions to narrow the thought-action repertoire for survival from threats, experiencing positive emotions helps to broaden and build resources that are more durable than the fleeting emotions that led to their creation.

Positive emotions have been challenging to study in that they do not have an easily identifiable autonomic response other than the respiratory change that occurs during laughter (Fredrickson, 1998). There is also some evidence that positive emotions reduce the activity of the amygdala (Echterling, Presbury, & McKee, 2005). Other evidence to support the broaden and build theory of positive emotions includes several studies conducted by Isen and colleagues (see Fredrickson, 1998) and those by Tugade and Fredrickson (2004) that found that positive emotions assisted in emotional regulation. They demonstrated that the expression of positive emotions during a stressful event helped moderate negative emotions. They also found that the ability to discriminate between emotions is a helpful skill in regulating them. In a study conducted following the terrorist attacks on the United States of America September 11, 2001,
prospective and follow-up data found that positive emotions such as interest, love, and gratitude protected resilient individuals from depression and encouraged psychological growth (Fredrickson, Tugade, Waugh, & Larkin (2003).
CHAPTER 2
LITERATURE REVIEW AND THEORETICAL FRAMEWORK OF TRAUMA

Review of Trauma Literature

Trauma, as a concept, came into the awareness of the general population with the return of World War I soldiers suffering from “shell shock” and later again following the end of World War II and the Vietnam War. Some of the events witnessed, experienced, and perpetrated were so horrific that the individuals involved showed symptoms of extreme mental, emotional, and physical dysfunction. It became obvious that when ordinary individuals were in life threatening situations, they were vulnerable to becoming traumatized by that event.

It is well documented in the scientific literature that traumatic events can create symptoms of Posttraumatic Stress Disorder (PTSD) (*DSM-IV-TR*; American Psychiatric Association, 2000). The closer, more prolonged and more severe a traumatic event, the more likely the person exposed will exhibit symptoms of PTSD. According to Perry (1997), the intensity and frequency of traumatic events help determine whether the person will internalize the traumatic event. Also, the unpredictability of the threat, proximity to the threat, how real the threat is, and the degree to which the threat of loss of limb or body is present all impact the internalization of the traumatic event.

According to the *Diagnostic and Statistical Manual of Mental Disorders* (*DSM-IV-TR*; American Psychiatric Association, 2000), PTSD is a group of symptoms that sometimes follow “exposure to an extreme traumatic stressor” (p. 463). These stressors include experiencing, witnessing, or learning about actual or threatened death or injury. Symptoms must also include “intense fear, helplessness or horror” (p. 463) and a re-experiencing of the event in some way. There must also be an avoidance of stimuli related to the traumatic event, emotional numbing, and symptoms of increased arousal. PTSD symptoms must last more than 1 month and cause significant impairment. Those who experience dissociation during trauma have shown significantly worse outcomes (Wolfe & Kimberling, 1997), as has been documented with female childhood, incestuous sexual abuse survivors.
Other authors have found that many events are considered traumatic to an individual. According to Aguilera (1994), there are typical maturational crises that take place in infancy and early childhood, preschool, pre-puberty, adolescence, young adulthood, adulthood, late adulthood, and old age that are traumatic to some. Also, there are situational crises that include premature birth, child abuse, status and role change, abortion, rape, physical illness, Alzheimer’s disease, elder abuse, chronic psychiatric conditions, spousal battering, divorce, substance abuse, suicide, the death process, and grief. According to Moghadam, (2006), the stressfulness of an experience is dependent on the overall outlook on life as well as the unique appraisal of the immediate circumstance of the person who has experienced the trauma. Individual factors then, such as optimism or pessimism, play a role in individual outcomes.

Echterling, Presbury, and McKee (2005) have noted that the Greek word for crisis refers to a turning point. They have also differentiated crises from traumatic events, and have noted that although traumas are crises, not all crises are traumas. They define a trauma as “a serious physical or psychological injury that has resulted from a threatening, terrifying, or horrifying experience” (p.7).

In a study of 1,000 men and women, 40% of participants reported a traumatic event in the last three years (Levine, 1997). In another study of a large urban community sample of 1,007, 21-30 year old members of a health maintenance organization, it was found that 39% of participants had experienced a traumatic stressor with 24% of those participants meeting the criteria for PTSD (Wolfe & Kimberling, 1997). In an epidemiological study of 1,000 Americans, Echterling, Presbury, and McKee (2005) reported that 69% of participants had experienced at least one “extremely traumatic event” (p.11). Another study found a lifetime prevalence rate of PTSD to be 12%. However, the American Psychiatric Association reported lifetime prevalence of PTSD in community samples to be 8% (4th ed.; DSM-IV-TR, 2000).

Chronic PTSD (symptoms that lasted more than one year) have been found to be associated with comorbid anxiety or affective disorders, increased severity of symptoms, and increased medical problems (Wolfe & Kimberling, 1997). Comorbid disorders most commonly associated with PTSD are depression and dysthymia. Substance abuse and borderline personality disorder also commonly co-occur with PTSD. Up to one third of those with a diagnosis of borderline personality disorder also meet the criteria for PTSD, as did 25% percent
of those with a substance abuse diagnosis. Causal relationships between diagnoses are difficult to ascertain.

Strong correlations have been found between stressful events and poor health, and especially for those exposed to physical assault, criminal victimization, and sexual assault (Wolfe & Kimberling, 1997). Both self-report measures and laboratory in vivo stressors have shown decreased immunocompetence when compared to control groups. Female physical assault survivors report more illnesses and twice as many reproductive problems. Also, after a year from the time of having been sexually assaulted, victims continued to report headaches, allergies, nausea, skin problems, and gynecological issues. Both male and female military personnel with PTSD have reported more physical problems.

Age and Gender Related Literature

According to Perry (1997), age (older being better) and other protective factors play a role in the response to traumatic situations. Turner and Avison (2003) have reported that young adults have significantly higher levels of social stress than older adults. Research has found the best predictors of PTSD in children are childhood abuse and the total number of stressors a child has experienced (Wolfe & Kimberling, 1997). According to child abuse data from 19 states, risk factors for such abuse include ethnicity, age, and family income. Unfortunately, emergency room personnel have been shown significantly less likely to report the suspicions of child abuse to girls and to those from the middle class, which may confound the results derived from such information. It has also been noted that females that come from dysfunctional family environments often show more distress and have more psychiatric disorders, especially dissociation following traumatic events.

In a study conducted two years after the Buffalo Creek Dam collapse, 37% of the child participants met the criteria for PTSD (Wolfe & Kimberling, 1997). The greatest predictors of this diagnosis were being younger in age, being female, experiencing threat of life, and parental psychopathology.

Childhood sexual abuse has been found to be a significant predictor of adult sexual abuse (Wolfe & Kimberling, 1997). This relationship between early exposures to trauma as a risk factor for adult exposure complicates the study of PTSD, as does the common methodological
issue of lax accounting for exposure to multiple stressors. Another related issue is the propensity of victims of trauma to compulsively re-enact the traumatic experience as a way of working through the event.

According to Wolfe and Kimberling (1997), females were four times more likely to develop chronic PTSD than males. Risk factors were identified as early separation from parents, family history of anxiety disorders or antisocial personality, premorbid anxiety or depression, and “neurotic style” (p.194). Other studies show being female and cocaine or opiate use to be two strong predictors of traumatic exposure and PTSD rates. Another study of over 1,000 ethnically diverse, urban southerners of various ages found sex differences to exposure and traumatic stress. Females were more likely to have suffered from sexual assault, which yielded the highest rates of PTSD. Men were more likely to have had motor vehicle accidents, been physically assaulted, and have combat exposure, which gave males greater overall exposure to trauma but lower rates of PTSD overall. It has also been reported that females have shown poorer recovery from natural and other disasters. However, long-term data from the National Vietnam Veterans Readjustment Study found very few differences in lifetime prevalence between male and female veterans with PTSD symptoms.

The National Women’s Study used random digit dialing to sample 4,008 women in order to assess rates of exposure to trauma (Wolfe & Kimberling, 1997). There study showed a 69% lifetime exposure rate, with 36% indicating exposure to aggravated sexual assault, or the homicide of a close family member or friend. Lifetime PTSD rates were 12.3%. The lifetime PTSD rate was associated higher with survivors of crime related traumas. Experiences that were life threatening or potentially physically injurious were the strongest risk factors for a PTSD diagnosis. Many studies have also shown that PTSD rates following rape are initially more than 90%, and that those rates drop in half after three months following the traumatic event. Although psychiatric symptoms were not found to be associated with high crime exposure, preexisting symptoms of depression for those with high crime exposure were more likely to experience PTSD.

Domestic violence is also highly correlated with PTSD (Wolfe & Kimberling, 1997). In one study, 47% of battered women at a women’s shelter met the criteria for PTSD. Thirty seven percent who met the criteria for PTSD also met the criteria for depression. Multiple researchers have found as much as 73% of female childhood sexual abuse victims meet the criteria for PTSD
at some point in their lives, often with delayed onset. A history of female childhood sexual abuse is highly associated with symptoms of dissociation, anxiety, rage, re-victimization, insomnia, suicidality, and substance abuse.

Physiological responses to laboratory induced stress in nonclinical samples have provided information of interest in relation to sex differences in samples (Wolfe & Kimberling, 1997). Animal studies using rats have gathered evidence to create theories that estrogen lowers thresholds to stress and that testosterone may buffer responses to aversive stimuli. Males also tend to display more vascular changes than females in response to stress, as evidenced by increases in blood pressure in response to stress. Females tend to exhibit more cardiac symptoms, such as increased heart rate. Postmenopausal women however, show increases in both cardiac and vascular symptoms, increasing the evidence that a reduction in hormones can increase stress reactive symptoms. Some data has suggested that physiological reactivity to traumatic events is an indicator of future PTSD diagnosis and severity. Studies are beginning to assess stress induced neuroendocrine changes along the hypothalmic-pituitary-adrenal axis. Preliminary data suggests that childhood PTSD effects critical biological development at puberty and may have effects that last a lifetime.

Women also tend to blame themselves following traumatic experiences, which is reflective of a cognitive style that is correlated with worse outcomes (Wolfe & Kimberling, 1997). Also, the thought of being permanently different following trauma can contribute to social withdrawal, resulting in alienation and entrenchment of self-blaming attributions. Since social support has been observed as a buffer to the harmful effects of stress, this is of particular importance. Male Vietnam War veterans have been found to receive less marital support when they experience PTSD symptoms of emotional numbing, irritability, and angry outbursts. When women manifest these symptoms they face even more social isolation because such symptoms are inconsistent with their roles and are seen as socially undesirable. Rage can also manifest itself through self-destructive behavior and self-injury. Sometimes the family members of those who have experienced trauma are less supportive because they are experiencing secondary traumatization, are very angry at the perpetrators or blame the victim of the traumatic event. Community support for these issues is also lacking. For example, in instances of work-based sexual harassment the one harassed may end up leaving the job and then subsequently lose his or
her social support. In instances of spouse abuse, the abusive partner may take the social support with them following the dissolution of the relationship.

Race Related Literature

Psychometric testing on PTSD assessments has been most representative of African Americans and Whites. However, greater PTSD among African American, American Indians, and Asian/Pacific Islander has been observed and attributed to greater exposure to traumatic events (Reyes, Elhai, & Ford, 2008). Latinos have shown increased symptoms of PTSD even with equal amounts of exposure compared to other ethnic groups. A propensity for dissociation and avoidant coping mechanisms may explain this difference. Japanese Americans appear to have lower rates of PTSD than Whites.

In a comparison study of 899 men and women from African American ancestry and non-Hispanic white ancestry, women reported more exposure to recent stressful events, whereas men reported more major traumatic events, witnessing violence, and more discrimination stress (Turner & Avison, 2003). The study found that African American women often experience more social stress than African American men. This may be due to societal gender roles.

In a three-year longitudinal study of 1,803 sixth graders from the Miami-Dade public school system with equal amounts of individuals from four racial groups, Turner and Avison (2003) found no differences in the number of traumatic events experienced by any one group. Their study used a checklist of traumatic events that was partially created by having 50 high school and college students answer the question “What is the worst thing that ever happened to you?” (p.493). They further defined a traumatic event as an event that implied force or coercion. They did not count multiple occurrences of the same traumatic event. The study did find racial differences in all of the other stress indicators including chronic discrimination. It was also found that those of lower socioeconomic status had greater amounts of stress. Group differences in exposure to stress were explained as systematic disadvantages based on social structures that increase the stress risk for minorities and those who are seen as lower in status by society. The researchers also asserted that social contexts increase the likelihood of stressful experiences and then limit the individual’s capacity to deal with stressors.
Cumulative Effects of Trauma

There is a growing body of evidence that suggests an increased prevalence of PTSD symptomatology with an increase in the number of traumatic events experienced. Follette, Polusny, Bechtle, and Naugle (1996) found that the number of different types of victimization was significantly correlated to increased symptoms of PTSD (especially anxiety, depression, and dissociation). In a sample of 210 females from both clinical agencies and a community sample from a western state university, women who reported childhood sexual abuse and sexual revictimization as adults scored higher on the Trauma Symptom Checklist. Symptoms were more severe from those in the clinical sample than the nonclinical participants; however, almost 40% of the nonclinical sample reported childhood sexual abuse and a little more than 40% reported physical abuse by a partner. For battered women, the severity and frequency of violence was significantly associated with PTSD symptoms and diagnosis. The majority of the women in this study were in her twenties with a range of 17-52, 86% were Caucasian and two thirds of them were single and had at least some college education. Seventy three percent reported one or more type of victimization, 49% had a history of childhood sexual abuse, 17% reported sexual assault as an adult, and 55% were physically abused by a partner. Women did not appear to habituate to repeated violent experiences, but showed more PTSD symptoms following additional instances of traumatic experiences.

Survivors of victimization often have experienced a series of events in which they have been exploited by others in one form or another (Eckberg, 2000). In a review of 90 empirical studies concerning sexual revictimization (Classen, Palesh, & Aggarwal, 2005), prevalence studies indicated that two thirds of individuals who are sexually victimized are revictimized. More than 30 studies found childhood sexual abuse to be a predictive factor in adult sexual revictimization. Five of the studies compared various groups of victims and found that women who are revictimized exhibit more symptoms of PTSD. Another group of studies showed that women who were sexually revictimized were more likely to report childhood onset of PTSD symptoms and were more likely to have a current PTSD diagnosis and a greater lifetime prevalence of the disorder. One study found that revictimization created more symptoms of PTSD but the severity of the abuse was more predictive of PTSD than revictimization. Related studies found adults who were retraumatized by rape suffered more anxiety compared to those
raped once. Complicating factors include the relationship between dissociation, a symptom of PTSD, and increased victimization. Victims of multiple offenders (which also indicated multiple traumas) were more likely to show greater dissociative symptoms possibly leading to a vulnerability to more abuse. One study found the arousal symptoms of PTSD to be protective in women who have experienced revictimization. The women were more sensitive and vigilant to cues of threat. Other factors that can be consequences of previous abuse or independent risk factors include alcohol and substance use. Gay men who have been sexually revictimized have been shown to use more tobacco, cocaine, and methamphetamine following abuse while substance use in women has been predictive of revictimization.

Multiple exposures to traumatic events are associated with increased symptomatology of PTSD (Reyes, Elhai, & Ford, 2008). The literature sometimes refers to this phenomenon as retraumatization which is said to occur when symptoms of PTSD are intensified following at least a second exposure to a traumatic event. These traumatic events come in many forms as opposed to revictimization which refers to interpersonal violence. Poverty is also associated with more traumatic event exposure.

Individuals who experience one traumatic event are at greater risk of encountering another event, and those who develop PTSD following exposure are at an even greater risk for experiencing more traumatic events as well as increased severity of PTSD symptoms (Anestis, 2010). Re-experiencing PTSD symptoms are the strongest predictors of experiencing more traumas and for suicidal ideations. Hyperarousal symptoms were highly associated with an increase in interpersonal violence as seen in a study of 2,863 women in a longitudinal telephone-based survey. Since PTSD changes attention and cue evaluation, sufferers were less able to evaluate their environments effectively. If threat seemed omnipresent, it was difficult for the women to assess actual danger from the internal arousal that resulted from previous traumatic exposure. If the individual dissociated, the chance of exposure increased as well.

There is said to be a dose-response to trauma in that the greater the dose of trauma, the greater it’s damaging effects and the likelihood of PTSD (Allen, 1995). Dosage increases with the amount of traumas and repeated traumas. Allen describes a priming process resulting in PTSD in which a gradual accumulation of stress hormones and memory networks combine like kindling to create intrusive memories, a hallmark of PTSD. With each recall of a traumatic
memory, stress hormones are released that strengthen the memory so that it is more likely to intrude again releasing more stress hormones, on and on.

Repeated exposures to stressors that are traumatic to an individual over a period of time in a specific context are sometimes called chronic traumatization (Kaysen, Resick, & Wise, 2003). This type of traumatic context has been associated with higher levels of PTSD symptoms and is often seen in combat soldiers, victims of childhood sexual abuse, and victims of domestic violence. Traumatic events are sometimes viewed as the time from the onset of the threat until the cessation of the threat, but the times in between can create continual fear for those worried about the next unpredictable dangerous incident. In domestic violence, psychological abuse and stalking behavior were associated with more symptoms of PTSD. Repeated exposure to war increased the diagnosis of PTSD for soldiers and increased combat stress reactions linearly. For a group of Israeli soldiers, the rate for those who participated in one war was 57%, for two wars, it was 67%, and for three wars, it was 83%. The longer the time spent in a combat zone, the more PTSD symptoms were reported and the more persistent those symptoms were.

Sometimes repeated exposures appear to be voluntary when someone who has endured a specific traumatic experience will pursue work in situations reminiscent of the original trauma (van der Kolk, 1987). This is often called reenactment and is seen as a compulsive urge by the traumatized individual to gain mastery over what was once unpredictable. Instead of feeling helpless, they try to feel omnipotent by controlling their own exposure to the traumatic events voluntarily. This may also be an attempt to release the arousal energy the individual still feels long after the original traumatic event is over. Unfortunately, these repeated events often lead to greater PTSD symptoms including chronic hyperarousal, intrusive re-experiencing, and sometimes identification with the aggressor.

PTSD is an anxiety disorder, and some evidence reveals increased symptoms of anxiety resulting from repeated traumas in community samples during wartime. In Somer, Keinan, and Carmil (1996), thirty-one patients being treated for anxiety disorders were interviewed along with 31 controls within two hours after each of two Iraqi missile attacks on Israel during the Gulf war. With an astonishing initial response rate of 100% and a follow-up rate of 87% for the anxiety patient group and 97% for the control group, subjects were asked 20 questions assessing anxiety, coping styles, and level of pessimism. Both the anxiety patients and the control subjects responded to the first missile blast in similar ways, but the patients with anxiety disorders were
more likely to exhibit their initial levels of anxiety and pessimism following the second missile bombardment than the control group who appeared to have adapted better. The patients with anxiety disorders had been trained for ten months on average to use cognitive-behavioral tactics for self-calming, while the control subjects were more likely to cope with the stress through social interactions and physical actions aimed at helping themselves and others. This study leads to more unanswered questions. For example, are people more likely to develop PTSD because they have stronger emotions or because they tend to focus more on their internal states rather than problem solving behaviors?

Research for PTSD and multiple traumas could be improved with more consistent diagnosis. For example, in a study of repeated traumatization that included sexual assault Cloitre, Tardiff, Marzuk, Leon, and Portera (1996), found that among 409 consecutive female inpatient psychiatric admissions between the ages of 18 and 59, none of them were given a primary diagnosis of PTSD and only two of them were given PTSD as a secondary diagnosis even though they presented with chronic PTSD symptoms. Forty five percent of the sample reported childhood abuse and 22% reported adult sexual assault in interview. Fifteen percent reported physicals abuse only, 12 % reported sexual abuse only and 19% reported both types of abuse. They also found adult sexual assault was reported at higher rates among those with a history of childhood physical abuse (36%) or both physical and sexual abuse (51%) than those with sexual abuse only (13%).

Summary

Many people are exposed to traumatic events, and symptoms of posttraumatic stress disorder develop following traumatic events in some cases. Who becomes traumatized is a complicated question. The type of event, how unexpected the event was, the person’s proximity to the event physically or emotionally, the intensity of the event, how dangerous the event was, how horrific it was, how out of control the person feels, and the length of time of the event all impact the event severity. Furthermore, several factors make a person more likely to suffer including co-morbid psychological diagnoses, childhood exposure to trauma, being female, and lack of social support. PTSD is a complicated disorder that can damage health in many ways.
Multiple exposures increase risk of developing PTSD and also increase the severity of PTSD symptoms. Few researchers have looked at the effects of multiple traumas over the duration of a lifetime and even fewer have looked at multiple types of trauma. As Wolfe and Kimberling (1997) have stated, “Little research to date has addressed differential rates of multiple trauma in males and females or levels of PTSD symptoms following multiple rather than single events” (p. 202). Therefore, this study proposes to look at the number and severity of traumatic events as they have been experienced by respondents during their lifetime.

Theoretical Framework of Trauma

Crisis Theory

Crisis theory must be considered when writing about trauma. Crisis theory is the basis for crisis intervention, which is one of the most widely recognized treatments for people who have experienced trauma (Aguilera, 1994). Crisis theory assumes that all persons live in a state of emotional equilibrium and when the balance is disrupted, a striving to regain homeostasis will occur. Once a crisis has occurred, survivors engage in problem-solving activities to regain homeostasis (Figley, 1989). Thus, the theoretical model that has evolved from crisis theory accounts for the general process of recovery and is applicable to the response of any traumatic event. Crisis resolution includes a restoration of equilibrium, cognitive mastery of the situation, and new coping methods that can be utilized in the future as needed (Roberts, 2000).

Prior to the crisis, each individual has a personal balance of cognitive and affective states (Burgess & Baldwin, 1981). Usually, the crisis creates an imbalance with greater emotional expression and decreased cognitive functioning. The outcome of the crisis will determine the type of lasting equilibrium that will emerge and whether it will be a healthy or unhealthy state (Caplan, 1974). The individual must either solve their problem or adapt to its non-resolution (Aguilera, 1994). In either case, a new state of equilibrium develops. Positive outcomes are related to the type of stress, ego strength, and emotional and task-oriented assistance received from others (Caplan, 1974). The family of the person in crisis can be helpful in mediating stress.
or may scapegoat or extrude the troubled member thus making matters worse for the individual but maintain stabilization for the family system (Langsley & Kaplan, 1968). As a result of being in crisis, some individuals become preoccupied with precipitous events and memories of similar problems in the past (Caplan, 1974).

According to Caplan (1974), “the upset of a crisis is caused when the person is confronted by an important life problem from which he cannot escape and which he cannot solve in a short time in his usual way” (p. 201). Roberts (2000) writes that a crisis is when a seemingly insurmountable obstacle to a life goal needs to be faced but customary coping patterns aren’t working. Langsley and Kaplan (1968) describe crisis as a struggle to master an upsetting situation with which he or she is presently unable to cope. According to Echterling, Presbury, and McKee (2005), “people are in crisis at the precise moment when their present is intolerable and their future seems grim” (p. 123). Traumatic stress crises are emotionally overwhelming crises that are externally imposed by uncontrollable and unexpected events ((Burgess & Baldwin, 1981).

According to Aguilera (1994), the crisis is the psychological response to the event, not the event itself. It is the individual’s perception of the event and resultant upset that make up the crisis (Roberts, 2000). In a crisis, the usual pattern of functioning becomes disorganized, resulting in emotional disturbance, confusion, and ineffectiveness (Caplan, 1974).

The first research related to crisis theory occurred in 1944 when Eric Lindemann and his colleagues wrote a clinical report on the psychological symptoms of survivors from the 1942 Coconut Grove fire in Boston in (Aguilera, 1994). This report was instrumental in the evolution of crisis theory because it was the first to identify the stages of grief that survivors of traumatic events experience as they recover from the upsetting incident. Even now, Burgess and Baldwin (1981) claim that every emotional crisis is a loss or includes the anticipation of a loss.

Much earlier, Hippocrates wrote about crisis as a sudden state that gravely endangered life (Roberts, 2000). Also, in 1906 there was a suicide prevention center created in New York City to help those in crisis. During World War II in the early 1940’s it was learned that brief periods of rest, tranquilization, or the releasing of tension by recalling and expressing painful experiences to another person resolved acute breakdowns experienced by soldiers (Aguilera & Messick, 1982).
Erik Erikson and others who have developed Freud’s ideas of maturational stages have also identified some crises as responses to developmental tasks that need to be mastered as part of the natural lifecycle (Aguilera, 1994). Burgess and Baldwin (1981) suggest identifying and conceptualizing the unresolved developmental issue with the client to assist them in its resolution. They further claim that crises are normative experiences in the well adjusted that have no relationship to psychopathology unless unresolved. Roberts (2000) claims millions of people are confronted with crisis producing events each year, some developmental and others from external events. According to Caplan (1974), crises represent mental health turning points. He has identified crises as both a danger due to an increased psychological vulnerability and also as an opportunity for psychological growth (Aguilera, 1994).

Crisis may last for a period of up to 4-6 weeks until an effective method of coping is utilized (Caplan, 1974). The novel response to the crisis will then be available to call upon again in the future, effective or otherwise. Caplan believes that the way the individual handles significantly stressful situations will have far reaching effects on future mental health. Caplan also observed that people feel a greater need for help during a crisis and are more easily influenced during this time than at other times in their life. He recommends that interventions be directed toward clients at the time of acute disequilibrium in order to achieve a maximum effect.

Clients who are treated using a solution-focused/strength-based approach to crisis intervention are often assumed to be resilient (Greene, Lee, Trask, & Rheinscheld, 2000). Sometimes clients just need help identifying, enhancing, or mobilizing the strengths they already have and may already be using. The crisis intervention practitioner often asks questions that help the client notice what has worked in the past, what is working now, and to think of new strategies that may prove to be helpful in the near future. Acknowledgements and compliments for the use of strategies that are working can be very reinforcing for a client who feels overwhelmed by their challenges. Giving permission to stop doing what isn’t working can also be helpful as is looking for exceptions to the problems a client appears to continually face.

Other recent literature regarding crisis intervention acknowledges that most people are resilient, and therefore cope successfully with the inevitable crises that are typically experienced in life (Echterling, Presbury, & McKee, 2005). Furthermore, resilience can be enhanced by relationships with individuals who listen, who understand, and who validate the experience of survivors. Offering hope and optimistic visions for the future can be invaluable to those in
various states of depression following a crisis (Roberts, 2000). Helping clients acknowledge and express negative emotions as well as offering anticipatory guidance, can be useful in supporting those in need (Burgess & Baldwin, 1981). Presuming resilience can assist survivors in seeing their progress and conceptualizing a better future (Echterling, Presbury, & McKee, 2005). Learning to thrive following a crisis can bring confidence, wisdom, empathy, and feelings of closeness to others. Unresolved crises can lead to bitterness, alienation, or even death. People tend to vacillate between wanting things to go back to the way they were before the crisis and thinking of creative solutions to the new situation. This creativity is enhanced by positive emotions as reviewed earlier in this text.

Those who make contact with others are more likely to find meaning in their suffering, but this can be challenging for Americans who value strong individualism (Echterling, Presbury, & McKee, 2005). Those who overcome the desire to rely solely on themselves often find their social identity expanding during and after a crisis experience. Vivid memories are often very compelling, and therefore, motivating to talk to others and find those with similar stories. These stories are eventually integrated into the identity of individuals, groups, and communities.

Managing the strong emotions that accompany a crisis can be accomplished by making sense of them through naming the internal physiological responses, redirecting attention, reframing events in a more positive manner, and seeing things from the perspective of others who are considered to be in more difficult circumstances (Echterling, Presbury, & McKee, 2005). Also, using emotions to take action can aid in making the crisis event meaningful. When survivors of crises can identify some perceived benefit from living through the crises, they are more likely to adjust to the new circumstances in the present. Those who see the crises in the past, as temporal, and situational, are better able to envision a happy future.

Theory of Trauma Re-negotiation and Transformation

According to Levine (1997), trauma occurs when an organism is unable to resolve the impact of a life event. Traumatic events happen to everyone, even though traumatic events that are intense or ongoing like war and childhood abuse that are more likely to cause symptoms of posttraumatic stress occur less frequently. When the body senses the danger in an event, it tenses and braces itself in fear. If the body is not able to run from the danger, fight away the attacker,
or shake off the fear following immobilization, then the unused arousal will be stored and symptoms of posttraumatic stress disorder will be experienced.

According to Levine (1997), posttraumatic symptoms are unresolved physiologic responses to a perceived threat. Unresolved urges to fight can become rage and unresolved urges to run can become feelings of helplessness. Levine also proposed that trauma can be caused by ordinary events that do not create physical harm. Anytime the body freezes involuntarily in terror, mechanisms come into play in which an altered state is created where the organism will no longer feel pain. If this state is again triggered by a similar experience, dissociation may appear. Levine thinks that all responses to traumatic events are involuntary, yet our rational brain may override our instinctual urges toward resolution due to the unfavorable self-judgments and confusion that can be created by guilt about the immobilization response of the body. When instincts, emotions, and the intellect work together, an individual will have more resources with which to respond to potentially threatening experiences. Some symptoms of traumatization include “flashbacks, anxiety, panic attacks, insomnia, depression, psychosomatic complaints, lack of openness, violent unprovoked rage, and repetitive destructive behavior” (p.41). Age, health, nutrition, experience, self-confidence, and social support can help mediate the effects of a frightful event. Levine also criticizes modern cultural mores that emphasize the endurance of stress, which may add to the stigma around the processes that help people heal from trauma.
This study investigated the relationship between ego-resiliency and symptoms of posttraumatic stress disorder in a non-clinical sample of students at Florida State University. It tried to answer the questions: Do ego-resilient adults recover better than ego-brittle adults over the lifetime of accumulated traumatic events? Does ego-resiliency mediate the effects of trauma? This study tested the definition of resilience. Resilience has been studied in relation to stressful life events and adversity. By testing resilience in relation to traumatic events for this research, an additional level of rigor has been added. For purposes of this study, resilience was the independent variable. If resilience remained stable over time regardless of the amount of traumatic events experienced and if resilience was inversely related to symptoms of posttraumatic stress disorder, then the definition would have been tested and upheld. This was especially challenging since prior research states that the number and severity of traumatic events increases the likelihood of Post Traumatic Stress Disorder (Allen, 1995; Anestis, 2010; Classen et al., 2005; Cloitre et al., 1996; Dietrich, 2002; Eckberg, 2000; Follette et al., 1996; Kaysen et al., 2003; Perry, 1997; Reyes et al., 2008; Somer et al. 1996; van der Kolk, 1987).

Conceptual Framework

The conceptual framework for this study was that ego-resiliency acted like a trait as part of the “ego” identified in psychodynamic theory. Because ego-resiliency acted like a trait, it would not be affected by the amount or severity of traumatic events encountered over the lifetimes of the survey respondents. If reported definitions of ego-resiliency were valid (Block & Block, 1980; Bonanno, 2004), as ego-resiliency increased, symptoms of posttraumatic stress disorder would decrease. Also, according to prior research, as the severity of traumatic events increased, so did the likelihood that traumatized individuals would experience symptoms of posttraumatic stress disorder (Allen, 1995; Anestis, 2010; Classen et al., 2005; Cloitre et al., 1996; Dietrich, 2002; Eckberg, 2000; Follette et al., 1996; Kaysen et al., 2003; Perry, 1997;
Reyes et al., 2008; Somer et al. 1996; van der Kolk, 1987). If both of these hypotheses were accurate, then this study would compare the amount of the variance in symptoms of posttraumatic stress each of the independent variables is responsible for creating.

In the first model, there was no relationship between ego-resiliency scores and the severity of traumatic events (see figure 1). There was a negative relationship between ego-resiliency and symptoms of posttraumatic stress disorder, and there was a positive relationship between traumatic events and symptoms of posttraumatic stress disorder.

![Figure 1][1]

To clarify these relationships further, Figures 2 and 3 show the expected linear relationship between ego-resiliency and the severity of traumatic events with symptoms of posttraumatic stress disorder (see Figures 2 and 3). An alternative model will present itself if there is found to be a curvilinear relationship in which the severity of traumatic events negated ego-resiliency. If this was the case, we may be able to predict symptoms of posttraumatic stress disorder scores based on ego-resiliency scores and the severity of traumatic events. In any case, the results of this study will potentially be very beneficial for the social work profession. At the very least, this study will lay the groundwork for further theoretical understanding of resilience and trauma.

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[1]: Figure 1

*Conceptual Framework*

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Figure 2
*Expected Relationship between Ego-Resilience and PTSD Symptoms*

Figure 3
*Expected Relationship between Severity of Trauma Events and PTSD Symptoms*
Problem Statement

The procedural problem statement was to investigate the relationship between ego-resiliency, trauma, and symptoms of posttraumatic stress disorder among students from the College of Social Work at Florida State University.

Need for the Study

The results of this study will advance the social work profession by either reinforcing the definition of ego-resiliency or by clarifying its limitations. The study helps identify the limits of ego-resiliency and tests the predictive power of the Ego-Resiliency Scale. There may also be benefits for clients by appropriately focusing resources and interventions to those that need them the most. There are many interventions that have been developed to increase resiliency. Such interventions are often based on the assumption that ego-resiliency is a state and not a trait. This is an important distinction because individuals who are ego-resilient may need a different kind of support (or no support at all) as they move through a crisis while those who are ego-brittle may need different interventions to exhibit a comparable level of functioning. Also, if ego-resiliency is a trait, then it is possible that previous outcome research showed effects that were attributable to this trait instead of the interventions being studied. Alternately, if it is possible to offer preventative measures to strengthen resiliency or to more effectively enhance coping strategies following traumatic events, then this research will be part of the knowledge base that makes that information possible.

Social work education could potentially benefit from this research. If ego-resiliency is a trait, then it can help students think about their career choices differently. A person who is more ego-brittle may not want to work in difficult situations in which they are also at the greatest risk for compassion fatigue. If an ego-resiliency score is known, than this part of social work education can be individualized. For those who are more ego-brittle, additional information regarding self-care and burn-out prevention may be helpful, as would the offering of interventions to build ego-strength. Resilience as admissions criteria for the college of social work is certainly not being advocated, but it may be useful to students who desire to understand
themselves better and who may want to use this information to make more informed choices about their career satisfaction.

If the extreme of ego-resiliency is narcissism, then students who are ego-resilient may need to be assessed for narcissistic tendencies. Sensitivity training or advanced learning of utilization of empathy skills might be useful if shown to be effective. Career counseling may also be offered to highlight other career options that may be more in line with the student’s personality characteristics. The ramifications for this research have theoretical, clinical, and educational applications.

Research Questions:
1. Is there a linear relationship between ego-resiliency and symptoms of posttraumatic stress disorder? If so, to what extent does resilience predict symptoms of posttraumatic stress disorder?
2. Is there a linear relationship between ego-resiliency and the severity of traumatic events?
3. Is there a linear relationship between the severity of traumatic events and symptoms of posttraumatic stress disorder? If so, to what extent does the severity of traumatic events predict symptoms of posttraumatic stress disorder?
4. Is ego-resiliency a better predictor of symptoms of posttraumatic stress disorder than the severity of traumatic events?
5. Does ego-resiliency mediate the severity of traumatic events in terms of symptoms of posttraumatic stress disorder?

Research Hypotheses:
1. There is an inverse relationship between ego-resiliency and symptoms of posttraumatic stress disorder.
2. There is no linear relationship between ego-resiliency and the severity of traumatic events.
3. There is a positive linear relationship between the severity of traumatic events and symptoms of posttraumatic stress disorder.
4. Ego-resiliency is a better predictor of symptoms of posttraumatic stress disorder than the severity of traumatic events.
5. Ego-resiliency mediates the severity of traumatic events in terms of symptoms of posttraumatic stress disorder.
Assumptions

For the purposes of this study, it is assumed that ego-resiliency is a trait and not a state. Accordingly, scores measuring resiliency will not vary over time regardless of the amount and the severity of traumatic events experienced. It is also assumed that traumatic experiences are stressful to all who endure them regardless of ego-resiliency. It is presumed that ego-resilient individuals will “bounce back” from these experiences better than those who are ego-brittle. Finally, it is assumed that the assessments used in this survey are valid and reliable.

Method

For the purpose of the proposed research, general descriptions of the research design, sampling, measurements, data collection, and data analysis follows.

Design

This research project explored the concept of ego-resilience, was descriptive in terms of lifetime occurrences of traumatic events, and explanatory regarding the coping abilities of ego-resilient individuals who have experienced traumatic events. This research was conducted using a survey design with the individual as the unit of analysis. The research was a non-experimental correlational study. Predictor variables included ego-resiliency, the number of traumatic events experienced over the course of a lifetime, and the demographic characteristics of gender, age, and race. The outcome variables were the degree of stressfulness now about the traumatic event and two assessments that measured recovery from trauma and symptoms of posttraumatic stress disorder. The research was conducted using a survey available to the entire population of interest to increase the number of respondents. The survey was available to participants on-line through a link to Survey Monkey. The recruitment goal for this study was 250 students.

Since response rates are affected by privacy concerns, specifically how personal information is used, released to the public, kept, or disposed of (Cho & LaRose, 2002),
reassurances were included in the invitation to the survey to bolster confidence and response rates. It was crucial for the respondents to trust the anonymity and confidentiality of the research. Survey return rates from traditional surveys have declined as survey requests have become more frequent. Although e-mail surveys often have a lower return rate than other surveys, e-mail surveys that have high response rates frequently come from organizational settings like Florida State University. A study by Parker (referenced in Cho & LaRose, 2002, p.214), had an e-mail survey response rate almost double the mail rate when the e-mail came from within an organization. University sponsorship has also been shown to increases response rates.

Psychological privacy was also a factor of concern for this research. The consent form to take this proposed survey disclosed beforehand the emotional states that might be elicited from the research process (see Cho & LaRose, 2002). Informed consent has shown a small but significant effect on response rates with surveys involving sensitive information such as the survey used for this study. These concerns were amplified in on-line surveys. It was encouraging however, to note that individuals often willingly make highly personal disclosures to those they consider professionals. Separating the consent form from the survey was done in order to improve respondent confidence in anonymity (see Appendix A). Those who did not consent to the survey was not allowed access to the survey, but were sent to a thank you page instead. Due to the time cost for respondents to complete the survey and since the use of incentives has been shown to improve response rates, each respondent was awarded either a card for a free coffee latte or a $5.00 gift card for Starbucks at the completion of the survey.

Sampling

The sample for this study was a community sample because of the interest in the epidemiological aspect of identifying resilient individuals. One of the assumptions tested by this study was that resilient individuals would not display symptoms of PTSD, so a clinical sample would nullify this intention. This research was also interested in reducing the bias of PTSD diagnosis, since it is widely accepted that only a small portion of those with PTSD seek treatment (Schlenger, Fairbank, Jordan, & Caddell, 1997), and not all those who seek treatment for PTSD have some or all of the symptoms of the disorder. Also of interest was the rate of
exposure to traumatic events that social work students have encountered throughout their lifetimes. It has been established that individuals may be exposed to extreme events but not develop PTSD symptoms. Those who exhibit some symptoms of PTSD, and not only those who meet all the criteria listed in the *DSM IV-TR* (APA, 2000) for PTSD, were of interest for this study. This study, as with most research in this area, relied on self-report measures. There is some evidence that sensitive information was shared more readily on self-report measures than in interviews (Schlenger, Fairbank, Jordan, & Caddell, 1997). Research on this subject has shown that assessments in this area are not usually harmful, although some participants may experience distress. Accordingly, professional referrals were made available.

The population studied was college students who have declared majors in the College of Social Work. Once the Human Subjects Committee and the doctoral committee approved the survey, it was sent in an e-mail to a test group as part of a pilot study. After changes were made and approved again, an e-mail was sent to the Director of the BSW Program and the Director of the MSW Program for approval to distribute the survey to all students who were currently enrolled in at least one class at the College of Social Work. College students taking social work courses were recruited to participate in the study only by e-mail.

Generalization from this study was intended to be limited to students of social work. It was believed to be generalizable to national students due to national standards of social work education. Once the sample was collected, the demographic information was compared to demographic information available on College of Social Work students to test for representativeness of the sample. The demographic data from this study was expected to be similar to another study completed in 2003 on undergraduate students by Karairmak (2003). In the Karairmak study, conducted at Florida State University in 2003, there was a sample of three hundred undergraduate students enrolled in various social work courses. There were 246 female students and 54 male students who completed the survey. Their ages ranged from 18 to 58 (*M*= 23.60, *SD*=7.3). The majority of the participants were Caucasian (70 %) and the rest of the participants indicated their ethnicity as African American (19 %), Latino or Hispanic (6 %), other (3 %) and Asian (1 %) respectively. There were 36% Seniors, 47% Juniors, 15% Sophomores, and 2% Freshmen.
Measurement

The measures that were chosen to comprise the survey for this study are presented in the order they appear in the survey. The survey began with four demographic questions to determine the degree students were seeking, gender, age, and racial background. These four demographic variables were chosen primarily due to convention. As noted earlier, the literature in the areas of ego-resiliency and trauma show only slight variance with respect to demographics in the explanation of the differences in coping ability. For example, older adults tend to be slightly more resilient than those who are younger (Bonanno, 2005).

The first assessment included in the survey was the Ego-Resiliency Scale (Klohnen, 1996). It was placed first in the survey because it referred to a personality characteristic. It was hoped that this questionnaire would help the respondent begin sharing information that was unique, yet not as probing as subsequent questions about traumatic life experiences. The Ego-Resiliency Scale is a 14 item, Likert scale questionnaire with four possible responses for each item (does not apply at all, applies slightly, applies somewhat, and applies strongly).

The Ego-Resiliency Scale was created using a sample of 350 individuals (Klohnen (1996). There were an equal number of men and women in the sample. Of the participants, 198 of them were sophomores at the University of California at Berkeley, most of which were 18 to 21 years of age, with a mode of 19. The other 152 participants were from the San Francisco Bay Area with a mean age of 35 years and a standard deviation of 10.2. There were also two cross validation samples of women taken from a longitudinal study of Mills College graduates at 43 years of age and from Radcliffe College with participants at 43 and 48 years of age.

Nine experts used the California Adult Q-Set (CAQ), which is an observer based personality inventory, to describe a typical ego-resilient individual. This measure yielded an agreement level of $\alpha = .97$ (Klohnen, 1996). The CAQ requires multiple observers and is very time consuming, so it was the intent of the inventors of the Ego-Resiliency Scale to find a self-report measure that was nearly as reliable as the observer-based assessment. The ratings from the CAQ were then used to create a composite Ego-Resiliency profile from self-report items in the California Personality Inventory (CPI), which is a self-report inventory of effective interpersonal and psychological functioning. A preliminary Ego-Resiliency Scale was created, tested, and refined.
The cross validation sample of women that were given the CAQ showed alpha reliabilities of .75 for the Mills sample and .76 for the Radcliffe sample (Klohnen, 1996). When given the Ego-Resiliency Scale, the alpha coefficients were .88 and .81, respectively. The validity scores for the predictability of the Ego-Resiliency Scale and the observation-based CAQ were .62 and .59, which are very good. The literature usually finds validity scores between self-reported measures and observation-based measures to be about .40.

When the ego-resiliency scale was used with University of Michigan students and recent graduates before and after the terrorist attacks against the United States of America in 2001, the coefficient alpha was .76 in the original sample and .77 in the follow-up sample (Fredrickson, Tugade, Waugh, & Larkin, 2003). The sample used for the current research had many similarities to the sample used in this study.

Assessing exposure to traumatic events is complicated because there are many kinds of exposures that can lead to symptoms of PTSD, and each respondent may have multiple experiences that range in frequency and intensity (Schlenger, Fairbank, Jordan, & Caddell, 1997). The best assessment available became the second questionnaire in the survey, the Trauma Recovery Scale (Gentry, 2006), which was placed in the survey to identify if the respondent had been exposed to traumatic events, and if so, which traumatic events. The Trauma Recovery Scale was first created in 1995 at the West Virginia University School of Medicine. It was created for a clinical population and was used to track weekly treatment progress. The conceptual underpinning of this assessment was the understanding that posttraumatic stress disorder is more connected with the response to traumatic events than it is to the events themselves. It has also been used to assess the ongoing symptoms of posttraumatic stress disorder.

The Trauma Recovery Scale begins with a section to identify if the respondent has experienced any event that meets the criteria for a traumatic event as specified in the Diagnostic and Statistical Manual *DSM IV-TR* (American Psychiatric Association, 2000). The scale also includes a list of traumatic events that may have been experienced and an 11-item Likert scale that allows the respondent to enter a numerical percentage of agreement with the statement provided to indicate the level of coping with the traumatic events experienced. Respondents may also spatially make a mark on a line between 0% and 100% to represent that number.
The Trauma Recovery Scale was normed on a convenience sample of students at Florida State University (n = 91) and mental health professionals from the State of Oklahoma (n = 56) (Gentry, 2006). The Trauma Recovery Scale achieved a Chronbach’s alpha of .8028, with an unbiased estimate of reliability of .8685. The Trauma Recovery Scale showed convergent validity with the Impact of Events Scale at r = -.711 (n = 70) at the (.001) level of significance. The negative correlation was expected due to the Trauma Recovery Scale being solution-focused and the Impact of Events Scale being pathology focused.

The first section of this assessment was removed which asked if the respondent had experienced a traumatic event that met the criteria as defined by the Diagnostic and Statistical Manual DSM IV-TR (APA, 2000) within the context of posttraumatic stress disorder. Gentry (2006) has reported that 40% of all respondents do not claim to have experienced a traumatic event but then check listed traumatic events from the list. The definition offered only includes events in which a person felt their life was threatened. There are many examples of traumatic events that individuals experience that do not typically cause fear of death, yet are undeniably traumatic to some individuals. Grief, divorce, spousal affair, and sexual abuse are some such events. Several other possible traumatic events have been added to this checklist as a result of the qualitative portion of the pilot study and an extensive review of the literature. The inclusion of discrimination as a possible trauma came from ideas in Turner and Avison (2003).

As in the original version of this assessment, respondents were asked to check all types of events experienced as traumatic and also to write in any additional events that were not on the provided list. The purpose of listing some of the possible traumatic events is to reduce the problem of selective memory that may be part of ego-resiliency and effective coping. For this study, respondents were also asked to provide the degree of stressfulness they currently felt for each event (if it has been at least three months since the incident occurred). This response section was added from the Traumagram Questionnaire (Figley, 1989). Both authors of these assessments (Gentry and Figley) were notified of the changes, and gave their approval.

Part II of this measure was made up of questions that related to the traumatic events experienced and how the respondent has coped with those events. It used solution-focused language to assess symptoms of PTSD and was changed from the graph version to the response set “never, sometimes, often, most of the time, and all of the time” due to constraints using Survey Monkey.
The next questionnaire in the survey was the Impact of Events Scale-Revised (Weiss & Marmar, 1997). This scale has 22 items that assess functioning over the past week with regards to a previous disaster. For this study, the words “disaster” were replaced with the words “past trauma” due to the scale’s history of use with a variety of traumatic events and various populations including Vietnam War Veterans, Israeli combat soldiers, emergency service workers, firefighters, criminal victims, adults sexually abused as children, parents of children who have been sexually abused, victims of earthquakes, firestorms, floods, hurricanes, railway accidents, car accidents, rape, cancer, and other life-threatening medical conditions.

The Impact of Events Scale has also been used as a dependent measure for many treatment outcome studies on PTSD. The Impact of Events Scale is widely used in the trauma field of study (Figley, 1989) and is one of the most commonly used self-report assessments of posttraumatic stress. It has been described as the “gold standard self-report measure in trauma research” (Joseph, 2000, p.108).

The Impact of Events Scale was the first generic measure of subjective distress in response to traumatic events (Horowitz, Wilner, & Alverez, 1979), even before the creation of Post Traumatic Stress Disorder was defined by the Diagnostic and Statistic Manual III (American Psychological Association, 1980). Data collected using the Impact of Events Scale supported the case for creating PTSD as a diagnosis (Weiss & Marmar, 1997). The original version of this scale can be accessed in Horowitz, Wilner, and Alverez, (1979). This scale was created to evaluate the subjective impact of bereavement and injuries related to accidents, violence, surgery, or illness. The original sample consisted of 50 women and 16 men whose ages ranged from 20 to 75, with a mean of 34. Participants were all literate and from low and middle class families in San Francisco. The Impact of Events Scale has been widely used in response to many other serious life events (Sundin & Horowitz, 2002). The results of clinical interviews led to its initial two-factor structure labeled intrusion and avoidance as well as the wording of the items themselves (Horowitz, Wilner, & Alverez, 1979). Intrusion encompasses: unbidden thoughts and images, troubled dreams, strong pangs or waves of feelings, and repetitive behavior… Avoidance responses included ideational constriction, denial of meanings and consequences of the event, blunted sensation, behavioral inhibition or counter phobic activity, and awareness of emotional numbness. (p.210)
Sundin and Horowitz (2002) looked at the 40 most robust of 66 available studies using the Impact of Events Scale and found the scale to have excellent reliability and validity. Internal consistency included a mean (alpha) .86 for the intrusion sub-scale and .82 for avoidance. Test-retest reliabilities were better the closer the interval between tests with .87 and .79 at one week, .56 and .74 at one year, and .57 and .51 at three years.

Sundin and Horowitz (2002) have found the Impact of Events Scale to have convergent validity with observer-based diagnosis of PTSD, making it useful for identifying individuals who require psychological treatment. The Impact of Events Scale has also shown convergent validity on other measures of PTSD (Joseph, 2000). Also, its two-factor structure is stable when administered following different types of events, and it can discriminate between reactions at different times thereby aiding the therapist in the assessment of therapeutic improvement over time (Sundin & Horowitz, 2002). Validity also appears to be evident when administered at least one month after the traumatic event because high levels of intrusion and avoidance are part of normal emotional processing (Joseph, 2000). This also coincides with the criteria of PTSD (American Psychiatric Association, 2000).

The original version did not measure hyper-arousal symptoms that are included in the PTSD diagnosis in the DSM III (American Psychiatric Association, 1980). The Impact of Events Scale – Revised has been designed to correct the missing criteria (Joseph, 2000). Seven additional items were added to the original version of the scale to address hyper-arousal and to mirror the diagnostic criteria more precisely (Weiss & Marmar, 1997). Reliability data across two samples of 197 and 429 subjects were very good and very similar over two waves of assessment. Intrusion alpha coefficients were .91, .92, .87, and .87, avoidance alpha coefficients were .84, .85, .85 and .86, and hyper-arousal alpha coefficients were .90, .89, .79, and .79. Test-retest data on the two samples generated coefficients of .94 and .57 for intrusion, .89 and .51 for avoidance, and .92 and .59 for hyper-arousal. Differences were speculated to be related to a shorter interval between assessments and an increased recentness to the traumatic event. It has been observed by Horowitz, Wilner, and Alvarez (1979) that individuals from a variety of economic, educational, and cultural backgrounds have been able to use the scale and have reported that it is not too probing.

There is a built in bias for individuals who are ego-resilient to experience selective remembrance when completing this survey. There is also a limitation for those with lower
Intelligence Quotients (IQ’s). All instruments are public domain, so there were no financial obligations for their use.

Plan for Data Collection

Data collection was expected to take place at the beginning of the semester following the approval of the completed prospectus and the approval of the Florida State University human subjects committee. In accordance with human subject’s requirements, prior to participation in the study each student would sign an informed consent form. Participants would be informed of their right to discontinue participation at any time without repercussion of any kind. A pilot study was to be conducted prior to the collection of the dissertation research to test the ease of survey use and to collect data for type of incentive to be offered for dissertation research participation.

Plan for Data Analysis

SPSS software would be utilized for data analysis. Descriptive data would be gathered from the demographic portion of the survey as well as from each questionnaire. Means, standard deviations, frequency scores and categorical data would be reported. Crohnbach Alpha’s would also be collected and analyzed for each scale utilized in the survey. Correlational data would be analyzed using linear regression. Tests would be performed to examine the relationships between the predictor variables ego-resiliency and the severity of traumatic events and the dependent variable symptoms of posttraumatic stress disorder. The alpha level of significance for the statistical procedures would be set at the .05 level to control for Type 1 errors (rejecting the null hypothesis when it is true). Power was set at .90 for the linear regressions so that in 90% of samples like the one in this study would correctly reject the null hypothesis when it is false. Using the effect size of .15 (a medium level), the sample size needed was 87 (Soper, 2008). The confidence interval for this study was calculated using Raosoft’s on-line calculator (Raosoft, 2008). For a 95% confidence level with a 5% margin of error, a population of 700, and a 50% response distribution, the recommended sample size was 249. The use of a Tukey or Bonferoni correction would only be utilized if the number of regression tests requires the adjustment.
Delimitations

Given the purpose and scope of this study, there were a number of delimitations. Participants for this study were a convenience sample of college students from the College of Social Work at Florida State University considered at a single point in time. Since the data collected was not prospective, cause and effect between correlated variables cannot be identified. This sample was not taken or compared to a clinical setting where PTSD diagnoses were likely, and since each respondent was a college student, his or her level of intelligence and functioning was assumed to be fairly high. Participation was also completely voluntary, so it was possible that non-volunteers would have responded differently than those who volunteered. Results of this study were not generalizable to children, the general adult population, or to college students from other majors. If the sample proved to be representative of the population, there would be possible generalizable results for degree program, race, and age.

All scales used in this study were self-report. No validity checks were included in this study to verify that respondent’s answers were correct. The time and personnel to complete such research was beyond the purview of this dissertation. Similarly, a longitudinal study would have been preferable but was impractical. The choice to utilize a predominately quantitative approach to this subject may have limited the depth of the conclusions that were drawn about the interactions of the variables being tested. Literature was limited to the previous twenty years except for seminal works that were necessary to describe the evolution of focal concepts. Literature was also limited to studies that focused on adults, except as needed for historical perspective and as an aspect of age when used as an independent variable.

Survey researchers have long acknowledged the possibility that response bias may have effected survey results. At its worst, response bias could account for the differences found between the independent and dependent variables. One concern is the possibility that the respondents need for social approval would affect responses (Gove & Geerken, 2002). Some respondents may also express general yeasaying or naysaying. Individuals may also have been influenced by their perception of the desirability or undesirability of the trait being assessed. That is why this study never mentioned the word resilience in the survey invitation nor on the survey itself.
Encouragingly, Gove and Geerken (2002) researched the effects from these three forms of response bias on the pattern of relationships between frequently used demographic variables as well as the mental health variables of self-esteem, positive affect, and psychiatric symptoms. They found that response bias variables had little impact on the pattern of relationships and that their results between demographic variables and mental health variables were consistent with previously reported relationships.

It is also encouraging that the Ego-resiliency Scale (Klohnen, 1996) has high reliability when compared to observer-based assessments of ego-resiliency. This led to less concern with response bias for this assessment. The Trauma Recovery Scale (Gentry, 2006) however, was a bias concern for two opposing reasons. First, individuals who are ego-resilient may not remember their past traumatic experiences while taking the assessment or may downplay the affect those incidents have had on them. It is for this reason that the list of possible traumatic events was provided, as it was intended to stimulate the memories of the respondents.

On the other hand, some individuals may have seen the list and overestimated how affected their lives were by events that may or may not have been traumatic to them. False self-reporting is of particular concern when assessing exposure to traumatic events (Schlenger, Fairbank, Jordan, & Caddell, 1997). Both false positives and false negatives have been reported by survey respondents in past PTSD research. For example, one Vietnam War veteran, who had spent most of his time in the military in a military prison in Virginia, reported that he had served five tours to Vietnam and was exposed to heavy combat during each tour. Also, 38% out of 129 adult women who had documented childhood sexual abuse denied the incident even when the interviewer described specific details of the abuse. Researchers would be unable to corroborate the responses to this survey.

It was also possible that the description of exposure to traumatic events would have stimulated a reaction in the individual (Schlenger, Fairbank, Jordan, & Caddell, 1997). The concern with the Trauma Recovery Scale (Gentry, 2006) was both under reporting of traumatic events and the exaggerations of traumatic events and their affects. It was hoped that these opposing biases would nullify one another, but the extent to which bias has affected the results of this measure is unknown. It may have been that appearing resilient or victimized was appealing to certain individuals and this may be captured with the constructs ego-resilience and ego-brittleness which were ultimately part of what this research was trying to capture.
The lack of clarity in definitions included in a survey can be problematic to research results (Deming, 2002). The definition of most concern in this survey is the concept of traumatic events. Clearly, what is traumatic varies from one individual to another. Gentry’s research (Gentry, 2006) has indicated that 40% of those who did not check the given definition in the DSM IV-TR (APA, 1994) for traumatic events went on to check such events that could be characteristic of experiences that precede posttraumatic stress. That is why a part of the Traumagram Questionnaire (Figley, 1989) that allowed survey respondents to report his or her level of distress was added. Listing possible traumatic events was meant to help resilient individuals remember traumatic events; however, it could also have been seen as leading the respondents to check all events experienced instead of just those that were traumatic. The second half of the Trauma Recovery Scale (Gentry, 2006) and the Impact of Events-Revised was also placed in this survey to gather more information regarding the extent of the amount of trauma experienced by the respondent. Due to the ambiguity in current research concerning whether a trauma must include the fear of death or not, it was virtually certain that respondents would define the term traumatic events differently than the definition provided in the DSM IV-TR (APA, 2000). Completing a pilot study before the larger sample also provided feedback concerning respondents understanding of the questions being asked.

Another common problem in research is non-response (Deming, 2002). It is so difficult to know why a prospective respondent will not take a survey, complete the survey, or why someone will not respond to a particular question. Attempts were made to keep this survey short in length so it would not appear too formidable. Since the survey asked for sensitive and potentially upsetting information, non-response was a significant concern. A qualitative question near the end of the survey was added to give respondents a chance to explain his or her personal traumas. Hopefully, those who did not respond to any particular item or section could explain their reticence by responding to that question. Concerns of non-response also prompted the use of an incentive which was used to encourage completion of the survey.

Turner and Avison (2003) have claimed that life event checklists underestimate differences between individuals of African American descent and non-Hispanic whites. Such checklists also tend to underestimate the stress of those with lower economic status. There was concern that the checklists used for this study would miss the extent of the lifetime accumulation of stress from discrimination and other adversities unique to those of minority status.
Discrimination was added to the list of traumas to help with this particular concern. Also, giving each event an equal weight, although conventional, did not account for the differences in stress that events have provoked.

Other errors in survey use include sampling errors and those of interpretation (Deming, 2002). Representativeness was assessed to reduce sampling errors. Processing errors were reduced by the use of Survey Monkey software. Interpretation errors should have been minimized by the involvement of the dissertation committee members’ review and evaluation of this researcher’s activities.
CHAPTER 4
DATA COLLECTION AND ANALYSIS

Data Collection

The dissertation prospectus was approved May 20, 2008 with the understanding that a list of changes would be incorporated into the final dissertation. The rest of that semester was spent making those changes and in the Fall 2008 the dissertation survey was constructed using Survey Monkey. The response set for one of the assessments was revised in order to fit into the Survey Monkey options. The list of traumas in the Trauma Recovery Scale (Gentry, 2006) was edited to the extent that it was no longer possible to get a number for multiple traumas in the same category. Also, the ability to get a subjective level of distress score for the time the trauma occurred was lost. A subjective level of distress score for how the respondent felt about the trauma the week of the survey though was retained. According to Gilbert (2006), memories of how a person has felt in the past are extremely unreliable, and with approval of Dr. Thyer, that question of the assessment was deleted. Survey Monkey also did not have a way of using the graph in the Trauma Recovery Scale (Gentry, 2006), so a Likert response set was created similar to the Impact of Events Scale-Revised (Weiss & Marmar, 1997). Part C sections 8 and 9 of the Traumagram Questionnaire (Figley, 1989) were also removed as well as the two questions about the survey itself due to the inability of the qualitative questions to assist in answering the research questions specified in this research project and in order to limit survey completion time.

Following approval by the Institutional Review Board on October 23, 2008, (see Appendix B) a pilot study was conducted with the students in one of Dr. Bruce Thyer’s Social Work classes for M.S.W. students. The pilot study can be seen in its entirety in Appendix C. All 26 of the students were offered an extra credit point for their course, and 26 responded to the offer and completed the on-line survey. The feedback received was very helpful in making improvements to the survey and in making it easier to use. Also, the students voted on the incentive they preferred to see offered. The students requested free coffee, and the owners of Brew & Bean committed to giving each student a free coffee latte for completing the survey.
Students were able to go to the Social Work Office in the University Center to pick up cards for free coffee lattes at Brew & Bean on Pensacola Street in Tallahassee.

The revised survey used in the dissertation research can be viewed in its entirety in Appendix D and the approval from the Institutional Review Board from February 5, 2009 can be seen in Appendix E. Following this approval, the assistant to the Director of the Master’s Program provided information that 40% of the Master’s students live outside the Tallahassee area. Since the incentive would not be feasible for the students living out of town, it was decided to offer $5.00 Starbucks gift cards at the researcher’s expense for each student who completed the survey that lived outside the Tallahassee area. The out-of-town students would be required to email their names and home addresses. Two separate email requests were created for the local students and the out-of-town students that were customized to reflect the different incentives (see Appendix F, G, H and I). Each email request contained a link to the survey using Survey Monkey. In the email request, the out-of-town students were reassured that there was no way of connecting survey responses with names and addresses.

The one sentence change added to the survey to reflect the different incentives required a new approval by the Institutional review Board which was sought and received (see Appendix J). The first email invitation was sent on April 23, 2009. The College of Social Work administrative staff sent out the invitations as they would not allow the author to have the email addresses of all other social work students. Unfortunately, the bachelor students only received the first two invitations to take the survey while most of the master’s students received all three. The master’s students from Panama City only received the last invitation.

Data Analysis

The population of interest was the student body in the college of social work. According to the information obtained from the assistant to the administrators of the undergraduates and graduate students, there were 291 undergraduate students, of which 87% were female and 13% were male, between the ages of 18 and 55 with a mean age of 23.14. The College of Social Work at Florida State University has a uniquely diverse population with a racial composite of 63% White, 24% Black, 10% Hispanic, and 2% American Indian with less than 1% Pacific Islanders and Asian. There were also 418 students seeking a master’s degree, of which 88% female 12%
male, between the ages of 20 and 63 with a mean age of 32.42. The racial composite was 76% White, 16% Black, 4% Hispanic, 1% Asian, American Indian and also 1% race not reported. As a whole, the 709 students were 87% female, 13% male, aged 18-63 with a mean age of 28.61. They were 71% White, 19% Black, 6% Hispanic, and 1% Asian, American Indian, with less than 1% Pacific, and 1% not reported.

The goal of collection was 250 responses. Overall, 253 responses were obtained by June 6, 2009. Eleven response sets were deleted due to insufficient information. One participant did not consent to the survey, 2 participants only provided consent to the survey but no other data, and 8 participants provided demographic data only. The eight participants who provided demographic data only included a white male, a 20-year-old white female BSW student, a 21-year-old white female BSW student, a 22-year-old white female MSW student, a 24-year-old white female MSW student, a 27-year-old white female MSW student, a 28-year-old white male student, and a 41-year-old black female MSW student. Three of the cases information deleted also shared the same computer IP addresses as cases that were kept with more complete data. There were several other cases that had the same IP addresses but had different demographic data as well as other survey responses. These cases were all kept and used in the data analysis. School computers were available, so multiple responses from the same computer were deemed acceptable.

The degree of the participants are represented pictorially in Figure 4, the gender of the participants is represented in Figure 5, the race is presented in Figure 6, and age is pictured in Figure 7.
Figure 4
*Participants by Degree*

Figure 5
*Participants by Gender*
The data collected may not reflect the population of study. When checking for representativeness of the sample compared to the population, several demographic variables
looked suspicious. Only age had a large enough $p$ value to reject the null hypothesis (see below), so the claim that there is no difference between the population and sample in terms of this demographic variable is the only variable for which this claim can be made. Since there were collection differences between the BSW and MSW students, representativeness was calculated separately. The demographic data was primarily nominal (with the exception of age), so the non-parametric chi-square test was used to complete the calculations.

For the MSW group, there were 366 females and 52 males in the population compared to 144 females and 8 males in the sample. The Pearson Chi-Square was calculated at $p = .014$ with a two-sided test. These probabilities are less than $\alpha = .05$, so the null hypothesis is rejected and there is sufficient evidence to claim the alternative hypothesis that there is a significant difference between the population and the sample for the variable gender. This means that the sample may not be representative of the population in terms of gender.

For the variable age, the Pearson Chi-Square test produced a $p$ value of .733, and being greater than $\alpha = .05$, there is not sufficient evidence to reject the null hypothesis. Therefore, it was accepted that there is no difference between the variable age in the population and sample and it was claimed that the sample is representative of the population.

For the variable race, the overall $p$ value was .0001, and being less than .05 leads to the rejection of the null hypothesis. Therefore, there is sufficient evidence to claim a statistically significant difference between the population and the sample. Under further testing, the $p$ value for White is .102 (failing to reject the null), for Black $p = .013$ (reject the null), for Asian $p = .138$ (failing to reject the null), for American Indian $p = .735$ (failing to reject the null), for Hispanic $p = .777$ failing to reject the null), for Unreported $p = .226$ (failing to reject the null), for Pacific Islander there were none reported in either the population or the sample, for multi ethnic, $p = .000$ 1 (but there were none reported in the population data because that was not an option and there were 6 reported in the sample when multi ethnic was an option), and for Other $p = .097$, but again there were none reported in the population and one in the sample.

Clearly the categories for black and multi-ethnic were the variables within race that required a rejection of the null hypothesis. This leads to the conclusion that there is sufficient evidence to claim a difference between the population and the sample. Seven individuals reported themselves as Multi-Ethnic or Other in the sample, but none of them were reported as such by the College of Social Work for the population. If these seven individuals were classified
as Black in the population data, this sample may be representative of the population. Since this
is not known to be true, the representativeness of this sample is questioned and there can be no
generalizing the conclusions of this study to the population.

For the BSW group, there were 253 females in the population and 68 in the sample, and
37 males in the population with 7 males in the sample. The \( p \) value was .417, thus failing to
allow the rejection of the null hypothesis and therefore claiming that the sample is representative
of the population for gender. Similarly, for the variable age, the \( p \) value was .941, failing to
allow rejection of the null hypothesis and therefore claiming that there was sufficient evidence to
claim that the BSW sample was representative of the population for age.

The variable race was a problem for the BSW group similar to the MSW group. The \( p \)
value was .002; therefore, rejection of the null hypothesis followed and the claim that the sample
and the population were significantly different in terms of race. Upon closer examination, there
were a greater number of whites than expected in the sample compared to non-whites. Of the
290 in the overall population, 63% or 183 were White, but in the sample of 75, 79 % or 59 were
White compared to 16 non-whites. For Black, there were 71 or 24% in the population of 290 and
8 out of 67 in the sample, or only 11%. With \( p = .010 \), the null hypothesis is rejected, and it is
claimed that the sample for black is not representative of the population.

For Asian, American Indian, Hispanic, and Pacific Islander, the \( p \) values are large enough
to reject the null hypothesis with values of .611, .679, .660, and .611 respectively. Thus, the
there was sufficient evidence to claim that these variables are representative of the population.
There were no responses for the Unreported category, so there is no statistic for that variable.
For the variables Multi Ethnic and Other, the same problem was encountered as with the MSW
group. There were no occurrences in these categories in the population but two in Multi Ethnic
and one in Other in the sample. These \( p \) values were .005 and .049 respectively. These numbers
suggest rejecting the null hypothesis and claiming they are not representative of the population.

The reason for the lack of representativeness is not known. The problem may have
occurred due to race options varying between those collected by the College of Social Work and
the survey. Alternatively, the type of incentive may have been an issue. Only 14 of the local
students picked up the free coffee gift cards from the Office of Social Work for Brew & Bean;
however, 58 of the out-of-town students requested the $5.00 gift cards for Starbucks.
Tests for assessment reliability were all very good for the sample. The Crohnbach’s alpha coefficient for the Ego-resiliency Scale was .728, a mean of 29.74, variance of 26.141, and a standard deviation of 5.113. The Crohnbach’s alpha coefficient for the Impact of Events Scale was .948, a mean score of 14.89, a variance of 230.757, and a standard deviation of 15.191. For the first half of the Trauma Recovery Scale (the list of traumas), the Crohnbach’s alpha coefficient was .792, a mean of 5.74, variance of 52.617, and a standard deviation of 7.254. For the second half of the Trauma Recovery Scale, the Crohnbach’s alpha coefficient was .870, a mean of 33.32, variance of 54.786, and a standard deviation of 7.402. Descriptive statistics including a correlation matrix for the various scales used in the study can be seen in Tables 1 and 2.

Table 1

Descriptive Statistics of Research Scales

<table>
<thead>
<tr>
<th>Scale</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERS</td>
<td>236</td>
<td>29.74</td>
<td>10.355</td>
</tr>
<tr>
<td>Number of Trauma</td>
<td>242</td>
<td>3.13</td>
<td>3.281</td>
</tr>
<tr>
<td>How Upset</td>
<td>242</td>
<td>6.19</td>
<td>7.612</td>
</tr>
<tr>
<td>Trauma Behavior</td>
<td>223</td>
<td>33.32</td>
<td>7.402</td>
</tr>
<tr>
<td>IESR</td>
<td>214</td>
<td>14.89</td>
<td>15.191</td>
</tr>
</tbody>
</table>
Table 2

Summary of Correlations between Surveys

<table>
<thead>
<tr>
<th>Item</th>
<th>Age</th>
<th>ERS</th>
<th>NumTrauma</th>
<th>HowUpset</th>
<th>TraumBehav</th>
<th>IESR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>ERS</td>
<td>.053</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>NumTrauma</td>
<td>.191**</td>
<td>.054</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>How Upset</td>
<td>.152*</td>
<td>.096</td>
<td>.921**</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>TraumBehav</td>
<td>-.052</td>
<td>.354**</td>
<td>-.279**</td>
<td>-.28**</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>IESR</td>
<td>.027</td>
<td>-.077</td>
<td>.416**</td>
<td>.495**</td>
<td>-.542**</td>
<td>---</td>
</tr>
</tbody>
</table>

* $p < .05$ and **$p < .01$

Age was significantly correlated to both the number of traumatic events and how upset the participants were at the time of the survey. In other words, as people age, they are more likely to have experienced more traumatic events. This is not surprising data. The Ego-resiliency Scale (Klohnen, 1996) was only significantly correlated to the second half of the Trauma Recovery Scale (Gentry, 2006). This makes some sense since it is positively worded, but would have been more important if it had also been significantly correlated with the Impact of Events Scale – Revised since that is the gold standard of assessing posttraumatic stress disorder. The number of traumas, how upset participants were at the time of the survey about those traumas, the second half of the Trauma Recovery Scale (Gentry, 2006), and the Impact of Events Scale – Revised (Weiss & Marmar, 1997) were all significantly correlated with each other. This makes sense according to previous literature (Allen, 1995; Anestis, 2010; Classen et al., 2005; Cloitre et al., 1996; Dietrich, 2002; Eckberg, 2000; Follette et al., 1996; Kaysen et al., 2003; Perry, 1997; Reyes et al., 2008; Somer et al. 1996; van der Kolk, 1987) and because the Trauma Recovery Scale (Gentry, 2006) was placed in the survey to provide convergent validity for the Impact of Events Scale-Revised (Weiss & Marmar, 1997).
Each of the research questions are restated and answered independently. Research Question 1: Is there a linear relationship between ego-resiliency and symptoms of posttraumatic stress disorder? If so, to what extent does resilience predict symptoms of posttraumatic stress disorder? The research hypothesis was that there is an inverse relationship between ego-resiliency and symptoms of posttraumatic stress disorder.

After analyzing the data, there is no evidence to claim that there is a linear relationship between ego-resiliency and symptoms of posttraumatic stress disorder. The Pearson Product Correlation between the Ego-Resiliency Scale (Klohnen, 1996) and the Impact of Events Scale – Revised (Weiss & Marmar, 1997) was not statistically significant at \( r = -0.077 \). The lack of linearity is visually evident in Figure 8.

![Figure 8: Scatterplot of ERS and IERS](image)

Figure 8
*Scatterplot of ERS and IERS.* Note: ERS=Ego-Resiliency Scale, IESR=Impact of Events Scale

The correlation between ego-resiliency and symptoms of PTSD would only be significant at the .268 level which is clearly above the standard alpha level of .05. The relationship between
the variables is inversely related as hypothesized but not to a large enough degree. This is a very important finding. If ego-resiliency does not predict significantly fewer symptoms of posttraumatic stress disorder, than is resilience recovering from trauma as it is now defined? There is no evidence from this research study to suggest that it is.

Research Question 2: Is there a linear relationship between ego-resiliency and the severity of traumatic events? The research hypothesis was that there is no linear relationship between ego-resiliency and the severity of traumatic events.

There is insufficient evidence to claim that ego-resiliency and the severity of traumatic events share a statistically significant linear relationship. The Pearson Product Correlation is .096 significant at .140. Thus, the research hypothesis is correct. This result is consistent with the current research in this area (Bonanno, 2004). Those who express resilience do so in spite of the level of upset that is experienced from a traumatic event. This study adds evidence to support this claim.

Research Question 3: Is there a linear relationship between the severity of traumatic events and symptoms of posttraumatic stress disorder? If so, to what extent does the severity of traumatic events predict symptoms of posttraumatic stress disorder? The research hypothesis was that there is a positive linear relationship between the severity of traumatic events and symptoms of posttraumatic stress disorder.

There is a statistically significant linear relationship between the severity of traumatic events and symptoms of posttraumatic stress disorder. The Pearson Product Correlation Coefficient is .495, significant at the .0001 level. This result is consistent with the proposed hypothesis and the current literature on trauma (Perry, 1997). This means that the number of traumatic events experienced can account for 17% of the changes in symptoms of posttraumatic stress disorder. This is a very typical effect size for social science research.

Research Question 4: Is ego-resiliency a better predictor of symptoms of posttraumatic stress disorder than the severity of traumatic events? The research hypothesis was that ego-resiliency is a better predictor of symptoms of posttraumatic stress disorder than the severity of traumatic events.

Ego-resiliency is not a better predictor of symptoms of posttraumatic stress disorder. The evidence in research questions one and three show the opposite conclusion. In fact, the results of
this survey indicate that the severity of traumatic events is a better predictor of symptoms of posttraumatic stress disorder than ego-resiliency.

Research Question 5: Does ego-resiliency mediate the severity of traumatic events in terms of symptoms of posttraumatic stress disorder? The research hypothesis was that ego-resiliency mediates the severity of traumatic events in terms of symptoms of posttraumatic stress disorder.

Ego-resiliency does not mediate the effects of trauma in terms of symptoms of posttraumatic stress disorder. In order for that to be the case, there would have had to have been statistically significant results in research question number one. Ego-resiliency would need to have shown a strong correlation with symptoms of posttraumatic stress disorder which it did not.

Qualitative Summary

One section of the survey allowed respondents to enter any additional traumas experienced that were not on the previous traumatic events list from the Trauma Recovery Scale (Gentry, 2006). Participants were prompted to think of the worst thing that ever happened to them, a question used in Turner and Avison (2003), to elicit responses of trauma. Thirty-two individuals submitted responses. Most of the responses were covered in the list of traumatic events or in a combination of those events. For example, a house fire might be covered in natural or industrial accident and/or property loss. Those responses are listed below in Table 3.

Table 3

<table>
<thead>
<tr>
<th>Trauma</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Natural Disaster or Industrial Accident</td>
<td>“Stayed in my home during Hurricane Ivan”</td>
</tr>
<tr>
<td></td>
<td>“My car stopped during a tornado and almost rolled down a hill into traffic.”</td>
</tr>
<tr>
<td></td>
<td>“flood in community”</td>
</tr>
<tr>
<td></td>
<td>“An airplane I flew on had to turn around due to the maintenance personnel forgetting the air conditioning panel”</td>
</tr>
<tr>
<td>Trauma</td>
<td>Response</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>2. Physical Injury Resulting from an Accident</td>
<td>“I cracked my skull when I was 16 years old while playing baseball. I suffered a traumatic brain injury as well as a stroke. I was hospitalized for several months and had to learn how to walk, talk, and other basic abilities in life that are taken for granted”</td>
</tr>
<tr>
<td></td>
<td>“experienced two major car accidents within six months”</td>
</tr>
<tr>
<td></td>
<td>“Car accident in which physical injury did not result”</td>
</tr>
<tr>
<td>3. Witnessing Event that was Traumatic to Another</td>
<td>“Stress from parent losing job and having to move to another state”</td>
</tr>
<tr>
<td></td>
<td>“11-Sep”</td>
</tr>
<tr>
<td></td>
<td>“I did not include Domestic Violence on this list because it has not occurred directly to me. However, I work with DV victims and have experience 2nd hand trauma that affects me on occasion in my daily life”</td>
</tr>
<tr>
<td></td>
<td>“I was witness to the Sept. 11th terrorist attack on the World Trade Center as I worked around the corner and saw terrible devastation, dismemberment, etc.”</td>
</tr>
<tr>
<td>4. Parental Divorce or Abandonment as a Child</td>
<td>“Temporary separation from a parent and placed in foster care”</td>
</tr>
<tr>
<td>5. Childhood Physical Assault/Abuse</td>
<td>“parental neglect”</td>
</tr>
<tr>
<td></td>
<td>“emotional abuse by a parent”</td>
</tr>
<tr>
<td>6. Adult Physical Assault/Abuse</td>
<td></td>
</tr>
<tr>
<td>7. Domestic Violence</td>
<td></td>
</tr>
<tr>
<td>8. Victim of Crime</td>
<td>“As a teenager, a man tried to abduct me while I was running in my neighborhood. He was later convicted of the death of 3 teenage girls”</td>
</tr>
<tr>
<td>Trauma</td>
<td>Response</td>
</tr>
<tr>
<td>-----------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>9. Threat of Physical Violence</td>
<td></td>
</tr>
<tr>
<td>10. Childhood Sexual Abuse</td>
<td></td>
</tr>
<tr>
<td>11. Rape</td>
<td></td>
</tr>
<tr>
<td>12. Other Unwanted Sexual Experience</td>
<td></td>
</tr>
<tr>
<td>13. Combat Trauma</td>
<td></td>
</tr>
<tr>
<td>14. Incarceration or Being Held in Captivity</td>
<td>“Boyfriend incarcerated”</td>
</tr>
<tr>
<td>15. Physical Torture</td>
<td></td>
</tr>
<tr>
<td>16. Humiliation</td>
<td>“fallout with several friends, dealing with alienated family members of my husband”</td>
</tr>
<tr>
<td></td>
<td>“Being yelled at and belittled by the clients at my internship”</td>
</tr>
<tr>
<td></td>
<td>“I have experienced verbal abuse, emotional abuse, and abandonment by friends”</td>
</tr>
<tr>
<td>17. Property Loss</td>
<td>“House fire”</td>
</tr>
<tr>
<td>18. Traumatic Death of a Loved One</td>
<td>“My friend’s father died right in front of me, while I was giving him CPR in Germany about 4 years ago. I’ve never cried about it…” “I am not sure if you want to know if we have experienced these traumatic experiences within the last month or ever. In this case, my mother passed of cancer last year and my husband was diagnosed with terminal brain cancer in September. Both are equally traumatic”</td>
</tr>
<tr>
<td>19. Loss of a child, Abortion, Miscarriage, Still Birth, or SIDS</td>
<td>“I authorized a permanent, irreversible surgery while pregnant and depressed that I deeply regret. I never should have been able to consent to this surgery in my condition. This surgery sterilized me and I am deeply traumatized by the experience. I think about it almost all of the time”</td>
</tr>
<tr>
<td>Trauma</td>
<td>Response</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>20. Suicide Attempt by Self or Other</td>
<td>“Successful suicide attempt by a loved one”</td>
</tr>
<tr>
<td></td>
<td>“My brother shot himself in the head”</td>
</tr>
<tr>
<td></td>
<td>“Client committing suicide”</td>
</tr>
<tr>
<td>21. Traumatizing Events of Discrimination</td>
<td>“Not being able to communicate with others because of a learning disability and not being able to understand information like other people. It can definitely effect a person in life just in general but on important issues such as a career. The individual with the learning disability can try extremely hard to try to be the best they can be. It is others who are the problem in the scenario due to them not being patient or due to them not understanding or due to the fact that they believe that the individual with the learning disability cannot do anything”</td>
</tr>
<tr>
<td>22. Life-threatening Medical Diagnosis of Self or Loved One</td>
<td>&quot;My sister suffered from an eating disorder and almost died because of it”</td>
</tr>
<tr>
<td></td>
<td>“Non-life threatening serious medical trauma”</td>
</tr>
<tr>
<td></td>
<td>“parent’s drug addiction/multiple recoveries and relapses”</td>
</tr>
<tr>
<td></td>
<td>“Experiencing or Living With PTSD Episodes of Loved One”</td>
</tr>
</tbody>
</table>
A complete list of qualitative traumas from the survey can be seen in Appendix K. Some responses did not fit easily in the list of traumatic events from the Trauma Recovery Scale (Gentry, 2006). These events listed by the survey respondents can be seen in Table 4.

Table 4  
*Unplaced Qualitative Responses*

<table>
<thead>
<tr>
<th>Number</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>“loss of job”</td>
</tr>
<tr>
<td>2.</td>
<td>“divorce”</td>
</tr>
<tr>
<td>3.</td>
<td>“homeless”</td>
</tr>
<tr>
<td>5.</td>
<td>“A break up with a loved one that was very hard on you or the other “</td>
</tr>
<tr>
<td>6.</td>
<td>“A fight with a best friend that ended in bad terms and ended their relationship”</td>
</tr>
<tr>
<td>7.</td>
<td>“Moving to a new country...I would say it was moderately traumatizing.”</td>
</tr>
<tr>
<td>8.</td>
<td>“Being cheated on by my first spouse - I think being betrayed by a trusted intimate is a type of trauma you could add to the list. P.S. I’m a doctoral student and that wasn’t one of the options on the first page!”</td>
</tr>
</tbody>
</table>
CHAPTER 5
DISCUSSION

The main purpose of this research study was to test empirically the assumption that resilience is the ability to recover from trauma (Block & Block, 1980; Bonanno, 2004). By using the best assessments available, the Ego-Resiliency Scale (Klohnen, 1996) and the Impact of Events Scale – Revised (Weiss & Marmar, 1997), this theory was tested. As expected, and as illustrated by the theoretical model, there was an inverse relationship between these two concepts. As resilience increased, symptoms of posttraumatic stress decreased. However, the relationship was not statistically significant. The scatter plot was also very helpful in showing the lack of linearity between the two constructs and in showing that many people exhibited high ego-resiliency and high scores for PTSD. There were also a number of people whose scores indicated low ego-resilience and low PTSD symptomology.

As a result of this study, there is empirical evidence to question the assumption that resilience means bouncing back from traumatic experiences. Ego-resiliency does not predict a reduction in PTSD symptoms. This is certainly the case with this particular population. This data suggests that resilience and symptoms of PTSD are not mutually exclusive. Bonanno (2004) explicitly stated that resilience is more than a lack of psychopathology, but as a result of this study, it appears that resilience may not preclude psychopathology at all. The assumption that resilient individuals would express fewer symptoms of PTSD was a reasonable one to make, but it has not been confirmed by this research project. This information may be very important if we come to realize that people who are resilient may also experience symptoms of PTSD. Maybe there is something unique about social work students that created this result. Maybe if a clinical population had been sampled, the results may have been different.

Perhaps people can exhibit resilient behavior while experiencing anxiety, nightmares, or other symptoms in response to traumatic experiences. It is possible that symptoms of anxiety or anger can propel some to move forward with projects that express their resilience. For example, parents of children killed in car accidents have united to create organizations that have changed legislation and run public relations campaigns to make others aware of the traumas they’ve
experienced. We do not know if these people who appear to be resilient still experience symptoms of PTSD as this has not been tested.

Some literature suggests that arousal symptoms can be protective of future trauma (Classen et al., 2005). Maybe those with resilience are more likely to exhibit arousal symptoms and those who are ego-brittle might exhibit more intrusive, avoidant, or dissociative symptoms. If this is the case, implications for theory and practice will surely result. Maybe we will need to divide PTSD into two separate disorders: one for arousal symptoms and another for intrusion and avoidance symptoms.

In terms of resilience as a state or a trait, this study showed that the number of categories of traumatic events experienced was not significantly correlated with resilience, which supports the idea that resilience is a trait or has some trait like characteristics. The number of traumatic events did not increase the likelihood that an individual would be less resilient. However, the number of traumatic events experienced did increase the likelihood that an individual would exhibit symptoms of posttraumatic stress. This is consistent with literature on this topic (Allen, 1995; Anestis, 2010; Classen et al., 2005; Cloitre et al., 1996; Dietrich, 2002; Eckberg, 2000; Follette et al., 1996; Kaysen et al., 2003; Perry, 1997; Reyes et al., 2008; Somer et al. 1996; van der Kolk, 1987). The number of traumatic events was also shown in this study to be a better predictor of PTSD than ego-resiliency.

If resiliency is defined as bouncing back from trauma, then will symptoms of PTSD negate a person’s resilience? Or, have we pathologized PTSD so that we do not allow for the possibility that individuals who have bounced back from traumatic events, can still function, grow, or even do great things in spite of their PTSD symptoms? Maybe we have too narrowly defined what ego-resiliency might look like or underestimated the functional capacity of people with posttraumatic stress disorder.

Another possibility is that we have limited how we think about people with PTSD. In a broader sense, we can see resilience as survival. What if surviving an ordeal is enough to be considered resilient even if the survivor has symptoms of PTSD? Maybe we have implied that having symptoms of PTSD means a person hasn’t responded appropriately to the aftermath of traumatic experiences. Many people do not survive traumatic events. Maybe we need to acknowledge that those who survive are already resilient even if they exhibit symptoms of PTSD.
Limitations

Although the interaction of the variables in this study was of more interest than describing the population from which they came, the inability to generalize from the sample to the population is one of the biggest limitations of this research. If the study were conducted again, it would be helpful to look closely at the incentives requested by the men and those who classified themselves as Black to find incentives that might increase the participation of those two groups. Florida State University used different race categories for the bachelor students and the master students. Instead of including all possible race categories, having a decision tree would have worked better. When the student answered that they were a bachelor or master student, they would have been sent to the corresponding race categories as they are collected by Florida State University. Having several individuals report their ethnicity as Multi Ethnic when none were reported by Florida State University was clearly problematic.

In terms of the collection process, it would be helpful to pursue administrative oversight of the survey requests to ensure that the requests were sent out an equal number of times to each and every student. The sending of the requests was not within the purview of the student researcher. As it occurred, the invitations went out at varied times in the semester, and the bachelor students only received the survey invitation twice while some of the master students received it once, some twice, and others received it three times. It is unknown if this had any effect on the representativeness of the sample, but it makes sense that this could explain some of the under representativeness of the bachelor students when compared with the master students.

Additionally, it would have been helpful to use more forced choices in the survey to minimize incomplete data. Since individual assessment scores with incomplete data were not used, it would have been beneficial to request the completion of that section before moving forward with the survey. It is possible that there would not have been any less data to analyze if students had been forced to complete the individual sections of the survey before continuing, and it is possible that there would have been additional scores on the internal assessments within the survey. Of course, that change may also have encouraged more participants to quit the survey prematurely.
In terms of the qualitative data, it is interesting that people felt the need to write about the traumas they have experienced even if those traumas were clearly provided in a list for them. Some of the student responses, like the loss of relationships, affairs, and job loss, were not surprising. The literature often categorizes these experiences as stressful events instead of traumatic ones. Clinical experience suggests that these events may indeed activate symptoms of posttraumatic stress disorder. Clients often report feeling like they are going to die when a relationship is over, and job losses also can leave clients feeling like their very survival is threatened. Of course, what is considered traumatic is the response of the individual to any event.

The DSM IV-TR (APA, 2000) specifically excludes these examples from the definition of PTSD. It may be significant that some of the worst things that have occurred in participant’s lives are not considered by the DSM IV-TR to be traumatic enough to warrant inclusion as possible antecedents to a diagnosis of posttraumatic stress disorder. It is hoped that there is good research to support this exclusion. Possibly research like this study can contribute to the body of information in support of the DSM IV-TR categories or provide evidence that individual responses to axis IV psychosocial and environmental stressors can also predispose people to exhibit symptoms of posttraumatic stress disorder.

If Dr. Gentry is willing to include events outside the criteria for PTSD in the DSM IV-TR, it may be prudent to add the following events to the list in the Trauma Recovery Scale (Gentry, 2006): verbal or emotional abuse by parents, friends or colleagues (might be combined with humiliation); divorce, affairs, significant loss of friendship or other relationship; car accident; job loss, extreme school or job stress; house-fire, homelessness, traumatic move, new country, inability to speak the local language; legal troubles of self, family, or friends; disability; war and acts of terrorism; and other life threatening events.

Six existing events could also be amended to reflect student responses better. Placement in foster care could be added to Parental Divorce or Abandonment as a Child, and neglect could be added to Childhood Physical Assault/Abuse. A potential crime could be added to Victim of Crime, and loss of custody and the ability to bear children could be added to Loss of a Child, Abortion, Miscarriage, Still Birth, or SIDS. The word “or” could be added after “Suicide” in Suicide Attempt by Self or Other. Finally, the words “or procedure” could be added to Life-Threatening Medical Diagnosis of Self or Loved One. Of course, if these changes are made to
the existing Trauma Recovery Scale (Gentry, 2006) then running a new statistical analysis including factor analysis would be useful.

In terms of the assessments themselves, the Traumagram Questionnaire (Figley, 1989) portion of the survey would be removed and instead include a question asking for an estimate of the number of traumas in each category. Since the number of traumas and the severity of those traumas correlated at .92, it was realized that severity was only answered for the traumas experienced, thus making the question redundant statistically. Furthermore, because the space in Survey Monkey was used to ask about the severity of events, multiple traumas within categories was not an option for measurement, therefore reducing the validity of the number of traumas experienced by each participant.

**Implications for Further Research**

Resilience is an important concept in our world today, and it is very important that we define this concept in an accurate and helpful way. This study has provided evidence that more research on resilience and trauma is necessary. Those who have conducted research that have claimed resilience includes the recovery from trauma (Block & Block, 1980; Bonanno, 2004) need to show that this is true. This study does not provide convincing evidence to do so. We need to operationally define what is meant when someone is resilient following exposure to traumatic events. How much of resilience is behavioral functioning as opposed to symptoms of PTSD that can be characterized by intrusive or dissociative thinking and feelings of anxiety? This clarification will have possible dramatic effects on the interventions that may help individuals cope with the aftermath of trauma. Do people who express resilient behavior also experience symptoms of posttraumatic stress disorder? And if so, which ones? Testing a clinical sample of individuals with posttraumatic stress disorder for resilience is one place to start. Populations to test include war veterans, domestic violence shelter clients, emergency medical technicians, law enforcement officers, rape victims, and those who have experienced natural or industrial accidents.
If individuals who are resilient can and do exhibit symptoms of PTSD, we need to find out which of these symptoms can be alleviated and by which interventions. Social work practice may need to focus on calming interventions if arousal symptoms are exhibited or maybe avoidance and dissociative symptoms are the ones needing intervention. Outcome research on interventions following traumas need to assess for resilience. First of all, to make sure the testing is addressing the intervention and not resilience but also to prospectively see how those who are resilient differ in his or her mental, emotional, and behavioral coping with the aftermath of trauma.

For research that is attempting to enhance resilience, the ego-resiliency scale or another assessment to test for resilience needs to be used. Individuals may show significant change on dependent variables due to their resilience instead of the interventions being tested. Correlations between the Ego-Resiliency Scale (Klohnen, 1996) and behavioral outcomes are also needed, but using behavioral outcomes alone is not sufficient until resilience can be operationally defined and testable for continued outcome research to be viable. In fact, this research study gives us reason to question the validity of the Ego-Resiliency Scale. The construct of resilience itself may be the problem or the theoretical assumptions underpinning this idea. Psychodynamic theory is not the most testable theory, so maybe we need to explore other alternative theoretical possibilities to explain the phenomenon of individuals who actually bounce back from traumatic experiences unscathed. Possible theories to explore in this regard include social learning theory, respondent learning theory, cognitive behavioral theory, change theory, and positive psychology. As mentioned earlier in this document, there are many related constructs that may be similar in meaning to resilience including hardiness, internal locus of control, self-efficacy, optimism, tenacity, and posttraumatic growth. Maybe it is time to combine our research efforts and create a broad and inclusive theory that explains this phenomenon more thoroughly than at present.

Assessing the severity of traumatic events is a great need in the field of trauma research. Using the Trauma Recovery Scale (Gentry, 2006) and the Traumagram Questionnaire (Figley, 1989) was insufficient. We need to find ways of determining the impact of experiences on individuals. Primarily, an assessment needs to be created that asks about the nature of the events, the number of events, the time those events lasted, the thinking of the person during those events, the emotional reactions, and the behaviors during and after the event. Also, determining if the events excluded in the diagnosis of posttraumatic stress disorder in the DSM IV- TR (APA, 2000)
produce similar symptoms may add to our understanding of severity. The data from this dissertation will be analyzed with this goal in mind at a later date. This data may also be added to Gentry’s (2006) data to get large enough cell sizes for more powerful data analysis about the responses to the specific events on the list in this assessment. The specific events experienced by the participants in this study will also be compared to the levels of PTSD exhibited by the scores on the Impact of Events Scale-Revised (Weiss & Marmar, 1997). Of interest are the events experienced by those who scored low on the Ego-Resiliency Scale (Klohnene, 1996) and low on the Impact of Events Scale-Revised (Weiss & Marmar, 1997) as well as those who scored high on both scales.

Pursuing Levine’s (1997) theories may also provide some insight if we ask those who experience traumas to tell us if they experienced the urge to fight, flee, or freeze until the danger had been averted or experienced. Then, it would be interesting to find out if they were ever able to complete the urges following the traumatic event. Did running help those who had the urge to flee, did fighting help those with the urge to fight, or did shaking help those who froze? If so, did this affect the likelihood of exhibiting symptoms of posttraumatic stress disorder? An interesting outcome study using a clinical sample could see if learning to fight, run, or shake would decrease the debilitating symptoms of PTSD. Levine’s theory may help explain why the use of calming techniques have lessened the symptoms of posttraumatic stress disorder in some people, and may provide inspiration to pursue new interventions.

In a recent article in the Tallahassee Democrat, Leonard Pitts, Jr. (Dec. 7, 2009) stated, “We are people of astounding capacity for resilience, redemption, renewal, reinvention. Change is our birth-right.” Although the literature on resilience mentions one’s ability to change according to changing demands in the environment (Block & Block, 1980; Klohnene, 1996), I did not see any research that tested resilience with change theory. Maybe the literature about change and change theory will help us understand the concept of resilience better. If so, this could be an interesting line of research to pursue.

Chris Peterson and colleagues in the positive psychology movement have identified 12 positive values and character traits they believe to be universal and malleable (Peterson & Seligman, 2004; Seligman, 2002). Since they have international outcome research to support this claim, and interventions to improve these ideals, it might be very interesting to compare those values and traits with resilience to see which ones correlate the highest. This research may assist
in the trait vs. state controversy in resilience literature by identifying the malleable state portion of resilience and the interventions that may increase resiliency. Then outcome studies can be conducted that use the Ego-Resiliency Scale and the interventions that have been shown to increase the state portion of resilience.

The needs of our society at this period in time could clearly benefit from more resilience. There are so many traumatic experiences that many are going through across the planet. Any insight and assistance that can be useful towards a more balanced and healthy population are worth pursuing. May we as helping professionals work towards this goal.
APPENDIX A

INFORMED CONSENT FORM

2. Consent Form:

Informed Consent Form

I freely and voluntarily and without element of force or coercion, consent to be a participant in the research project entitled “The Study of Ego-Resiliency.” This research is being conducted by Rene’ McCoy LCSW, who is a doctoral candidate at Florida State University under the supervision of Dr. Charles Figley, Professor of Social Work. I understand the purpose of this research project is to explore the definition of ego-resiliency. I understand that if I participate in this project I will be asked to answer personal questions about stressful or traumatic events from my past. This process will take approximately 15 minutes. I understand my participation is totally voluntary and I may stop participation at any time without penalty.

I also agree that Rene’ McCoy and Dr. Charles Figley may view the assessments that I complete. After I sign this form and provide an identification number that matches the survey I complete, my name will no longer be associated with the personal information I provide. All my writing will be kept confidential to the extent allowed by law, and my name will not appear on any of the results of this study. Group results will be sent to me upon my request.

I understand there is a possibility of a minimal level of risk involved if I agree to participate in this study. I might experience anxiety or other negative feelings when thinking about stressful or traumatic events from my past. I understand that counseling services are available to me through the Student Counseling Center at 644-2003. I am also aware that telephone counseling is available to me anytime at 224-6333 (224-NEED). I am also able to stop my participation at any time I wish.

I understand there are benefits for participating in this research project. I may come to realize that I have overcome many stressful experiences in my life. I might also discover that I want assistance with my recovery from the effects of a particular traumatic event. Additionally, my participation will help one of my fellow students complete their education, and I will be providing mental health professionals with valuable insight into the process of overcoming trauma.

I understand that this consent may be withdrawn at any time without prejudice or penalty. I understand that I may contact Rene’ McCoy at (850) 668-6607 rmc9163@fsu.edu or Dr. Charles Figley at the Florida State University, College of Social Work (850) 644-9598 cfigley@fsu.edu for answers to questions about this research. If I have questions about my rights as a subject/participant in this research, or if I feel I have been placed at risk, I can contact the Chair of the Human Subjects Committee, Institutional Review Board, through the Office of the Vice President for Research, at (850) 644-8633.

I have read and understand this consent form.

(Subject) ___________________________ (Date) __________

12/22/08
08.03.07
10/21/09
07.34.12
10/19/08
APPENDIX B

REAPPROVAL MEMORANDUM

Date: 10/23/2008

To:
Rene McCoy
2609 Vassar Rd.
Tallahassee, FL 32309

Dept.: SOCIAL WORK

From: Thomas L. Jacobson, Chair

Re: Reapproval of Use of Human subjects in Research:
Ego-Resiliency Study

Your request to continue the research project listed above involving human subjects has been approved by the Human Subjects Committee. If your project has not been completed by 10/21/2009 please request renewed approval.

You are reminded that a change in protocol in this project must be approved by resubmission of the project to the Committee for approval. Also, the principal investigator must report to the Chair promptly, and in writing, any unanticipated problems involving risks to subjects or others.

By copy of this memorandum, the Chairman of your department and/or your major professor are reminded of their responsibility for being informed concerning research projects involving human subjects in their department. They are advised to review the protocols of such investigations as often as necessary to insure that the project is being conducted in compliance with our institution and with DHHS regulations.

Cc: Charles Figley
HSC No. 2009.0697-R
APPENDIX C

PILOT STUDY SURVEY

---

**Pilot Study**

**1. Informed Consent**

I freely, voluntarily, and without the element of force, consent to be a participant in this research project. This research is being conducted by Rene McCoy, LCSW, who is a doctoral student at Florida State University under the supervision of Dr. Bruce Thyer, Professor of Social Work. I understand the purpose of this research is to explore the ways people respond to the traumas in life. I understand that if I participate in this project, I will be asked to remember traumatic experiences from my past. This process will take approximately 15 minutes. I understand my participation is totally voluntary, and I may stop participation at any time without penalty. I further understand that my responses will be anonymous. My name will never be associated with the responses I provide in this survey. Although the results of this study may be published, my name will not appear in any publication. I understand that there is a minimal level of risk involved if I agree to participate in this study. I might experience negative emotions when thinking about experiences from my past. I understand that counseling services are available to me at the Student Counseling Center at (850) 644-2003. I am also aware of telephone counseling available 24 hours a day at (850) 224-6333 (224-NEEO). I am also able to stop my participation at any time I wish. I understand there are benefits to my participation in this research project. I may come to realize that I have overcome many stressful events, and I will be contributing to another student's education and a greater understanding of the topics covered in this survey. I understand that I may contact Rene McCoy before or after my consent for answers to questions about this survey or to request group results of this research at rms9165@fsu, (850) 668-6607 or Dr. Bruce Thyer at bthyer@fsu.edu, (850) 645-4792, Florida State University, College of Social Work, University Center Complex, Tallahassee, FL 32306-2576. If I have questions about my rights as a subject/participant in this research, or if I have been placed at risk, I can contact the Chair of the Human Subjects Committee, Institutional Review Board, through the Office of the Vice President for Research, at (850) 644-3633. The nature, demands, benefits and risks of this project have been explained to me. I knowingly assume any risks involved. I understand that I may withdraw my consent and discontinue participation at any time without penalty or loss of benefits to which I may otherwise be entitled. I am not waiving any legal claims, rights or remedies. I may print a copy of this consent form if I so desire.

1. I have read, understood, and consent to take this survey. I know I can stop taking this survey at any time.

- [ ] Yes
- [ ] No
2. Demographics

1. What level of degree are you seeking?
   - Bachelor's
   - Master's

2. What is your gender?
   - Female
   - Male

3. What is your Age?

4. What is your ethnicity?
   - White
   - Black
   - Asian
   - Hispanic
   - American Indian
   - Pacific Islander
   - Multi-ethnic
   - Other.
### Pilot Study

#### 3. Personality Questions

1. Please read each item below and indicate which statement most closely matches your experience.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Does not apply at all</th>
<th>Applies Slightly</th>
<th>Applies Somewhat</th>
<th>Applies Very Strongly</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am generous with my friends.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I quickly get over and recover from being startled.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I enjoy dealing with new and unusual situations.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I usually succeed in making a favorable impression on people.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I enjoy trying new foods I have never tasted before.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am regarded as a very energetic person.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I like to take different paths to familiar places.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am more curious than most people.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Most of the people I meet are likable.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I usually think carefully about something before acting.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I like to do new and different things.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My daily life is full of things that keep me interested.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I would describe myself as a pretty &quot;strong&quot; personality.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I get over my anger at someone reasonably quickly.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### 4. Traumatic Experiences

#### 1. Events that I have experienced that were traumatizing to me:

<table>
<thead>
<tr>
<th>Event</th>
<th>Degree of Stressfulness at the Time of the Event</th>
<th>Degree of Stressfulness Now (if more that one month since event)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural or Industrial Accident</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accidental Physical Injury</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Witnessing Event that was Traumatic to Another</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parental Abandonment as a Child</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Childhood Physical Assault/Abuse</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adult Physical Assault/Abuse</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Domestic Violence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Victim of Crime</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Threat of Physical Violence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Childhood Sexual Abuse</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rape</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Unwanted Sexual Experience</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Terrorist Attack</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Combat Trauma</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Captivity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Torture</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Humiliation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Property Loss</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Victim of Crime</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traumatic Death of a Loved One</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loss of a child, Abortion, or Still Birth</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loss Through Suicide or Attempt by Self or Other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Pilot Study

**Traumatizing Events of Discrimination**

**Life-Threatening Medical Diagnosis**

2. Other traumatic events that were not on the previous list: (For example, what is the worst thing that has ever happened to you?) Please Specify.

3. Please indicate the degree of stressfulness each of these other traumatic events have caused you.

<table>
<thead>
<tr>
<th>Event</th>
<th>Degree of Stressfulness at the Time of the Event</th>
<th>Degree of Stressfulness now (if more than one month since event)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Event 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Event 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Event 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Event 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Event 5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## 5. Response to Trauma

### 1. Indicate your Experience during the Last Week:

<table>
<thead>
<tr>
<th>Experience</th>
<th>Percentage of Time Per Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>I made it through the day without distressing recollections of past events.</td>
<td></td>
</tr>
<tr>
<td>I sleep free from nightmares.</td>
<td></td>
</tr>
<tr>
<td>I am able to stay in control when I think of difficult memories.</td>
<td></td>
</tr>
<tr>
<td>I do the things I used to avoid.</td>
<td></td>
</tr>
<tr>
<td>I am safe.</td>
<td></td>
</tr>
<tr>
<td>I feel safe.</td>
<td></td>
</tr>
<tr>
<td>I have supportive relationships in my life.</td>
<td></td>
</tr>
<tr>
<td>I feel that I can now safely feel a full range of emotions.</td>
<td></td>
</tr>
<tr>
<td>I can allow things to happen in my surroundings without needing to control them.</td>
<td></td>
</tr>
<tr>
<td>I am able to concentrate on thoughts of my choice.</td>
<td></td>
</tr>
<tr>
<td>I have a sense of hope about the future.</td>
<td></td>
</tr>
</tbody>
</table>
6. When you have thought about traumatic events this last week:

1. Please indicate how distressed you have been about past traumatic events in the last week:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Not at all</th>
<th>A little bit</th>
<th>Moderately</th>
<th>Quite a bit</th>
<th>Extremely</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any reminder brought back feelings about it.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I had trouble staying asleep.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other things kept me thinking about it.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I felt irritable and angry.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I avoided letting myself get upset when I thought about it or was reminded of it.</td>
<td></td>
<td></td>
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<tr>
<td>I thought about it when I didn't mean to.</td>
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<tr>
<td>I felt as if it hadn't happened or wasn't real.</td>
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<tr>
<td>I stayed away from reminders about it.</td>
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<tr>
<td>Pictures about it popped into my mind.</td>
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<tr>
<td>I was jumpy and easily startled.</td>
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<tr>
<td>I tried not to think about it.</td>
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<tr>
<td>I was aware that I still had a lot of feelings about it, but I didn't deal with them.</td>
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<tr>
<td>My feelings about it were kind of numb.</td>
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<tr>
<td>I found myself acting or feeling like I was back at that time.</td>
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</tr>
<tr>
<td>I had trouble falling asleep.</td>
<td></td>
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<tr>
<td>I had waves of strong feelings about it.</td>
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<tr>
<td>I tried to remove it from my memory.</td>
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</tr>
<tr>
<td>I had trouble concentrating.</td>
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<td></td>
</tr>
<tr>
<td>Reminders of it caused me to have physical reactions, such as sweating, trouble breathing, nausea, or a pounding heart.</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
Pilot Study

7. Survey Feedback

Pilot study

1. What did you like best about this survey?

2. How could this survey have been better?

3. What kind of incentive would motivate 250 students to complete this survey? Check all that apply.
   - $2.00
   - $3.00
   - Coupon for Free Drink at Coffee Shop
   - Coupon for Free Ice Cream or Yogurt
   - Coupon for Free Pizza
   - Raffle for $50.00 Gift Card to Borders
   - Raffle for $50.00 Gift Card to Bed Bath and Beyond
   - I'd rather have $5.00 cash than a $5.00 Gift Card or Coupon
   - Other (please specify)

8. Thank You

Thank you so much for your time! Your help with this research is really appreciated.
APPENDIX D

FINAL STUDY SURVEY

Copy of Dissertation Survey for more Rep sample

1. Informed Consent

I freely, voluntarily, and without the element of force, consent to be a participant in this research project. This research is being conducted by Rene McCoy, LCSW, who is a doctoral candidate at Florida State University under the supervision of Dr. Bruce Thyer, Professor of Social Work. I understand the purpose of this research is to explore the ways people respond to the traumas in life. I understand that if I participate in this project, I will be asked to remember traumatic experiences from my past. This process will take approximately 5-10 minutes. I understand my participation is totally voluntary, and I may stop participation at any time without penalty. I further understand that my responses will be anonymous. My name will never be associated with the responses I provide in this survey. Although the results of this study may be published, my name will not appear in any publication. I understand that there is a minimal level of risk involved if I agree to participate in this study. I might experience negative emotions when thinking about experiences from my past. I understand that counseling services are available to me at the Student Counseling Center at (850) 644-2003. I am also aware of telephone counseling available 24 hours a day at (850) 224-6333 (224-NEED). I am also able to stop my participation at any time I wish. I understand there are benefits to my participation in this research project. I may come to realize that I have overcome many stressful events, I will be contributing to another student's education, and a greater understanding of the topics covered in this survey. I understand that I may contact Rene McCoy before or after my consent for answers to questions about this survey or to request group results of this research at rms9165@fsu.edu, (850) 668-6607 or Dr. Bruce Thyer at bthyer@fsu.edu, (850) 645-4792, Florida State University, College of Social Work, University Center Complex, Tallahassee, FL 32306-2570. If I have questions about my rights as a subject/participant in this research, or if I have been placed at risk, I can contact the Chair of the Human Subjects Committee, Institutional Review Board, through the Office of the Vice President for Research, at (850) 644-8633. The nature, demands, benefits and risks of this project have been explained to me. I knowingly assume any risks involved. I understand that I may withdraw my consent and discontinue participation at any time without penalty or loss of benefits to which I may otherwise be entitled. I am not waiving any legal claims, rights or remedies. I may print a copy of this consent form if I so desire.

1. I have read, understood, and consent to take this survey. I know I can stop taking this survey at any time.

☐ Yes

☐ No
## 2. Demographics

1. What level of degree are you seeking?
   - Bachelor's
   - Master's

2. What is your gender?
   - Female
   - Male

3. What is your Age?

4. What is your ethnicity?
   - White
   - Black
   - Asian
   - Hispanic
   - American Indian
   - Pacific Islander
   - Multi-ethnic
   - Other
### 3. Personality Questions

1. Please read each item below and indicate which statement most closely matches your experience.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Does Not Apply</th>
<th>Applies Slightly</th>
<th>Applies Somewhat</th>
<th>Applies Very Strongly</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am generous with my friends.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I quickly get over and recover from being startled.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I enjoy dealing with new and unusual situations.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I usually succeed in making a favorable impression on people.</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>I enjoy trying new foods I have never tasted before.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am regarded as a very energetic person.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I like to take different paths to familiar places.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Please read each item below and indicate which statement most closely matches your experience. (Continued)

<table>
<thead>
<tr>
<th>Statement</th>
<th>Does Not Apply at All</th>
<th>Applies Slightly</th>
<th>Applies Somewhat</th>
<th>Applies Very Strongly</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am more curious than most people.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Most of the people I meet are likable.</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>I usually think carefully about something before acting.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I like to do new and different things.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My daily life is full of things that keep me interested.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I would describe myself as a pretty &quot;strong&quot; personality.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I get over my anger at someone reasonably quickly.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4. Traumatic Experiences

1. If you were traumatized by any of the events below, please indicate how upsetting it has been for you this week. If it has been less than one month since the trauma occurred, please indicate only that. If you have not experienced an event, please indicate that by checking the N/A column.

<table>
<thead>
<tr>
<th>Event</th>
<th>Not at all</th>
<th>A little bit</th>
<th>Moderately</th>
<th>Quite a bit</th>
<th>Extremely</th>
<th>It has been less than 1 month</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Disaster or Industrial Accident</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical Injury Resulting from an Accident</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Witnessing Event that was Traumatic to Another</td>
<td></td>
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</tr>
<tr>
<td>Parental Divorce or Abandonment as a Child</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Childhood Physical Assault/Abuse</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adult Physical Assault/Abuse</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Domestic Violence</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Victim of Crime</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Threat of Physical Violence</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Childhood Sexual Abuse</td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>
Copy of Dissertation Survey for more Rep sample

2. If you were traumatized by any of the events below, please indicate how upsetting it has been for you this Week. If it has been less than one month since the trauma occurred, please indicate only that. If you have not experienced an event, please indicate that by checking the N/A column (Continued).

<table>
<thead>
<tr>
<th>Event</th>
<th>Not at all</th>
<th>A little bit</th>
<th>Moderately</th>
<th>Quite a bit</th>
<th>Extremely</th>
<th>It has been less than 1 month</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rape</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Other Unwanted Sexual Experience</td>
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<tr>
<td>Combat Trauma</td>
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<tr>
<td>Incarceration or Being Held In Captivity</td>
<td></td>
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<td></td>
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<tr>
<td>Physical Torture</td>
<td></td>
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</tr>
<tr>
<td>Humiliation</td>
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<tr>
<td>Property Loss</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Traumatic Death of a Loved One</td>
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</tr>
<tr>
<td>Loss of a child, Abortion, Miscarriage, Still Birth, or SIDS</td>
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<tr>
<td>Suicide Attempt by Self or Other</td>
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<td></td>
</tr>
<tr>
<td>Traumatizing Events of Discrimination</td>
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<tr>
<td>Life-threatening Medical Diagnosis of Self or Loved One</td>
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</tbody>
</table>

3. If you have experienced traumatic events that were not on the previous list, please add them here. (For example, what is the worst thing that has ever happened to you?) Please Specify.
4. Please indicate how upset you have been this week about each of these other traumatic events that were not on the previous list. If you did not add any traumatic events in the last question, you may skip this one.

<table>
<thead>
<tr>
<th>Event</th>
<th>Not at all</th>
<th>A little bit</th>
<th>Moderately</th>
<th>Quite a bit</th>
<th>Extremely</th>
<th>It has been less than 1 month</th>
</tr>
</thead>
<tbody>
<tr>
<td>Event 1</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Event 2</td>
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<tr>
<td>Event 3</td>
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<tr>
<td>Event 4</td>
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<tr>
<td>Event 5</td>
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</tr>
</tbody>
</table>
## 5. Response to Trauma

### 1. Please Indicate your Experience during the Last Week:

<table>
<thead>
<tr>
<th>Experience</th>
<th>Never</th>
<th>Sometimes</th>
<th>Often</th>
<th>Most of the Time</th>
<th>All the Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>I can allow things to happen in my surroundings without needing to control them.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I make it through the day without distressing recollections of past events.</td>
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</tr>
<tr>
<td>I sleep free from nightmares.</td>
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</tr>
<tr>
<td>I am able to stay in control when I think of difficult memories.</td>
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</tr>
<tr>
<td>I do the things I used to avoid.</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>I am safe.</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>I feel safe.</td>
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</tr>
<tr>
<td>I have supportive relationships in my life.</td>
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</tr>
<tr>
<td>I feel that I can now safely feel a full range of emotions.</td>
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</tr>
</tbody>
</table>

### 2. Please Indicate your Experience during the Last Week: (Continued)

<table>
<thead>
<tr>
<th>Experience</th>
<th>Never</th>
<th>Sometimes</th>
<th>Often</th>
<th>Most of the Time</th>
<th>All the Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>I can allow things to happen in my surroundings without needing to control them.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am able to concentrate on thoughts of my choice.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have a sense of hope about the future.</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
6. Response to Past Traumatic Events:

1. Please indicate how upset you have been about past traumatic events in the last week:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Not at all</th>
<th>A little bit</th>
<th>Moderately</th>
<th>Quite a bit</th>
<th>Extremely</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any reminder brought back feelings about it.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I had trouble staying asleep.</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other things kept me thinking about it.</td>
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<td></td>
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</tr>
<tr>
<td>I felt irritable and angry.</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>I avoided letting myself get upset when I thought about it or was reminded of it.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I thought about it when I didn't mean to.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I felt as if it hadn't happened or wasn't real.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I stayed away from reminders about it.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pictures about it popped into my mind.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Please indicate how upset you have been about past traumatic events in the last week: (Continued)

<table>
<thead>
<tr>
<th>Statement</th>
<th>Not at all</th>
<th>A little bit</th>
<th>Moderately</th>
<th>Quite a bit</th>
<th>Extremely</th>
</tr>
</thead>
<tbody>
<tr>
<td>I was jumpy and easily startled.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I tried not to think about it.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I was aware that I still had a lot of feelings about it, but I didn't deal with them.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My feelings about it were kind of numb.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I found myself acting or feeling like I was back at that time.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I had trouble falling asleep.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I had waves of strong feelings about it.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I tried to remove it from my memory.</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I had trouble concentrating.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3. Please indicate how upset you have been about past traumatic events in the last week:

<table>
<thead>
<tr>
<th>Reminders of it caused me to have physical reactions, such as sweating, trouble breathing, nausea, or a pounding heart.</th>
<th>Not at all</th>
<th>A little bit</th>
<th>Moderately</th>
<th>Quite a bit</th>
<th>Extremely</th>
</tr>
</thead>
<tbody>
<tr>
<td>I had dreams about it.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I felt watchful and on guard.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I tried not to talk about it.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

7. Thank You

Your help with this research is really appreciated! To redeem your FREE coffee or latte, take a copy of this page to the Social Work front office on the second floor of the University Center Building C, and Charles Reid will give you a card that you can use at Brew & Bean just two blocks from the University Center at 1730 West Pensacola Street Tallahassee Florida 32304 (850) 224-2739. Please enjoy!

If you live outside Tallahassee, just send me an email at renemccoy@comcast.net with the code word "coffee," your name and address, and I will send you a gift card.

If you are unable to print this page or you have any questions, please call Ilene McCoy at (850) 868-8607.

8. Thank You for Your Time
APPENDIX E

APPROVAL MEMORANDUM

Office of the Vice President For Research
Human Subjects Committee
Tallahassee, Florida 32306-2742
(850) 644-8673 - FAX (850) 644-4392

APPROVAL MEMORANDUM (for change in research protocol)

Date: 2/5/2009

To: Rene McCoy
2609 Vassar Rd.
Tallahassee, FL 32309

Dept: SOCIAL WORK

From: Thomas L. Jacobson, Chair

Re: Use of Human subjects in Research
Project entitled: Ego-Resiliency Study

The memorandum that you submitted to this office in regard to the requested change in your research protocol for the above-referenced project have been reviewed and approved. Thank you for informing the Committee of this change.

A reminder that if the project has not been completed by 10/21/2009, you must request renewed approval for continuation of the project.

By copy of this memorandum, the chairman of your department and/or your major professor is reminded that he/she is responsible for being informed concerning research projects involving human subjects in the department, and should review protocols of such investigations as often as needed to insure that the project is being conducted in compliance with our institution and with DHHS regulations.

This institution has an Assurance on file with the Office for Human Research Protection. The Assurance Number is IRB00000446.

cc: Bruce Thyer
APPLICATION NO. 2008.0897-R
Dear Social Work Student,

I only need 18 more students to take this brief survey if you haven’t already done so. You will get a free gift card for coffee as a “Thank You.”

My name is Rene’ McCoy, and I'm a doctoral student here at the FSU College of Social Work. I am conducting a survey exploring the ways people respond to the traumas of life. I really need your help and will greatly appreciate it if you take 5-10 minutes to complete this survey. If you complete the survey, I’d like to thank you with a FREE cup of coffee or latte. Just take a copy of the last page of the survey to the Social Work front office on the second floor of the University Center Building C, and Charles Reid will give you a card that you can use at Brew & Bean just two blocks from the University Center at 1730 West Pensacola Street Tallahassee Florida 32304 (850) 224-2739. If you live outside Tallahassee, just make a note of the codeword on the last page of the survey, and then email me at renemccoy@comcast.net with the codeword, your name and address, and I’ll send you a gift card through the mail. Please be assured that I cannot connect your survey responses to your name and address.

Here is a link to the survey: [http://www.surveymonkey.com/s.aspx?sm=su9os6EE7X5x6h6HHr87xw_3d_3d](http://www.surveymonkey.com/s.aspx?sm=su9os6EE7X5x6h6HHr87xw_3d_3d)

Thanks Again!

Rene’ McCoy
renemccoy@comcast.net
(850) 668-6607 h.
(850) 321-0966 c.
Feel free to call me if you have any questions.
APPENDIX G

EMAIL FOR OUT-OF-TOWN STUDENTS

Dear Social Work Student,

I only need 18 more students to take this brief survey If You Haven’t Already Done So. You will get a free Starbucks gift card for your time worth $5.00 as a “Thank You.”

My name is Rene’ McCoy, and I’m a doctoral student at the FSU College of Social Work. I am conducting a survey exploring the ways people respond to the traumas of life. I really need your help and will greatly appreciate it if you take 5-10 minutes to complete this brief survey. If you complete the survey, I’d like to thank you with a FREE gift card to Starbucks worth $5.00. Just take the survey, make a note of the code word on the last page, and then email me at renemccoy@comcast.net with the code word and your name and address. Please be assured that I cannot connect your survey responses to your name and address.

Here is a link to the survey:
http://www.surveymonkey.com/s.aspx?sm=su9os6EE7X5x6h6HHr87xw_3d_3d

Thanks Again!

Rene’ McCoy
(850) 668-6607 h.
(850) 321-0966 c.
Feel free to call me if you have any questions.
Dear Social Work Student,

My name is Rene’ McCoy, and I'm a doctoral student here at the FSU College of Social Work. I am conducting a survey exploring the ways people respond to the traumas of life. I really need your help and will greatly appreciate it if you take 5-10 minutes to complete this brief survey. If you complete the survey, I'd like to thank you with a FREE cup of coffee or latte. Just take a copy of the last page of the survey to the Social Work front office on the second floor of the University Center Building C, and Charles Reid will give you a card that you can use at Brew & Bean just two blocks from the University Center at 1730 West Pensacola Street Tallahassee Florida 32304 (850) 224-2739.

Here is a link to the survey: [http://www.surveymonkey.com/s.aspx?sm=su9os6EE7X5x6h6HHr87xw_3d_3d](http://www.surveymonkey.com/s.aspx?sm=su9os6EE7X5x6h6HHr87xw_3d_3d)

Thanks Again!

Rene’ McCoy
(850) 668-6607
Feel free to call me if you have any questions.
Dear Social Work Student,

My name is Rene´ McCoy, and I'm a doctoral student at the FSU College of Social Work. I am conducting a survey exploring the ways people respond to the traumas of life. I really need your help and will greatly appreciate it if you take 5-10 minutes to complete this brief survey. If you complete the survey, I'd like to thank you with a FREE gift card to Starbucks worth $5.00. Just take the survey, make a note of the code word on the last page, and then email me at renemccoy@comcast.net with the code word and your name and address. Please be assured that I cannot connect your survey responses to your name and address.

Here is a link to the survey: http://www.surveymonkey.com/s.aspx?sm=su9os6EE7X5x6h6HHr87xw_3d_3d

Thanks Again!

Rene´ McCoy
(850) 668-6607
Feel free to call me if you have any questions.
APPENDIX J

APPROVAL MEMORANDUM FOR PROTOCOL CHANGE

Office of the Vice President For Research
Human Subjects Committee
Tallahassee, Florida 32306-2742
(850) 644-8673 • FAX (850) 644-4392

APPROVAL MEMORANDUM (for change in research protocol)

Date: 3/19/2009

To:
Rene McCoy
2609 Vassar Rd.
Tallahassee, FL 32309

Dept: SOCIAL WORK

From: Thomas L. Jacobson, Chair

Re: Use of Human subjects in Research
Project entitled: Ego-Resiliency Study

The memorandum that you submitted to this office in regard to the requested change in your research protocol for the above-referenced project have been reviewed and approved. Thank you for informing the Committee of this change.

A reminder that if the project has not been completed by 10/21/2009, you must request renewed approval for continuation of the project.

By copy of this memorandum, the chairman of your department and/or your major professor is reminded that he/she is responsible for being informed concerning research projects involving human subjects in the department, and should review protocols of such investigations as often as needed to insure that the project is being conducted in compliance with our institution and with DHHS regulations.

This institution has an Assurance on file with the Office for Human Research Protection. The Assurance Number is IRB00000446.

cc: Bruce Thyer
APPLICATION NO. 2008.0897-R
1. Successful suicide attempt by a loved one.

2. Fallout with several friends

3. Dealing with alienated family members of my husband

4. Boyfriend incarcerated, emotional abuse by a parent, loss of job

5. House fire

6. Divorce

7. Custody of my child was lost for seven months

8. I authorized a permanent, irreversible surgery while pregnant and depressed that I deeply regret. I never should have been able to consent to this surgery in my condition. This surgery sterilized me and I am deeply traumatized by the experience. I think about it almost all of the time.

9. Children being caught doing illegal activities

10. Stayed in my home during Hurricane Ivan

11. Not being able to communicate with others because of a learning disability and not being able to understand information like other people. It can definitely effect a person in life just in general but on important issues such as a career. The individual with the learning disability can try extremely hard to try to be the best they can be. It is others who are the problem in the scenario due to them not being patient or due to them not understanding or due to the fact that they believe that the individual with the learning disability can not do anything.

12. Homeless

13. I have experienced verbal abuse, emotional abuse, and abandonment by friends

14. I am not sure if you want to know if we have experienced these traumatic experiences within the last month or ever. In this case, my mother passed of cancer last year and my husband was diagnosed with terminal brain cancer in September. Both are equally traumatic.

15. My brother shot himself in the head.
16. My sister suffered from an eating disorder and almost died because of it.  
Event 1- Stress from parent losing job and having to move to another state.  
parental neglect

Other than that, nothing terrible.

18. Being yelled at and belittled by the clients at my internship.

19. My friend's father died right in front of me, while I was giving him CPR in Germany about 4 years ago. I've never cried about it...  
My car stopped during a tornado and almost rolled down a hill into traffic.

20. I cracked my skull when I was 16 years old while playing baseball. I suffered a traumatic brain injury as well as a stroke. I was hospitalized for several months and had to learn how to walk, talk, and other basic abilities in life that are taken for granted.

21. A break up with a loved one that was very hard on you or the other  
A fight with a best friend that ended in bad terms and ended their relationship

22. 11-Sep

23. flood in community

24. Losing one of my closest friends to suicide.

25. As a teenager, a man tried to abduct me while I was running in my neighborhood. He was later convicted of the death of 3 teenage girls.  
Temporary separation from a parent and placed in foster care

26. Moving to a new country...I would say it was moderately traumatizing.

27. Non-life threatening serious medical trauma  
parent's drug addiction/multiple recoveries and relapses

28. I was witness to the Sept. 11th terrorist attack on the World Trade Center as I worked around the corner and saw terrible devastation, dismemberment, etc.  
Client committing suicide  
experienced two major car accidents within six months.

29. Experiencing or Living With PTSD Episodes of Loved One

30. Car accident in which physical injury did not result.
31. Being cheated on by my first spouse - I think being betrayed by a trusted intimate is a type of trauma you could add to the list. P.S. I'm a doctoral student and that wasn't one of the options on the first page!

32. I did not include Domestic Violence on this list because it has not occurred directly to me. However, I work with DV victims and have experience 2nd hand trauma that affects me on occasion in my daily life.

33. An airplane I flew on had to turn around due to the maintenance personnel forgetting the air conditioning panel.
LIST OF REFERENCES


Reneé McCoy

Professional Preparation

Present  The Florida State University
Tallahassee, Florida
Doctoral Candidate, Graduate Assistant
1993  Master of Social Work; G.P.A. 3.9
1985  The University of Florida
Gainesville, Florida
Bachelor of Science in Mathematics Education; G.P.A. 3.6
1981 - 1983  Brenau University
Gainesville, Georgia
Focus of Study: Education; G.P.A. 3.7

Professional Licenses
Licensed Clinical Social Worker, State of Florida, # 0004919

Professional Experience

1998 - 2003  Department of Children & Families, State of Florida
Utilization Management Specialist, Tallahassee, Florida
1994 - 1998  Tallahassee Memorial Psychiatric Center
Psychiatric Clinical Social Worker, Tallahassee, Florida
1993  Big Bend Hospice, Inc. & Wakulla Manor Nursing Home
Social Work Intern, Tallahassee, Florida  
1988 – 1990  Florida Chamber of Commerce  
Manager of Education, Tallahassee, Florida  

1986 - 1988  Up With People  
Public Relations Representative, Broomfield, Colorado  

1986  Leon County School Board  
Math Teacher - Adult Education, Tallahassee, Florida  

1984 – 1985  The University of Florida  
Algebra/Trigonometry Teacher  

**Professional Publications:**


**Guest Reviewer:**


**Contributing Author:**


**Professional Presentations:**


Additional Teaching Experience
1996 - Teacher for Solution Skills – SAT Preparatory Class
1994 - Assistant Teacher for Reevaluation Counseling Class
1986 - Teacher for Leon County Schools - SAT Preparatory Class
1985 - Teacher for The University of Florida - GRE Preparatory Class
1985 - Teaching Internship with Eighth Grade Students at Westwood Middle School
1984 - Assistant Teacher for Computer Courses
1983 - Teachers’ Aide, Leon County Schools, Elementary Level