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The Role of a Sense of Coherence In The Prevention of Compassion Fatigue

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The Role of a Sense of Coherence
In The Prevention of Compassion Fatigue

Mary Eleanor Schaffer

Dissertation submitted to the
College of Human Resources and Education
at West Virginia University
in partial fulfillment of the requirements
for the degree of

Doctor of Philosophy
in
Counseling Psychology

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2011

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salutogenic, trauma, PTSD, counselor development, psychologist development
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Abstract

The Role of A Sense of Coherence in the Prevention of Compassion Fatigue

Mary Eleanor Schaffer

Compassion fatigue is defined as the syndrome experienced by a helper who meets the full diagnostic criteria for PTSD with a qualifying criterion A1 event that is not personal experience, but vicarious learning about a traumatic event that was experienced by a person with whom the therapist has a helper/client relationship. The prevention of compassion fatigue is considered important due to the pain associated with distress experienced by the helper and because it may result in a helper who is less able to provide effective treatment for clients. The sense of coherence (salutogenic) model proposed by Aaron Antonovsky (1987) identifies meaning, manageability and comprehensibility as facets contributing to the ability of an individual to manage a high stress load well and move toward the positive end of a health continuum. The purpose of this study was to investigate if a sense of coherence provides protection against compassion fatigue. Additionally, the correlation of training in trauma therapy, past traumatic experience, supervision and counseling experience with compassion fatigue was examined. After controlling for social desirability, a medium negative correlation between sense of coherence and compassion fatigue was found in a group of 131 individuals who provide support to victims of trauma. Contrary to previously published research and the hypothesis for this study, a correlation was not found between compassion fatigue and training in trauma therapy, past traumatic experience, supervision or counseling experience with victims of trauma.

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The Role of a Sense of Coherence In The Prevention of Compassion Fatigue

Chapter 1: Compassion Fatigue

Psychological trauma is an affliction of the powerless. At the moment of trauma, the victim is rendered helpless by overwhelming force. When that force is that of nature, we speak of disasters. When the force is that of other human beings, we speak of atrocities. Traumatic events overwhelm the ordinary systems of care that give people a sense of *control, connection and meaning* (italics added) (Herman, 1992b, p. 33).

The essence of trauma lies in the experience of unbearable affect. (Stolorow & Atwood, 1992, p.52)

What is compassion fatigue? How does it impact those who care for the victims of trauma? Compassion, according to the Encarta dictionary, is “sympathy for the suffering of others, often including a desire to help” (Encarta, 2009). This desire to help has been observed to lead to exhaustion and fatigue in the caretaker; a fatigue so profound it is understood by some to be an unavoidable casualty of the desire to help. (Figley, 1995a, 1995b, 1999, 2002; Pearlman & Mac Ian, 1995; Rothschild & Rand, 2006; Stamm, 1999).

Compassion fatigue, the most recent term in an evolving taxonomy and conceptualization in the field of traumatology, has been associated with the cost of caring for those who have experienced the horrors of a traumatic event (Figley, 1995a, 1995b, 1999, 2002; Valent, 2002). Many researchers have understood this cost of caring as

leading to a disorder of overwhelming secondary traumatic response in those who care for victims of trauma, with many, if not all, of the symptoms of PTSD (Figley, 1995a, 1995b, 1999, 2002; Pearlman & Mac Ian, 1995; Rothschild & Rand, 2006; Stamm, 1999).

The pathological response to witnessing a traumatic event has been formally recognized as posttraumatic stress disorder (PTSD) since 1978 with the publication of the International Classification of Diseases, Ninth Revised Edition (ICD-9) (World Health Organization, 1978). The American Psychiatric Association (1980) formally recognized PTSD as a diagnosable mental disorder two years later. Since that time, the understanding that exposure to trauma can result in a mental disorder in a previously psychologically healthy individual has been sustained by research and clinical observation with only minor changes in the diagnostic criteria. PTSD is unique among mental disorders in that it requires an event occurring outside the individual as the first criterion for diagnosis. Criterion A for a diagnosis of PTSD in the current *Diagnostic and Statistical Manual of Mental Disorders fourth edition, text revision (DSM-IV-TR)* states:

The person has been exposed to a traumatic event in which both of the following have been present:

(1) the person experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others (2) the person's response involved intense fear, helplessness, or horror. Note: In children, this may be expressed instead by disorganized or agitated behavior. (4th ed., text rev.; *DSM-IV-TR*; American Psychiatric Association, 2000, p. 467).

The American Psychiatric Association's current *DSM-IV-TR* (2000) notes that PTSD is possible when an individual is traumatized either directly or indirectly. The latter pathway is what is referred to in research literature as compassion fatigue when it occurs in a helper who is emotionally affected by the suffering and trauma of someone with whom they have a close association, such as that between a therapist and a client.

The importance of understanding, preventing, and treating compassion fatigue has two layers. In one layer, therapists who are disabled as a result of compassionate interaction with their client's traumatic sequelae are less able to be effective in support of their clients' healing. In another layer, therapists who suffer as a result of their work, also become victims (Figley, 1995a, 1999, 2002; Pearlman & Mac Ian, 1995; Rothschild & Rand, 2006; Stamm, 1999). The consequences of mental suffering from the impact of trauma can have severe, even fatal consequences for the victim in addition to uncomfortable distress. Pietrzak et al. (2010) found in a population of recent combat veterans that suicide contemplators were more likely to screen positive for posttraumatic stress disorder than non suicide contemplators, highlighting the urgency in insuring early, effective treatment for all forms of PTSD.

Compassion fatigue is increasingly important to study because the number and intensity of Criterion A events for PTSD currently appear to be increasing in intensity, frequency and duration. Humans appear to be capable of creating increasingly horrible man made disasters. Even the impact of a natural disaster is brought to a heightened awareness and re-exposure through highly developed and repetitious mass communications. This increase in traumatic exposure, both direct and vicarious, only increases the urgency for finding effective treatment. There is a growing interest among

researchers as to how best to treat the psychological fallout from such events, which extend beyond the primary trauma victim to those who care for them (Adams, Boscarino, & Figley, 2006; Bonanno, Galea, Bucchiarelli, & Vlahow, 2007; Figley, 2002; Rothschild & Rand, 2006).

Statement of the Problem

A therapist experiencing compassion fatigue can become less effective, even impaired in treating clients who have experienced a potentially traumatic event. If clinicians and researchers can learn to ameliorate or even prevent compassion fatigue, we can increase the quality and effectiveness of service provided to our clients who are victims of trauma. In addition, compassion fatigue can lead to the experience of personally painful psychological sequelae on the part of the therapist, potentially resulting in an additional victim. Preventing and ameliorating compassion fatigue also protects the potential second victim: the therapist (Figley, 2002; Pearlman & Mac Ian, 1995; Rothschild & Rand, 2006; Stamm, 1999).

A Sense of Coherence as Protection

Aaron Antonovsky (1987) was a medical sociologist who chose to focus on factors that contributed to health and vitality rather than disease. His research led to his conceptualization of the construct of a sense of coherence (SOC) and the development of a scale to measure it, the 29-item sense of coherence scale. A sense of coherence is a protective construct composed of three domains of comprehensibility, manageability and meaningfulness. Comprehensibility refers to an individual's ability to make sense of one's environment. Manageability is the belief that an individual has the requisite resources to deal with the challenges he or she is facing. Meaningfulness refers to the

belief that these challenges are worth the investment and the challenge. Antonovsky proposed that this sense of coherence served to activate and strengthen an individual's resistance resources toward the successful reduction and even prevention of physical disorders. Antonovsky originally defined a sense of coherence as:

...a global orientation that expresses the extent to which one has a pervasive, enduring though dynamic, feeling of confidence that one's internal and external environments are predictable and that there is a high probability that things will work out as well as can reasonably be expected. (1987, p.xiii).

As his research progressed, Antonovsky found increased empirical evidence that suggested a sense of coherence was a key to understanding the origins of physical health and generalized resistance resources.

Other researchers have found this sense of coherence positively correlates with resilience in the face of psychological stress. Kaiser, Sattler, Bellack and Dersin (1996) found that a measurable sense of coherence was correlated with less psychological distress, depression and anxiety following Hurricane Hugo. In a study of traffic accident victims, Frommberger et al. (1999) found that a measurable sense of coherence correlated negatively with the development of posttraumatic psychopathology. Helen Antonovsky (Aaron Antonovsky's daughter) and Sagy (2001) found that a sense of coherence was negatively correlated with anxiety responses in adolescents in "normal" stressful situations. Little research has been published to date on the role of a sense of coherence in the prevention of compassion fatigue (Linley, & Joseph, 2007; Linley, Joseph, & Loumidis, 2005).

Purpose of the Study

The focus of this research was on the correlations between compassion fatigue and a sense of coherence. Other variables identified in the literature that may serve as either risk or protective factors were also examined. The additional variables that were investigated are training in trauma therapy, past personal traumatic experience, and counseling experience with victims of trauma. The emphasis was on protective factors that may provide resilience to, and perhaps accelerate recovery from, the psychological distress and potential impairment of compassion fatigue. The primary question of interest concerned a sense of coherence and the hypothesized protection it may provide against compassion fatigue.

Research Questions

Much remains to be learned about the impact of traumatic exposure on primary and secondary victims. In a recent meta-analysis of risk factors for PTSD, the only significant predictors to show relatively homogeneous effects were psychiatric history, childhood abuse, and family psychiatric history (Brewin, Andrews & Valentine, 2000). Ozer, Best, Lipsey and Weiss (2008) reviewed 2,647 studies of PTSD and found the seven most significant predictors to be prior trauma, prior psychological adjustment, family history of psychopathology, perceived life threat during the trauma, posttraumatic social support, peritraumatic emotional response and peritraumatic dissociation. Adams et al. (2006) found negative life events and a lack of a sense of mastery to be the most significant predictors of compassion fatigue in therapists. Despite the multitude of studies on risk factors, little is known about protective factors.

The primary question of interest for this study concerned protection against compassion fatigue. This contrasted with a more traditional approach of examining risk factors for PTSD. The focus on protective factors is in keeping with Antonovsky's (1987) salutogenic model that seeks to understand the origins of health rather than disease. My research question was: How does a sense of coherence, training in trauma therapy, past traumatic experience, and counseling experience with victims of trauma influence compassion fatigue after controlling for social desirability? Five questions were developed from this overall question:

Question 1: Is there a significant correlation between compassion fatigue and a sense of coherence?

Question 2: Is there a significant correlation between compassion fatigue and training in trauma therapy?

Question 3: Is there a significant correlation between compassion fatigue and past personal traumatic exposure?

Question 4: Is there a significant correlation between compassion fatigue and counseling experience working with victims of trauma?

Question 5: Is there a significant difference in the predictive correlation of the predictor variable of a sense of coherence and the other predictor or independent variables of training in trauma therapy, past personal traumatic exposure and counseling experience working with victims of trauma on the dependent variable compassion fatigue?

Summary

In order to sharpen the focus of this research, the existing literature on PTSD, compassion fatigue and related constructs was examined in depth. The literature review also focused on a sense of coherence and additional variables that may provide resilience, and perhaps accelerate recovery from psychological distress, including compassion fatigue. The factors identified in the literature of training in trauma therapy, past personal traumatic exposure and counseling experience working with victims of trauma were examined in terms of their contribution to providing protection from or creating risk for compassion fatigue. Hopefully, this investigation will increase our understanding of compassion fatigue and will benefit both the client and the professional therapist.

Chapter 2: Review of the Literature Related to the Study

Compassion fatigue has been defined by Figley (1995a, 1995b, 1999, 2002) as the syndrome experienced when a therapist meets the full criteria for posttraumatic stress disorder (PTSD) as stated in the *DSM-IV-TR* (2000), with a qualifying event for criterion A1 that is not personal experience, but a vicarious learning about an event experienced by a close associate with whom they have a helper-client relationship. Because compassion fatigue is understood as a form of PTSD, the variables that influence compassion fatigue may be related to the variables that influence PTSD. Or, because the perspective of the helper in a therapeutic relationship is different than that of a victim of a traumatic event, there may be different or additional factors involved.

This relationship between PTSD and compassion fatigue is partially intuitive, partially semantic, but primarily based on the above definition operationalized by Figley (1995a, 1995b, 1999, 2002). To date, there are relatively few studies on compassion fatigue or its related constructs. I propose that a secure base for beginning to understand compassion fatigue needs to start with an understanding of the research literature on trauma events and their posttraumatic reverberations. Through a review of the literature on PTSD and compassion fatigue, I would like to establish a foundation for understanding the variables that influence vulnerability to and resilience against PTSD, and specifically those factors that influence compassion fatigue in the therapist.

History of Our Understanding of Traumatic Response

Soldiers returning from battle have long been observed to exhibit psychological signs of their exposure to the horrors of war. Three thousand years ago, an Egyptian combat veteran named Hori wrote about the feelings he experienced before going into battle: “You determine to go forward. . . . Shuddering seizes you, the hair on your head stands on end, and your soul lies in your hand” (Bentley, 2005, p.1). Over 2500 years ago, the Greek writer of tragedies Sophocles wrote a play about a warrior named Ajax who completed suicide as a result of his response to the horrors of war (Doerries, 2010). The Greek historian Herodotus, in writing of the battle of Marathon in 490 B.C., cites an Athenian warrior who went permanently blind when the soldier standing next to him was killed, although the blinded soldier “was wounded in no part of his body” (Bentley, 2005, p.1). Blindness, deafness, and paralysis, among other conditions, are common forms of conversion reactions experienced and documented in the *DSM-IV-TR* (2000) among soldiers and other victims of trauma today. The understanding that the wounds of traumatic exposure may be more than physical is not new.

Shell shock. The term used during World War I was “Shell Shock” for the cluster of symptoms experienced by many soldiers in response to battle. A pattern of re-experiencing that which they had left behind, avoidance of stimuli associated with their trauma, and increased anxious arousal was identified. As the name implies, “Shell Shock” was understood at that time as a somatic response to the concussive force of the ubiquitous shelling during the war. Many soldiers returned from this war, and all following wars, changed, with their views on life forever altered (Alexander, 2010; Jones & Wessely, 2007).

Traumatic neurosis. Traumatic neurosis was the term used in the first major published study of trauma related psychological sequelae in (Kardiner, 1941). Kardiner's research was based on his work as a psychiatrist in a government hospital between 1922 and 1925 with over 1000 veterans with neurotic disturbances connected with World War I. He believed that:

No psychiatric symptom complex is observed in war which does not occur in peace. The only influence that war has is that it offers opportunities for the development of neurosis in much greater concentration and frequency than do the conditions of peace. (p. 219)

Kardiner (1941) recommended the Army learn to rule out candidates for service who appeared most likely to develop traumatic neurosis, with examples such as stammerers, tiqueurs and those who were "fainty" (p. 220). However, he also noted that he had "often observed the most severe types of traumatic neurosis in soldiers with not of the aforementioned stigmas, soldiers who had great powers of endurance and who distinguished themselves in service as the bravest of men" (p. 220). So while Kardiner's (1941) primary emphasis was on the predisposing characteristics of the individual exposed to the traumatic event of war, even this early study recognized that predispositions did not account for all cases of traumatic neurosis.

Combat fatigue. Following World War II the term "Combat Fatigue" (Hohman, 1947; Mayer, 2007; Menninger, 1946; World Health Organization, 1969) was used to describe the same confluence of symptoms; these phenomena were intuitively recognized as being reactions to the trauma of war, but were not fully understood, conceptualized, or even fully defined. However, it was believed that if a healthy individual experienced

psychological effects in the aftermath of traumatic exposure, time would bring about the remission of symptoms.

These symptoms were considered short-term and reversible. If the symptoms did not resolve naturally, then the primary causation was understood to be a characterological flaw, and the traumatic event was understood to be merely a trigger. Long-term effects of traumatic exposure were regarded as abnormal expressions resulting from a weak personality (Jones & Wessely, 2007; Kardiner, 1941; Scott, 1990).

Sigmund Freud (Freud, 1910/1957, 1939/1959), Eric Erikson (Erikson, 1959) and others recognized in some of their non-military clients severe, even life changing responses to traumatic exposure. However, the event itself was seen merely as a trigger for a pre-existing, previously undetected neurosis (Sharf, 2004). Freud, along with Joseph Breuer, in *Studies on Hysteria* (Breuer & Freud, 1893/2000) argued that the crucial factor was not the event itself, but the susceptibility of the person affected.

Diagnostic and statistical manual of mental disorders (DSM-I) (1st ed.; DSM; American Psychiatric Association, 1952/2008). The category *gross stress reaction* where the particular stress is specified as either combat or a civilian catastrophe was introduced in the original *DSM*. The diagnostic criterion provided in this first publication of the *DSM* was “Under conditions of great or unusual stress, a normal personality may utilize established patterns of reaction to deal with overwhelming fear...If the reaction persists; this term is to be regarded as a temporary diagnosis to be used only until a more definitive diagnosis is established” (p. 40). The strong implication was that a gross stress reaction to an event will be transitory unless there is another disorder present.

Diagnostic and statistical manual of mental disorders, second edition (DSM-II). (2nd ed.; DSM-II; American Psychiatric Association, 1968) In the *DSM-II* (1968) the term “transient situational disturbance” (p. 48) was introduced. One example given for this diagnosis was “Fear associated with military combat and manifested by trembling, running and hiding” (p. 49). The focus remained with the individual rather than the event, as implied by this recommendation “If the patient has good adaptive capacity his symptoms usually recede as the stress diminishes. If, however, the symptoms persist after the stress is removed, the diagnosis of another mental disorder is indicated” (p. 48). The strong implication in this diagnosis is that a disturbing reaction to an event will be transitory unless there is another disorder. Researchers believed that a significant number of individuals with this diagnosis had an underlying personality disorder (Looney, & Gunderson, 1978; Scott, 1990).

In the 1960s researchers began to recognize the event or events as significant factors in understanding the relationship between adaptation and maladaptation. The publication of *The Social Readjustment Rating Scale* (Holmes & Rahe, 1967) was an early attempt to quantify the impact of stressful events on an individual. During this period a transient situational disturbance was generally understood to be less severe and disabling than other major psychiatric disorders in terms of chronicity, length of hospitalization, and disposition (Looney, 1978). By the late 1970s, sparse literature on transient situational disturbance and traumatic neurosis was available to guide either researchers or mental health practitioners (Jones & Wessely, 2007; Scott, 1990; van der Kolk, Roth, Pelcovitz, Sunday & Spinazzola, 2005).

Post Vietnam Syndrome. Following the Vietnam War, a new term was coined; the “Post Vietnam Syndrome” (Berry, 1972; Fleming, 1985; Jones & Wessely, 2007; Scott, 1990). This classification reflected the many tensions the name Vietnam evoked. The social and political resentment against this war was strong and bitter. The idea that the traumatic response of the soldiers could be blamed on the unpopular war resonated with the social climate of the time. Legal, scientific, medical and public recognition that the horrors of this war could be the root of a clinical traumatic response became, in part, politically driven by strong anti-war sentiments. This attribution resulted in more fuel for the social and political resentment (Jones & Wessely, 2007; Lifton, 1973; Scott, 1990).

In 1969 former military psychiatrist Robert Lifton began a loose affiliation along with other mental health professionals in the organization *Vietnam Veterans Against the War* (VVAW). Through this involvement, Lifton and others began to lobby for the inclusion of a combat stress diagnosis in the next edition of the DSM (Scott, 1990). In 1973 Lifton authored *Home from the War* in which he criticized American psychiatry, and more specifically military psychiatry, for failing to appropriately recognize the psychological impact of the war on individuals (Lifton, 1973).

Diagnostic and statistical manual of mental disorders, third edition (DSM-III). (3rd ed.; *DSM-III*; American Psychiatric Association, 1980). With the publication of the *DSM-III* (1980), for the first time the American Psychiatric Association formally recognized maladaptive traumatic response as a mental disorder and named it posttraumatic stress disorder (PTSD). For the first time in any diagnosis the emphasis was on the stressor itself rather than the individual. The primary PTSD diagnostic in criterion A identified an etiological agent outside the individual, rather than a

characterological anomaly or weakness. The diagnostic criterion A read: “Existence of a recognizable stressor that would evoke significant symptoms of distress in almost everyone” (p.238). This reflected a major paradigm shift in the way trauma response was understood: an event, occurring outside of the individual, became the primary diagnostic criterion differentiating PTSD from other disorders. Criterion B required a reexperiencing of the traumatic event and criterion C required a numbing of responsiveness. Criterion D provided a cluster of additional symptoms, of which at least two required endorsement; hyperalertness, sleep disturbance, guilt, trouble concentrating, avoidance and an intensification of symptoms that symbolized the event. It is noteworthy that the *DSM-III* (1980) diagnostic criteria for PTSD required the individual experience a specific traumatic stressor and exhibit signs of reexperiencing the event, but accepted as optional an endorsement of avoidance and hyperalertness from the list of criterion D symptoms. Two subtypes of PTSD were provided in *DSM-III* (1980); acute (onset with-in 6 months after the event) and a subtype of chronic or delayed (duration of 6 months or more or an onset at least 6 months after the event).

Diagnostic and statistical manual of mental disorders, third edition -revised (DSM-III-R). (3rd ed., rev.; *DSM-III-R*; American Psychiatric Association, 1987). The *DSM-III-R* (1987) maintained the requirement that the individual experience an event and included in this criterion A the new requirement that the event be one that was “outside the range of usual human experience and that would be markedly distressing to almost anyone” (p. 250). In addition to maintaining the *DSM-III* (1980) criterion B of reexperiencing, the *DSM-III-R* (1987) included additional requirements of avoidance of stimuli associated with the event (criterion C) and persistent symptoms of arousal

(Criterion D). Previously in *DSM-III* (1980) avoidance and hyperalertness (increased arousal) were identifiable but not requisite symptoms. The duration of the disturbance was required to be at least one month, the subsets were dropped and the only specifier provided became delayed onset.

Diagnostic and statistical manual of mental disorders, fourth edition (DSM-IV). (4th ed.; *DSM-IV*; American Psychiatric Association, 1994). With the publication of the *DSM-IV* (1994) the diagnostic criteria of reexperiencing, avoidance and increased arousal were maintained from the *DSM-III-R* (1987) with some modifications and expansions. The criteria D6 under persistent symptoms of increased arousal of “physiologic reactivity upon exposure to events that symbolize or resemble an aspect of the traumatic event” in *DSM-III-R* (1987, p. 250) was re-conceptualized as persistently re-experienced rather than increased arousal and moved in the *DSM-IV* (1994, p. 428) to the B5 criterion using the same wording of “physiologic reactivity upon exposure to events that symbolize or resemble an aspect of the traumatic event.” An additional criterion was added requiring that the disturbance cause clinically significant distress or impairment (criterion F). PTSD specifiers were expanded to include acute PTSD if the duration of symptoms was less than three months and chronic PTSD if the duration of symptoms was three months or more. The specifier “with delayed onset” was maintained in *DSM-IV* (1994) from *DSM-III-R* (1987) for cases where the onset of symptoms is at least six months after the stressor.

The criterion requiring exposure to an outside event continued to be unique to posttraumatic stress disorder (American Psychiatric Association, 1980, 1987, 1994, 2000). With the publication of the *DSM-IV* (1994), the *DSM-III-R* (1987) requirement

that the criterion A event be outside the range of usual human experience was dropped and new qualifier, A2 was added stating “the person’s response involved intense fear, helplessness, or horror” (p. 428). This recognized that horrific trauma is not outside the usual range of experience, but during the course of a normal life span, many if not most individuals are confronted with a potentially traumatic event (Bonanno et al., 2007).

In other aspects, the diagnostic criteria for PTSD remained the same from *DSM-III-R* (1987) to *DSM-IV* (1994). However a new diagnosis of acute stress disorder (ASD) was identified in the *DSM-IV* (1994) for cases where the posttraumatic disturbance lasts for a minimum of two days and a maximum of four weeks after the traumatic event.

Diagnostic and statistical manual of mental disorders, fourth edition, text revision (DSM-IV-TR). (4th ed., text revision; *DSM-IV-TR*; American Psychiatric Association, 2000). The most recent edition, the *DSM-IV-TR* (2000) maintains the diagnostic criteria and the specifiers for PTSD and acute stress disorder (ASD) as identified in the *DSM-IV* (1994). The narrative description of the diagnostic feature of posttraumatic stress disorder in the *DSM-IV* (1994) and the *DSM – IV-TR* (2000) includes the following clarification to Criterion A1:

The essential feature of Posttraumatic Stress Disorder is the development of characteristic symptoms following exposure to an extreme traumatic stressor...or learning about unexpected or violent death, serious harm, or threat of death or injury experienced by a family member *or other close associate* (italics added) (2000, p. 463).

This indicates that the qualifying event in Criterion A1 may be understood to include vicarious exposure to a traumatic event, as may happen in the close association between a therapist and his or her client.

Diagnostic and statistical manual of mental disorders, fifth edition, (DSM-V).

The proposed language for the *DSM-V* (2010) provided further descriptors for the Criteria A event, including vicarious exposure:

The person was exposed to one or more of the following event(s): death or threatened death, actual or threatened serious injury, or actual or threatened sexual violation, in one or more of the following ways:

1. Experiencing the event(s) him/herself
2. Witnessing, in person, the event(s) as they occurred to others
3. Learning that the event(s) occurred to a close relative or close friend; in such cases, the actual or threatened death must have been violent or accidental
4. Experiencing repeated or extreme exposure to aversive details of the event(s) (e.g., first responders collecting body parts; police officers repeatedly exposed to details of child abuse); this does not apply to exposure through electronic media, television, movies, or pictures, unless this exposure is work related (2010, 309.81 Posttraumatic Stress Disorder).

Criteria three and four indicate intentional movement toward more developed formal clinical recognition of the impact of vicariously experiencing a traumatic event. These expanded criteria, if adopted, will leave no uncertainty that helpers and therapists can

experience and be diagnosed with PTSD as a result of their work and engagement with their client's traumatic experiences.

History and Present Conceptualization of Vicarious Traumatic Response

As early as 1978, researchers began to notice and document that negative psychological sequelae of trauma victims could spill over on to those who seek to work with them (Pines & Maslach, 1978; Rothschild & Rand, 2006). Trauma workers were exhibiting the symptoms of PTSD, yet they did not technically meet the diagnostic criteria because they had not been exposed in vivo to a qualifying event as defined by the *DSM-III* (1980).

A variety of terms have been defined and used, with some degree of confusion, to describe the impact of working with victims of trauma on those in the helping professions (Baird & Kracen, 2006). In 1995 Figley first used the term "compassion fatigue" (1995b, p. 2) as a general term to describe the helping professional's negative psychological sequelae and reduced capacity to provide effective, professional treatment, resulting from compassionate support of a client who has been impacted by a traumatic experience. I will use the term compassion fatigue with the general meaning conceptualized by Figley as PTSD in a helper resulting from vicarious exposure (1995a, 1995b, 1999, 2002).

Much of the early research on traumatic response was conducted with returning veterans, who were all adults and who were primarily male. Current epidemiological research has shown that childhood abuse is the most frequent cause of traumatization in women (Briere, 2004a, 2004b; Harvey, 1996, 2007). In the past two decades researchers have substantiated that trauma has a different impact on adaptation and development at different stages of the life cycle. Trauma early in the life cycle appears to have a much

more pervasive impact than trauma that occurs after an individual's ability to modulate his or her arousal has developed. The impact of abuse when the perpetrator is known to the child has been shown to give rise to a greater prevalence of maladaptive symptomatology than the impact of war on an adult. Duration and intensity of traumatic exposure has also been found to increase vulnerability to traumatic response (Brewin et al., 2000; Herman, 1992a, 1992b; Pearlman & MacIain, 1995; van der Kolk & Pelcovitz, 1999; van der Kolk et al., 2005; Zlotnick & Pearlstein, 1997). These factors of age of exposure, duration of exposure and relationship to the perpetrator may be variables that increase vulnerability to compassion fatigue as well.

Baird and Kracen (2006) found persuasive evidence for personal trauma history as a factor contributing to vulnerability for the related constructs of secondary traumatic stress and vicarious traumatization in their research synthesis of literature published from 1994 to 2003. They also found reasonable evidence for the efficacy of the therapist's perceived personal coping abilities as a protective factor.

Adams et al.(2006) conducted an empirical study of 236 licensed social workers living in New York City following the attacks of September 11, 2001. The authors interpreted the results of their study to indicate that while exposure to secondary traumatic is emotionally difficult, it may not be the sole or even most significant predictor of compassion fatigue. The authors conceptualized compassion fatigue within a stress process framework. In their analysis, exposure to traumatized clients did not, in itself, lead to compassion fatigue. Other recent negative life events, lifetime trauma, social support, the work environment and sense of mastery influenced the impact of the vicarious exposure on the clinician. In their understanding, there is more that impacts our

response to traumatic exposure, both vicarious and immediate, than the intensity and duration of the event itself.

Since Figley first introduced the construct of compassion fatigue in 1995, there has been a lack of conceptual clarity in the literature (Baird & Kracen, 2006). Various additional terms have been used to identify the realization that a professional helper can have a maladaptive response to the trauma experienced by one of their clients. Vicarious trauma, burnout, countertransference, and secondary traumatic stress have been used with varying degrees of clarity and definition to represent this construct. This project will use the construct of compassion fatigue as defined by Figley as the basis for research. The focus of this study is to investigate the correlations between compassion fatigue and factors identified in the literature that may serve as either risk or protective factors. Clarification of the construct of compassion fatigue and associated terminology is foundational to identifying variables that may promote growth and strength or increase risk in response to vicarious exposure to trauma. The term compassion fatigue implies a dialectical tension between fatigue and compassion. One of my research goals is to further understanding of how to resolve that tension toward compassion in order to increase our capacity as therapists to support, love and encourage those we are trained to serve.

Compassion fatigue and the related constructs of burnout, countertransference, secondary traumatic stress and vicarious traumatization are not classified as mental disorders in DSM-IV-TR (2000). Symptoms may align closely with ASD and PTSD, and as noted, may be formally classified as a form of PTSD in the future *DSM-V* (2010).

Other clinical disorders may capture the symptomology of compassion fatigue such as a mood disorder, anxiety disorder, dissociative disorder, somatoform disorders, impulse-control disorders, substance abuse disorders, or in some rare cases, even brief psychotic disorder. Using these diagnoses only presents a partial picture of the confluence of stressors and symptoms an individual may experience. PTSD is frequently diagnosed comorbid with another disorder, as often as 80-88 % of the time (van der Kolk et al., 2005). Forty-eight percent of individuals with a lifetime history of PTSD also meet criteria for major depressive disorder (Gaudiano & Zimmerman, 2010). This raises important issues about the categorical versus the dimensional nature of posttraumatic stress and PTSD. When an individual diagnosed with PTSD also exhibits the full criteria for co-morbid disorders, they maybe presenting with an additional disorder, or perhaps they are presenting with a more complex form of PTSD. This differential diagnostic question may have important implications for diagnosis, treatment and in understanding the impact of traumatic stress both on the primary victim and those who care for him or her.

However, despite the lack of consistent diagnostic criteria for compassion fatigue or even consistent taxonomy for the construct, considerable research has been devoted to defining and empirically investigating risk factors, preventative measures and supportive treatments. (Bober, & Regehr, 2006; Motta, 2008; Pearlman, & Mac Ian, 1995; Pines & Maslach, 1978; Rothschild & Rand, 2006; Stamm, 2002; Valent, 2002).

How is compassion fatigue defined? Within the literature on compassion fatigue, there exists a confusingly inconsistent plethora of terms that have been operationalized by various researchers for their own purposes. In order to effectively

study the variables that correlate with compassion fatigue, it is necessary clarify the criteria and definition. For this study, the following terms will be utilized and defined as follows because these definitions appear to be the most consistent in the current professional literature.

Burnout. Burnout has been conceptualized as a psychological syndrome in response to chronic interpersonal stressors in the workplace (Adams et al., 2006; Jenkins & Baird, 2002; Pines & Maslach, 1978; Rasmussen, 2005; Rothschild & Rand, 2006; Valent, 2002). Three content domains of burnout have been identified through factor analysis (Maslach, Schaufeli, & Leiter, 2001) of emotional exhaustion, depersonalization and a sense of reduced personal accomplishment. The heart of burnout appears to be the consequence of unattended emotional and work overload. It most often occurs in people who care deeply about their work, but feel frustrated and powerless to achieve their work-related goals. This exhaustion and frustration often results in periods of wanting to give up, or in the person thinking they “just do not care anymore.” Burnout has been found to be a contributing factor to compassion fatigue (Adams et al., 2006; Devilly, Wright & Varker, 2009).

Primary traumatization. Primary traumatization is the emotional and cognitive impact on an individual who has directly experienced a traumatic event. Therapists who have the experience of being an abuse victim or of being exposed to imminent danger in a disaster zone may be included in this category (Rothschild & Rand, 2006). The experience of being a primary victim of trauma is not randomly distributed. Gender, age, income, race, class, and culture all influence who may be at risk for what type of trauma (Harvey, 2007). There is some indication that a therapist who is also a primary trauma

victim is at greater risk for compassion fatigue (Baird & Kracen, 2006; Bober & Regehr, 2006; Figley, 2002; Rothschild & Rand, 2006).

Secondary traumatization. Secondary traumatization is used for the experience of traumatic stress where the trauma is not experienced or witnessed directly (Chrestman, 1999; Devilly et al., 2009). Secondary traumatic stress may occur in a loved one of a primary trauma victim or it may occur in a professional helper who has closely aligned his or herself with the trauma victim. Following the September 11, 2001 attacks, individuals around the world reported secondary traumatic stress reactions while watching the World Trade Center go up in smoke on television. These individuals experienced a full range of disturbing symptoms, ranging from mild to full PTSD criteria. Some researchers have gone one step further and proposed a *Secondary Traumatic Stress Disorder* when the stress symptoms are outside the range of adaptive coping and meet full PTSD criteria. The individual, as a result of this vicarious traumatic experience, exhibits full symptoms of the PTSD criteria B, C, and D of re-experiencing, avoidance and increased arousal (Figley, 1995a, 1995b; Pearlman & Saakvitne, 1995a; Valent, 2002; Yassen, 1995). Valent noted that using a respectful label such as secondary traumatic stress disorder for affected trauma workers may help to convey the potential severity of secondary traumatic exposure. However, he also noted that “like PTSD, the label does not heuristically make sense of the wide range of manifestations and symptoms that are relived or avoided or begin to explain why they are suffered” (p. 20). Figley has used the term secondary traumatic stress disorder interchangeably with compassion fatigue in past writings (1995a, 1995b, 1999) to describe PTSD resulting from vicarious exposure to trauma; however, more recently he has used the term

compassion fatigue in his writings (2002). I will use secondary traumatization to refer to the experience of traumatic stress where the trauma is not experienced or witnessed directly.

Vicarious trauma. The term vicarious trauma was first coined by Pearlman and Mac Ian in 1995 to describe “The transformation in the therapist (or other trauma worker) as a result of empathic engagement with clients’ trauma experiences and their sequelae” (p. 558). According to Pearlman and Saakvitne (1995b) the theoretical basis for vicarious trauma as a syndrome is in constructivist self-development theory, which conceptualizes an individual’s adaptation to trauma as an interaction between the individual’s personal history and their personality, and the traumatic event and its social and cultural context. This echoing of a deep change in the trauma workers’ perception of the world is a theme throughout much of the compassion fatigue literature, and a central construct of vicarious trauma (Halpern & Tramontin, 2007; Jenkins & Baird, 2002; Rasmussen, 2005; Valent, 2002). This conceptualization continues to be relevant; with the emphasis on the changes that take place in the therapist and the influence of personal history, personality, the traumatic event and its social and cultural context; or the meaning ascribed to the event. The variables Pearlman and Saakvitne (1995b) proposed contribute to vicarious trauma in therapists include: exposure to trauma patients, the chronicity of trauma work, the individual’s capacity for emotional empathy and a personal history of trauma. For the sake of clarity in terminology, I will use the term vicarious trauma in keeping with more recent writing, to refer to vicarious rather than direct exposure to traumatic events.

Countertransference. Countertransference was first identified by Sigmund Freud (1910/1957) as the therapist’s inappropriate and potentially damaging reaction to a client,

triggered by the therapist's own unconscious needs and neurotic conflicts. More recently, countertransference has been seen as the totality of the therapist's emotional responses and attitudes toward an individual client (Friedman & Gelso, 2000; Gelso, & Hayes, 2001; Van Wagoner, Gelso, Hayes, & Diemer, 1991). While compassion fatigue is typically understood as a long term response (Figley, 1995, 2002), countertransference is understood to be short-term and often confined to a particular client or session (Harrison & Westwood, 2009).

In interpersonal process therapy, countertransference is viewed as a supportive aspect of the therapist's empathic engagement with a client, albeit an engagement that must be monitored and intentionally focused toward the needs of the client (Teyber, 2006). When therapy involves a partial identification and engagement with the client, this will include some level of empathic identification with the trauma client's traumatic sequelae. It may be beneficial to view what happens during the process of vicarious traumatization through the lens of what we know about countertransference and its management.

The empirical literature on the management of countertransference is relatively sparse, however it makes intuitive sense that there may be some insight to be gained in relation to compassion fatigue. Hayes, Riker, and Ingram (1997) found countertransference management was inversely related to counselor avoidance behavior. Elsewhere, avoidance has also been correlated with maladaptive responses to primary traumatic and vicarious traumatic exposure (Figley, 2002; Foa, Keane, & Friedman, 2000; Friedman, 2005; Harvey, 2007; Rand, 2004; Rauch, Foa, Furr, & Filip, 2004; Rothschild & Rand, 2006).

Hayes, Gelso, Van-Wagoner and Diemer (1991) published a study that provided an empirical basis for understanding the management of countertransference. They found that a therapist's inability to disengage from identification with their client, rather than disengaging from the process of empathy itself, led to problems with countertransference. Their study found that therapists with an increased capacity for empathy also experienced the ability to better manage their own responses and increased self-efficacy as a therapist.

A theory of five factors that improve the management of countertransference has received some empirical support. These therapist factors are self-insight, self-integration, anxiety management, accurate empathy and the ability to conceptualize (Friedman & Gelso, 2000; Gelso & Hayes, 2001; Van Wagoner et al., 1991).

The five factors of countertransference management have good face validity in terms of managing compassion fatigue. Compassion fatigue and countertransference can each be understood in part as a process of either attending to or not attending to the therapist's own needs. However, Figley (2002) cautions against oversimplifying the understanding of compassion fatigue as simple countertransference, in part because compassion fatigue is a broader, more extensive concept than countertransference. Countertransference tends to be about the interaction between the therapist and a particular client. Compassion fatigue may influence not only the immediate interaction, but the therapist's interaction with other clients and even the therapist's personal life experience. Additionally, in Figley's view, countertransference "is encased in an elaborate theoretical context that is difficult to measure and to distinguish from all others in the client-therapist transactions" (p.3).

Disorders of extreme stress not otherwise specified (DESNOS). Additional information on primary victims of trauma can be found in the research on disorders of extreme stress not otherwise specified. Currently, disorders of extreme stress not otherwise specified is included in the ICD-10 as a category separate from posttraumatic stress syndrome. Consideration was given to including disorders of extreme stress not otherwise specified as a separate category in the *DSM-IV*. The research compiled by the field trials indicated that the 27 subcategories of symptoms were subsumed by the PTSD classification and did not warrant a separate taxonomy. However, subsequent studies on both veteran and civilian samples have found disorders of extreme stress not otherwise specified in a sizable subset of trauma patients who failed to meet criteria for PTSD. This highlights the categorical versus dimensional nature maladaptive traumatic response. One noteworthy facet of the disorders of extreme stress not otherwise specified criteria is the impact of trauma on an individual's existing systems of meaning (Pelcovitz et al., 1997; van der Kolk et al., 2005; Zlotnick, & Pearlstein, 1997).

The DSM-IV field trial for posttraumatic symptoms was conducted to investigate the definition of the criterion A (the definition of a qualifying traumatic event), the placement of other PTSD symptoms and to explore whether victims of prolonged and repeated interpersonal trauma tended to meet criteria for PTSD or if another diagnosis was more appropriate. The committee organized the most frequently studied symptoms under the rubric of disorders of extreme stress not otherwise specified (Herman, 1992a).

Disorders of extreme stress not otherwise specified were originally conceptualized as a primary stress reaction with sequelae that go beyond the primary diagnostic criteria of PTSD. Disorders of extreme stress not otherwise specified has also

been referred to as complex PTSD and additionally as a separate category of traumatic response. (National Institute for Clinical Excellence, 2005; Pelcovitz et al., 1997; van der Kolk et al., 2005; Zlotnick & Pearlstein, 1997). The disorders of extreme stress not otherwise specified criteria include (a) alteration in regulation of affect, (b) alteration in attention or consciousness, (c) alteration in self perception, (d) alteration in relations with other, (e) Somatization, (f) alteration in systems of meaning, and (g) loss of previous beliefs (Pelcovitz et al., 1997; van der Kolk et al, 2005; Zlotnick & Pearlstein, 1997).

The concept of disorders of extreme stress not otherwise specified is important to the understanding of compassion fatigue because there are threads woven through the research on the effects of trauma work on therapists alluding to the impact of vicarious trauma on the cognitions and the enduring personality of the therapist (Adams et al., 2006; Bober & Regehr, 2006; Figley, 2002; Jenkins & Baird, 2002; Pearlman & Mac Ian, 1995; Phipps & Byrne, 2003; Rothschild & Rand, 2006). Disorders of extreme stress not otherwise specified has some additional congruence with symptoms often associated with compassion fatigue, in that compassion fatigue may manifest with additional sequelae beyond PTSD symptoms of avoidance, intrusion and arousal; such as changes in meaning (Hernández, Engstrom, & Gangsei, 2010; Linley et al., 2005; Owens, Steger, Whitesell, & Herrera, 2009; Pearlman & Mac Ian, 1995).

Further study on disorders of extreme stress not otherwise specified will increase the professional's ability to effectively treat victims of trauma. Additionally, because several of the disorders of extreme stress not otherwise specified criteria overlap with what we are learning about compassion fatigue, understanding the totality of an

individual's complex response to traumatic events will aid in understanding secondary victims as well.

Compassion fatigue. Compassion fatigue has been used by some researchers with the same definition as *Secondary Traumatic Stress*. (Bober & Regehr, 2006; Figley, 1995, 2002; Jenkins, 2002; Stamm, 2002). However, in order to utilize terminology that encompasses the full range of traumatic response identified in the literature, I will draw a distinction between the terms. Compassion Fatigue will be used to describe the somewhat amorphous leap from uncomfortable, even pathological responses to reactions that have become diagnosable as PTSD. Compassion Fatigue is conceptualized as the syndrome experienced by an individual who meets the full criteria for Posttraumatic Stress Disorder, with a qualifying event for criterion A1 that is not personal experience, but vicariously learning about an event experienced by a close associate with whom they have a helper-client relationship. Thus, compassion fatigue is related to the cognitive schema of the therapist (Figley, 1995b, 2002). This distinction is in keeping with recent writings by Figley (2002), Halpern and Tramontin (2007), Rothschild and Rand (2006), and Stamm (2002, 2005).

Factors Promoting Resilience

There has been early recognition that while traumatic exposure is difficult, good can come from the rubble. Viktor Frankl (1959/1992) had already begun development of his theory of logotherapy when his work was disrupted by Hitler's occupation of Austria. Frankl believed that if he faced the unavoidable suffering with courage, and held on to his will to meaning, his experience could be used for human achievement and lead to an even deeper awareness of personal meaning. Held against his will in the most despicable of

conditions as a prisoner of war in a Nazi concentration camp, Frankl made the conscious choice to face suffering with courage. This culminated in a deepening of Frankl's compassion, in his personal growth and a clarification of meaning.

Growth often involves tension, sometimes uncomfortable, even painful, between what is and what can be. For Frankl (1959/1992), meaning involved finding the will to support, love and encourage others, despite his own, often acute discomfort. Since Frankl's time, others have built models of resilience to and recovery from psychological distress and built on an awareness of compassion, meaning and purpose (Almedom, 2005; Anadarajah & Hight, 2001; Antonovsky, 1987, 1996; Bryant-Davis, 2005; Friedman, 2005; Grauf-Grounds & Edwards, 2007; Harvey, 1996; Harvey & Tummala-Narra, 2007; Hernández et al., 2010; Honos-Webb, Hart, & Scalise, 2006; Linley & Joseph, 2007; Pallant & Lae, 2002; Pietrzak, Johnson, Goldstein, Malley, & Southwick, 2009; Raingruber & Kent, 2003; Sagy & Antonovsky, 2000).

Linley et al. (2005) have documented positive changes in individuals who have experienced trauma. Nelson (2010) has had strong positive results utilizing a posttraumatic growth model in therapy with service members who experience combat related PTSD. Hernández, Gangsei, and Engstrom (2007) have addressed how therapists who work with survivors of traumatic experiences are positively affected by their clients' stories of resilience.

Sense of coherence. The salutogenic model proposed by Antonovsky (1987) identified meaning, manageability and comprehensibility as the primary domains contributing to the ability of an individual to manage a high stress load well. He called this the Sense of Coherence or salutogenic model. The sense of coherence concept was

originally proposed as an explanation for why some people tend toward the positive end of the physical health continuum. The sense of coherence construct was intended to represent a health orientation continuum rather than a dichotomous variable that people either had or did not have. A medical sociologist, Antonovsky was primarily interested in factors that contributed toward moving toward the healthy end of this continuum, rather than those that contributed toward the disease end. The results of his research indicated that making meaning out of the countless stressors which constitute life, was an important key to health management. More recently, Linley and Joseph (2007) revealed an empirical association between sense of coherence and therapist well being. They found the sense of coherence construct to be the factor most protective against negative psychological changes and compassion fatigue.

Posttraumatic growth. Posttraumatic growth refers to the process by which trauma survivors are positively transformed by their experience of trauma. These survivors experience distress and struggles in trauma's aftermath, but they also experience positive changes in their relationships, their recognition of new possibilities for their life, a greater appreciation of life and personal strength, and spiritual development. The trauma becomes a pivotal point that may trigger a deepened search for life's meaning (Almedom, 2005; Frankl, 1959/1992; Harrison & Westwood, 2009; Hernández et al., 2010; Nelson, 2010; Pietrzak et al., 2009). Hernández et al. (2010) point out that some victims develop a greater sense of altruism, empathy and prosocial behaviors in the aftermath of their own suffering, and move from survivorship to an activist quest to help others.

Vicarious resilience. Vicarious resilience is a new concept, similar to posttraumatic growth, which addresses the question of how psychotherapists who work with survivors of violence and trauma are able to make sense of the impact their work has had on their life (Almedom, 2005; Hernández et al., 2010; Hernández et al., 2007; Ortlepp & Friedman, 2001). Vicarious resilience relates to exploring the way in which some therapists are able to access adaptive processes and coping mechanisms to not only survive, but thrive in their work with victims of trauma, much like some victims of trauma are able to thrive after trauma.

In their qualitative study, Hernández et al., (2007) make specific reference to the inspiration, strength and meaning some therapists are able to derive from working with clients, clients whom these therapists sometimes describe as “heroes” (p. 230). Building on McCann and Pearlman’s (1990) use of vicarious trauma to refer to “a transformation in the therapist’s inner experience resulting in empathic engagement with the client’s trauma material,” these researchers focus on the relationship of vicarious resilience to vicarious trauma, believing that it is possible to both be engaged with a client who has been the victim of trauma and experience a positive rather than a maladaptive transformation as a therapist and as an individual. Hernández et al., (2007) note that vicarious resilience is a process “characterized by a unique and positive effect that transforms therapists in response to client trauma survivors’ own resiliency” (p. 237).

In their research on vicarious resilience, Hernández et. al. (2007) quote Weingarten (2003) in *Common Shock* as speculating that therapists who are able to be fully aware of the implications of the violence experienced by their clients while maintaining a position of effective action are the least vulnerable to vicarious trauma.

This position of empowering individuals to take part in the process of effectively addressing the system that allowed the trauma to occur is a tenant of feminist trauma treatment (Brown, 2004). The concept of learning to be fully aware of one's own sensations and feelings, including pain, during the therapeutic process as a contributor toward resilience against vicarious trauma has also been noted by others (Rand, 2004). This is also a key construct of mindfulness therapy, which encourages the cultivation of an open, expansive, compassionate, present moment awareness that is understood to facilitate adaptive functioning. The therapeutic value of bringing a gentle awareness to experiences of anxiety or fear is that it can help to put the transience of these emotions into perspective and keep the fear of the experience from controlling an individual's life (Orsillo & Roemer, 2005). This position of fully facing the primary source of emotional pain is also basic to the development of emotional regulation in Dialectical Behavior Therapy (Linehan, 1993a, 1993b).

Exquisite empathy. The process of skilled intimate empathic engagements with clients has been termed exquisite empathy. Harrison and Westwood (2009) found when therapists are able to express a strong empathic connection with their clients, while maintaining clarity about interpersonal boundaries, a type of exquisite empathy is formed that is nourishing for both client and therapist. Their findings indicate that empathetic engagement can be a protective factor against compassion fatigue for clinicians who work with victims of trauma. These findings support Hayes et al.'s (1991) finding that therapists with an increased capacity for empathy experienced increased self-efficacy.

Dutton and Rubinstein (1995) have speculated that empathic detachment from a trauma victim may actually lead to blaming the client for their experience. They suggest

that boundary violations among mental health professionals may be more likely with therapists who detach from their own empathic emotional responses to their clients' traumatic material.

The role of trauma specific training. Early research into the construct of vicarious trauma revealed the idea that therapists with less experience and training may be more vulnerable (Pearlman & Mac Ian, 1995). More recent scholars have highlighted the importance of substantial training in preparing students for the work of trauma therapy (Figley, 2002). Despite this, there has been little actual research into the impact of trauma specific training as a protective factor for compassion fatigue. Adams and Riggs (2008) report that only 35.6 % of student therapists in their recent study reported having received substantial trauma specific training. A full quarter of their sample reported no formal trauma training in their graduate programs.

The role of supervision and professional peer support. Bober and Regehr (2006) found a lack of efficacy for clinical supervision as a protective factor against compassion fatigue. This finding is in apparent conflict with other empirical research. There is a growing body of literature indicating that clinical supervision and peer support do indeed diminish the impact of burnout and vicarious traumatization in general, as well as compassion fatigue specifically (Hernández et al., 2010; Linley & Joseph, 2007; Rothschild & Rand, 2006; Sommer, 2008). Linley and Joseph found that therapists who were receiving regular clinical supervision reported more positive psychological changes and greater levels of personal growth.

Supportive clinical supervision needs to be free of any perception that it is linked to performance evaluation and have the assurance of confidentiality in order to be

effective in this respect (Bernard & Goodyear, 2004; Halpern & Tramontin, 2007; Linley & Joseph, 2007; Pearlman & Mac Ian, 1995; Pearlman & Saakvitne, 1995a, 1995b; Rothschild & Rand, 2006). Appropriate clinical supervision provides a safe vehicle for therapists to process and make meaning of their reactions to the pain and suffering of others, while simultaneously increasing their clinical efficacy (Hayes & Frederickson, 2008). Pearlman and Saakvitne (1995a) recommend four components for successful supervision of trauma counselors: a strong theoretical grounding in trauma therapy, attention to both the conscious and unconscious aspects of treatment, a mutually respectful interpersonal climate and educational components that directly address vicarious traumatization (p. 360). Hernández et al., (2010) note that appropriate therapist self-care habits are most often a result of strong training and supervision. Increasing clinical efficacy through skilled clinical supervision might also increase a therapist's sense of competency and manageability, a factor in Antonovsky's (1987) sense of coherence. Clinical supervision also contributes to a supportive work environment, a significant factor in preventing burnout (Bernard & Goodyear, 2004; Campbell, 2000; Pines & Maslach, 1978).

With the preponderance of evidence in support of the protective factor offered by appropriate clinical supervision, the study published by Bober and Regehr in 2006 bears closer examination. Their study of 259 therapists found no association between time devoted to supervision and traumatic stress scores. However, this study was cross sectional and correlational in design. No evaluation was made about the type of supervision or the qualifications of the supervisor to support a therapist working with victims of trauma. It is not possible to determine whether appropriate clinical supervision

that targets the therapist's work with the victim of trauma would be protective regarding compassion fatigue. It may also be possible that therapists with fewer negative beliefs are better able to actively engage in supervision.

One overarching limitation of the research on the support offered by clinical supervision is that trauma therapy is a relatively new field. It is likely that most clinical supervisors who have the experience that qualifies them to supervise, and who have been in practice for a period of time, may not have received adequate training unless they have specifically sought additional training in this field. In addition to a paucity of training for clinical supervisors in vicarious trauma, many supervisors may have had little to no formal training in actual trauma work. Adams and Riggs (2008) found in their study of current students in 11 APA accredited clinical and counseling psychology graduate programs that 38.7% reported minimal training in trauma work and a full quarter of the sample reported working with trauma clients without any prior trauma-related training. Trauma work or vicarious trauma work is not specifically mentioned in two popular textbooks on supervision currently used as textbooks for courses in accredited counseling and psychology graduate programs (Bernard & Goodyear, 2004; Campbell, 2000).

The role of appropriate peer support has frequently been documented as a protective factor against maladaptive traumatic response (Bober & Regehr, 2006; Ozer et al., 2008; Phipps & Byrne, 2003). Isolation from clinical peer support has been identified with an increased risk of compassion fatigue. Therapists who practice in rural areas with limited contact with other professionals have been shown to be more at risk for compassion fatigue than those who have the benefit of an extensive collegial support group. Trauma workers who work in teams where encouragement and supportive case

conferencing are regularly scheduled appear to benefit (Sprang, Clark, & Whitt-Woosley, 2007).

Experience. Dutton and Rubinstein (1995) reported that extensive professional experience is a mediating factor in minimizing secondary trauma. Pearlman and Mac Ian (1995) reported that the more experienced a therapist, the greater the ability to personally buffer the impact of their client's traumatic exposure. They hypothesize this ability is a result of the opportunity for more supervision and training.

While experience has been shown to correlate with a decreased in the maladaptive impact of exposure to traumatic material in clients, it is unclear what the driving reason for this may be. Because studies about this correlation have been cross sectional, it may be that therapists who are overly impacted by compassion fatigue or who are less suited for the field in general may move on to other fields of work, leaving the therapists who are able to deal effectively with their own response to the trauma they hear in their clients as the ones who accrue extensive experience.

Meaning. A developed sense of meaning in life has been identified as a protective factor against PTSD (Dutton & Rubinstein, 1995; Honos-Webb et al, 2006, Owens et al., 2009; Rasmussen, 2005). These studies support the hypothesis contained in this current study that a sense of coherence, which includes a strong component of meaning, might play a mitigating role in the prevention of compassion fatigue, where compassion fatigue is viewed as a form of PTSD and a sense of coherence is understood to be primarily based upon the importance of meaningfulness

In a study of 174 veterans of various service eras, Owens et al. (2009) found lower meaning in life predicted greater PTSD severity in veterans of various service eras.

Their study examined the interrelations among guilt, depression and meaning in life in the context of PTSD. The authors used a hierarchical linear regression to predict PTSD severity while controlling for age and combat severity. They concluded that establishing a sense of meaning in life may be significantly protective against PTSD.

However, there are limitations to Owens et al.'s (2009) study that need to be considered. The cross sectional design did not allow determination of the direction of influence among the variables. The participants were also all volunteers who responded to a veterans' internet-based list serve. These volunteer respondents may have been more interested in mental health issues. It is also possible that the respondents may have been higher functioning veterans due to their use of the internet.

An interesting application of the paradigm of meaning making in recovery from traumatic exposure is a study on story telling models (Honos-Webb et al, 2006). By providing short, almost hypnotic stories that reflect a deep sense of meaning and purpose in life, this intervention is designed to provide a psychological container for the awfulness of the event and shift the focus to finding a greater purpose or meaning. Listening to stories of altruism, courage and hope appear to induce a pleasant relaxed state of consciousness that assists in the reintegration of the personality and in healing disassociate tendencies. In their controlled study, this intervention was found to be significantly more effective than traditional exposure-based treatments.

Others have found that therapists who have a well developed sense of meaning appear more resistant to the impact of compassion fatigue. There appears to be a reciprocal connection between an increased tendency toward reflection following

exposure to the trauma of others and the healing nature of this tendency. (Dutton & Rubinstein, 1995; Rasmussen, 2005).

Hernández et al. (2007) report that in the reciprocity of the therapeutic relationship, therapists may find new meaning in both their work and their life as a result of engagement with survivors of trauma. They understand the potential for vicarious resilience as equal to the potential for compassion fatigue for therapists. In a later paper on vicarious resilience, Hernández et al. (2010) provide an integrative training framework demonstrating how the therapist can be taught to develop vicarious resilience, through nurturing, reciprocity with the client, growth, altruism, empathy and prosocial behavior. They posit this can counteract compassion fatigue.

Antonovsky (1987) understood the component of meaningfulness to be the most critical component in a sense of coherence. He proposed that without meaning, the factors of manageability and comprehensibility were less influential. The concept of a personal, internal meaning driving external behavior or purpose is not new. People can and do choose goals and behaviors based on their personal internalized sense of values and meaning that promote “higher” purposes and behaviors, such as purposes of creativity, morality, generosity, compassion, and spirituality (Antonovsky, 1987).

In his classic work, *Man's Search for Meaning*, the psychiatrist Viktor Frankl (1959/1992) presented his theory of logotherapy, founded on the belief that developing a well grounded system of meaning is the best and only protection against trauma. Frankl wrote (in the non-de-genderized language of his day):

Man's search for meaning is a primary force in his life and not a “secondary rationalization” of instinctual drives. This meaning is unique and specific in that it

must and can be fulfilled by him alone; only then does it achieve a significance which will satisfy his own *will* to meaning. There are some authors who contend that meanings and values are “nothing but defense mechanisms, reaction formations and sublimations.” But as for myself, I would not be willing to live merely for the sake of my “defense mechanisms,” nor would I be ready to die merely for the sake of my “reaction formations.” Man, however, is able to live and even to die for the sake of his ideals and values! (p. 121).

Risk and Vulnerability Factors for Compassion Fatigue

The definition of compassion fatigue used in this current study is PTSD experienced by a helper based on vicarious exposure to the trauma of someone with whom the helper has a professional relationship (Figley, 1995a, 1999, 2002). Based on this understanding of compassion fatigue, an examination of the risk factors for PTSD is important. Although lifetime exposure to a potentially traumatizing event is high (60%-90%), most people do not go on to develop PTSD (Litz, Gray, Bryant & Adler, 2002). Various risk factors have been proposed to explain why some people are more likely to develop PTSD than others.

Peritraumatic dissociation. Peritraumatic dissociation is dissociation that occurs at the time of traumatic exposure. Peritraumatic dissociation is one of the most consistent predictors of the development of PTSD across types of traumatic exposures. Peritraumatic dissociation can lead to cognitive and emotional effort in the maintenance of the dissociated emotional, perceptual, sensory and cognitive fragments. (Brewin et al., 2000; Koopman, Classen, & Spiegel, 1994; Ozer et al., 2008). PTSD is thought by some

researchers to be the result of the failure to integrate these fragments (Foa, Hembree, & Rothbaum, 2007; Nanda, Gaydos, Hathorn, & Watkins, 2010).

It has been noted in this literature review that empathic detachment to the trauma stories of their clients can lead to less effective behaviors on the part of therapists (Dutton & Rubinstein, 1995). It may be that this emotional dissociation on the part of a therapist may lead to increased difficulties with compassion fatigue.

Frequency and intensity of exposure. The frequency and intensity of exposure to traumatic experiences has also been found to be a contributing factor to maladaptive traumatic response (Breslau & Anthony, 2007; Bonanno et al., 2007). Hoge et al. (2004) found that greater combat exposure was strongly associated with a greater risk of soldiers developing chronic PTSD. Herman (1992a) has found evidence that prolonged, repeated trauma has a far greater impact than discrete traumatic experiences. Ozer et al. (2008) found in their meta-analysis of 68 studies on PTSD that prior experiences of trauma increased vulnerability for PTSD with subsequent exposure to trauma.

Emotional regulation. Several additional trends emerged from a review the literature base regarding PTSD. Tull, Barrett, McMillan, and Roemer (2007) concluded that post-trauma symptoms were more prevalent in individuals who experienced difficulty with emotional regulation. Emotional regulation is not stopping emotion, but the ability to fully experience an emotion while accepting it. Much of an individual's distress is a result of maladaptive secondary responses to primary emotions. The primary emotions may have been adaptive and appropriate, but the individual has invalidated them for a variety of reasons and begins to focus on secondary emotions. Emotional regulation can be thought of as a type of exposure technique that facilitates accurate

identification of the accurate primary emotional response, then acceptance, integration and regulation of that response (Linehan, 1993a, 1993b).

A limitation of Tull et al.'s 2007 study is that the data were cross sectional and correlational in nature, thus, it is not possible to determine if the reported emotional regulation difficulties precede or follow exposure to the potentially traumatic event, and even if the difficulties initially stem from symptoms rather than cause them. Further research on this correlation is needed to investigate whether the emotional regulation difficulties are a co-occurring result of the traumatic experiences or if they predisposed the individual to be more vulnerable to the experience of posttraumatic stress symptoms (PTS) and PTSD. The effect of comorbid conditions of depression, substance abuse and anxiety (common comorbid disorders with PTSD) were not accounted for in terms of emotional regulations difficulties. Forty-eight percent of individuals with a lifetime history of PTSD also meet criteria for major depressive disorder (Gaudiano & Zimmerman, 2010).

The impact of emotional regulation skills on traumatic response is a field that is beginning to receive serious attention (Baird & Kracen, 2006; Friedman, 2005; Linehan, 1993a, 1993b; Orsillo & Roemer, 2005; Rand, 2004; van der Kolk et al., 2005). Tull et al. (2007) recommended that skills training in emotional regulation may be a useful early intervention for survivors of a traumatic event. Skills training in emotional regulation is one of the core elements in Dialectical Behavioral Therapy (DBT), a broad based cognitive-behavioral treatment developed specifically for individuals who have been diagnosed with Borderline Personality Disorder (Linehan, 1993a, 1993b). This is not to imply in any way that individuals who have been diagnosed with PTSD also have

borderline personality disorder, but simply to highlight the effective, evidence-based work that is being done in the area of emotional regulation and trauma.

History of abuse and trauma. There appears to be ample evidence that abuse during childhood contributes to forming and deforming a personality leaving the individual especially vulnerable later in life for a variety of difficulties, including posttraumatic stress disorder. Although a causal relationship between childhood abuse and adult psychological disorders cannot be easily established, the extensive replication of findings, both cross-sectionally and prospectively, suggest that childhood abuse is a significant risk factor for later psychopathology, including PTSD (Breslau & Anthony, 2007; Brewin et al., 2000; Briere, 2004b; Gahm, Lucenko, & Fukuda, 2007; Herman, 1992b, 1992b; van der Kolk et al., 2005).

While not as powerful a predictor as childhood abuse, any history of traumatic exposure has been found to increase vulnerability for PTSD. In a meta-analysis of studies published between 1980 and 2000, previous trauma was found to have an effect size ranging from -.05 to .36 in 14 studies (Brewin et al., 2000). A later meta-analysis of 68 studies on predictors of PTSD found an average effect size of .21 for prior trauma (Ozer et al., 2008).

Negative appraisal about self. In a study of firefighter trainees using the Posttraumatic Cognitions Inventory (PTCI), Bryant and Guthrie (2007) found that negative appraisal about one's self rather than about the world was a predictor for developing PTSD. The researchers found in this study that negative appraisals about one's self was a greater predictor of subsequent PTSD than prior exposure to trauma. Additional studies on the validity of the PTCI further supports the strength of the

association between negative cognitions about one's self and poor recovery from traumatic experiences (Nixon & Bryant, 2005; Startup, Makgekgenene, & Webster, 2007).

The factor of manageability is the instrumental component in Antonovsky's (1987) construct of a sense of coherence that addresses the individual's positive belief that he or she has the resources at his or her disposal to reasonably meet the demands of a threatening situation. This sense of coherence, including the factor of manageability, was found to significantly moderate the association between traumatic experiences during the war and posttraumatic stress of child survivors who endured the most severe Holocaust exposure (van der Hal-van Raalte, van IJzendoorn, & Bakermans-Kranenburg, 2008).

Burnout as risk. Burnout was found in a recent study to predict compassion fatigue (the term secondary traumatic stress was used for this construct in this study) and vicarious trauma more than the theoretical models usually associated with compassion fatigue, secondary traumatic stress or vicarious trauma. This study found that secondary traumatic stress, vicarious trauma and burnout are highly convergent constructs. Work related stressors (such as burnout and being new to the profession) predicted therapist distress better than trauma case load. In this study secondary traumatic stress and vicarious trauma correlated more strongly with burnout than they did with each other, indicating these constructs may tap into more than trauma-related psychopathology (Deville et al., 2009).

Adams et al. (2006) found in their study of social workers living in New York City following the September 11, 2001 terrorist attacks that the intensity and duration of exposure to traumatized clients did not in itself lead to compassion fatigue. They selected

social workers because they believed the work environment of this profession is often characterized by high case loads and inadequate resources. The researchers measured general health, negative life events, counseling involvement with victims of trauma, overall counseling load, social support, sense of mastery and burnout. Their results indicated the strongest correlation with compassion fatigue and psychological distress was burnout.

Other risk factors. Other risk factors include younger age at time of exposure, depression, guilt, lower meaning in life (Owens et al., 2009), and decreased social support (Brewin et al., 2000; Pietrzak et al., 2009). Posttraumatic events that appeared to increase likelihood of PTSD are socioeconomic challenges, and poor coping skills afterwards (Tanielian et al., 2008). Pre-event vulnerabilities include being young, single (Wolfe, Erickson, Sharkansky, King & King, 1999), and being female (Seal et al., 2009).

In a recent meta-analysis of 77 articles published between 1980 and 2000 on risk factors for the development of posttraumatic stress disorder in trauma exposed adults, the relative importance of the traumatic event versus factors specific to the individual were examined. The data tended not to be uniform across studies, indicating the influence of other mitigating factors on the individual's response to trauma. The exceptions were consistent findings that a previous psychiatric history, a history of childhood abuse and a family psychiatric history were predictive factors for the development of PTSD following exposure to a traumatic event as an adult (Brewin et al., 2000).

Compassion Fatigue: Integrating Risk and Resilience

It has been noted in this literature review that a personal history of childhood abuse and past traumatic experience are factors that may leave an individual more

vulnerable to PTSD. Perhaps these factors may also leave a therapist more vulnerable to the impact of compassion fatigue.

Counseling experience with victims of trauma may be a sensitizing factor in that it may be that more experience creates the effect of re-traumatizing the therapist much the same as multiple traumas re-traumatize victims. Or, experience may be a protective factor in that the therapist with greater experience has had the opportunity to develop more effective coping mechanisms in order to better withstand the impact of listening to repeated stories of trauma. As noted, a third possibility is that counselors with years of experience are those who have for a variety of reasons remained in the profession, while those who may have been less suited have moved on to other endeavors.

A careful review of the existing literature presents some conflicting data regarding the identification of factors that support therapists' resilience to the stress of engaging with traumatized clients. Based on a cross-sectional design study of 259 therapists who work with trauma victims, Bober & Regehr (2006) concluded that the commonly recommended coping strategies of personal self-care, adequate time devoted to personal leisure, and additional training and supervision did not result in lower levels of distress. The variable that did impact levels of compassion fatigue is a variable traditionally associated with burnout: number of hours per week spent counseling victims of trauma. This finding is consistent with other studies that found that therapists with higher caseloads of trauma clients reported more trauma-related symptoms of their own (Chrestman, 1999; Kassam-Adams, 1999; Linley & Joseph, 2007; Richardson, 2001). Bober and Regehr (2006) also found that increased years of experience working with trauma victims was directly correlated with more disrupted beliefs regarding intimacy

with others. However, this finding does not substantiate causality for the disrupted belief system as a result of vicarious trauma, in that those with disrupted beliefs about intimacy may remain with the work for longer than those without such beliefs.

The process of making meaning beyond the pain of traumatic events may help to contextualize and reduce the threat of trauma. A well developed sense of meaning may help the therapist to understand the pain of their clients in the context of a greater purpose, but it does not take away the pain and grief. The belief that life has value and meaning, that the problems and demands that arise from living in a difficult and challenging world are worthy of intense commitment and engagement appears to be protective, and even growth enhancing (Antonovsky, 1987, 1992, 1996; Antonovsky & Sagy, 2001; Frankl, 1959/1992; Hernández et al., 2010; Nelson, 2010; Sagy & Antonovsky, 2000; van der Kolk and McFarlane, 1996).

In a qualitative phenomenological investigation of 47 participants, including social workers, psychiatrists, nursing faculty and nursing students, Raingruber and Kent (2003) sought to explore the embodied understandings that are associated with traumatic clinical events. They found that there is a reciprocal connection between an increased propensity to reflect following a traumatic interaction and the healing nature of this tendency. The clinicians who were most able to continue on in trauma work reported that they used the traumatic experiences to remind themselves about what was most important in life and to reconnect to their sense of personal and professional meaning.

In the late seventies, the medical sociologist Aaron Antonovsky (1987) began to approach health care from a new paradigm he termed salutogenesis. Antonovsky became interested in the origins of health following research he conducted in 1970 with a group

of concentration camp survivors. He found that 29% of the survivors were in quite good overall emotional health (Antonovsky, 1987). Traditionally, health care had primarily asked questions about the origins of pathology. Antonovsky asked instead, what keeps some people healthy, energetic, satisfied and strong, despite living in the most unimaginable horror. He was able to show that people who were able to handle stress were also more resistant to disease, among other things. This approach, which he termed *salutogenesis*, became the foundation for what is now considered health psychology. The key factor in his theory of salutogenesis is a person's sense of coherence. A sense of coherence is not a dichotomous variable that an individual either has or does not have, but represents a continuum. Antonovsky was interested in factors that moved people toward the positive end of this health continuum. He formally refined his definition of sense of coherence as:

... a global orientation that expresses the extent to which one has a pervasive, enduring though dynamic feeling of confidence that (1) the stimuli deriving from one's internal and external environments in the course of living are structured, predictable, and explicable; (2) the resources are available to one to meet the demands posed by these stimuli; and (3) these demands are challenges, worthy of investment and engagement (Antonovsky, 1987, p.19).

This does not reflect a belief in the denial of pain, but rather an acceptance of pain as an inevitable part of life that can and must be faced. Three common factors were identified in people with a strong sense of coherence, even when confronted by challenging circumstances. The first factor is a sense of comprehensibility--the belief that there is an order and structure to the universe and that the difficulties encountered can be

understood. The second common factor is a sense of manageability, a belief that resources exist for managing the difficulty and pain of the world and that they are available. The third common factor is a belief that life has value and meaning, that the problems and demands that arise from living in a difficult and challenging world are worthy of intense commitment and engagement (Antonovsky, 1987; Sagy & Antonovsky, 2000). This is congruent with Frankl's (1959/1992) logotherapy which focuses on personal meaning to be fulfilled by an individual.

Purpose is defined in this study as an intention to accomplish something that is both intrinsically meaningful to the self and of external consequence to the world beyond the self. Purpose, as a protective factor against the impact of traumatic exposure will be examined.

Antonovsky (1987) initially assumed that an individual's sense of coherence would develop by about the age of 30 and remain relatively stable after that. He conceptualized this development to occur in proportion to one's experience of the world as a predictable and consistent, as well the individual's perception of his or her ability to influence outcomes.

However, more recent research has found that sense of coherence tends to increase with age through the entire lifespan. (Eriksson & Lindström, 2005; Frenz, Carey & Jorgensen, 1993; Nilsson, Leppert, Simonsson & Starrin, 2010; Pallant & Lae, 2002). Whether the increases in individual sense of coherence are an effect of natural selection (the higher the sense of coherence, the greater an individual's chances for health and survival into older age) or a positive effect of the aging process is unclear because most studies have been cross-sectional.

In a ten year longitudinal study of Finnish workers, the development of a sense of coherence was measured as developing in a positive direction during the 10 years of follow-up in those without burnout, while it had weakened in the group with serious burnout (Kalimo, Pahkin, & Mutanen, & Toppinen-Tanner, 2003). A study of the effect of salutogenic treatment using the principals of a sense of coherence found that in individuals who had been diagnosed with mental disorders, a 19 week treatment program could significantly increase participant's scores on the 29-item Sense of Coherence-Scale (Langeland et al., 2006). These studies seem to indicate that an individual's sense of coherence is not as stable as hypothesized by Antonovsky in 1987.

Acceptance of pain as an inevitable part of life is also a theme in dialectical behavior (DBT) (Linehan, 1993a, 1993b) and acceptance therapy (Hayes, Follette, & Linehan, 2004; Orsillo & Roemer, 2005). The antithesis of acceptance, avoidance of the reminders of pain and trauma is pivotal in our current conceptualization of PTSD in the *DSM-IV-TR* (2004). Linehan has described a component of dialectical behavior therapy as encompassing the dialectic of acceptance and change, allowing the client to focus on both. Orsillo, Roemer and Holowka (2005), in their writings on acceptance based therapy, also emphasize the dual role of the importance of acceptance while developing behavioral repertoires that are broad, flexible, effective and value driven.

Despite the distress associated with trauma, some positive effects of traumatic exposure have been reported by some individuals. Antonovsky's sense of coherence has been identified by Linley et al. (2005) as a useful way of conceptualizing factors that influence both positive and negative adaptation in therapists in dealing with the traumatic experiences of others. They found that therapists scoring higher on the 29-item Sense of

Coherence-Scale endorsed more positive changes as a result of their work on the Changes in Outlook Questionnaire, a 26-item self report measure of positive and negative changes as a result of work as a trauma therapist. This study examined the self report responses of 85 therapists who were drawn from the European Society for Traumatic Stress Studies and a traumatic stress e-mail list serve.

In a later study of 156 therapists, Linley and Joseph (2007) identified a sense of coherence as the best predictor of resistance to negative psychological change and compassion fatigue. Their research explored both the potential positive effects and the potential negative effects of working with traumatized clients. They found that regular clinical supervision appeared to be correlated with a strong sense of coherence in therapists, but the study did not address the models of supervision used, or how the type of model might impact sense of coherence or efficacy.

Another interesting aspect of Linley and Joseph's 2007 study is the finding that certain training and practice orientations evidenced consistent associations with therapist well-being. Therapists most likely to report personal growth and positive psychological changes as a result of their work with traumatized clients were those who endorsed a humanistic or transpersonal orientation. Those most likely to report burnout and compassion fatigue were those who operated from a cognitive behavioral orientation.

This correlates with findings in the literature that a well developed sense of meaning and purpose provides a layer of protection against compassion fatigue (Friedman, 2005; Honos-Webb et al., 2006; Rasmussen, 2005; Teyber, 2006) because humanistic and transpersonal orientations place greater emphasis on existential meaning. This is an area that warrants further research, perhaps critically so because the American

Psychiatric Association's 2004 practice guidelines for the treatment of acute stress disorder and posttraumatic stress disorder lists cognitive and behavior therapies as the recommended first line of psychotherapeutic intervention (p. 17). Because Linley and Joseph's (2007) study did not take into account the populations served, it is possible that another factor influenced burnout, such as the current trend toward using cognitive behavioral treatments more frequently with the most difficult populations. It may be that working with these difficult and stressful populations influences burnout and compassion fatigue far more than the theoretical orientation.

While the results of this study invite a more in depth examination of the role of a sense of coherence in the prevention of compassion fatigue, there are some limitations that need to be noted. The study was cross sectional in design, thus the causal relationship between sense of coherence and positive and negative changes is not established. The study did not address the therapist's personal history of trauma or abuse or the length of time they have been working with victims of trauma. Additionally, the sample was self-selected from self-identified trauma therapists and thus may not be fully representative of either therapists in general or of a defined definition of trauma therapists.

Sommer and Ehlert (2004) conducted a study of 552 Swiss mountain guides to assess the frequency of trauma exposure, the prevalence of PTSD and their sense of coherence as measured by Antonovsky's (1987) scale. Seventy-eight percent of the participating mountain guides participating in this study had been exposed to at least one traumatic event involving threat to life, serious injury, or death, but only 37.5% met the emotional response criterion (A2) for PTSD according to the *DSM-IV* (1994) of responding with intense fear, helplessness or horror. The mountain guides endorsed very

few PTSD symptoms, with only 2.7% meeting criteria for PTSD. The mean sense of coherence score (based on the 29-item SOC scale) was very high: 157.9. The mountain guides who endorsed items consistent with the full criteria for PTSD scored significantly lower on sense of coherence total scores (Mann-Whitney U test: z value = -3.832, $P \leq .01$), indicating a correlation with a higher sense of coherence and a lack of PTSD.

Because this study was cross sectional, the sense of coherence measured in this sample of mountain guides can not be credited with providing a protection against PTSD. The high tolerance of these Swiss mountain guides toward objectively dangerous situations as indicated by their low endorsement of the A2 criteria may be due to training and to the highly selective nature of this position. The authors noted that tolerance toward danger as well as against peritraumatic distress is an understudied phenomenon in the chain of events that may lead to the development of PTSD.

In contrast to the hypothesis that a failure to experience the A2 criteria of fear, helplessness or horror may lessen vulnerability for PTSD, Adler, Wright, Bliese, Eckford and Hoge (2008) found in their study of 202 combat veterans who were trained to respond to a potentially traumatic event, that a significant number did not endorse the (PTSD) A2 diagnostic criterion of fear, helplessness, or horror and yet still reported significant PTSD symptoms. These military researchers noted that when individuals in their study did not respond with A2 criteria, they typically responded with statements reflecting their occupation and training.

Both of these studies (Adler et al., 2008; Sommer & Ehler, 2004) highlight the ongoing debate on the definition of a qualifying event in criterion A for PTSD. Weather and Keane (2007) recommend that the clinician attend more to an individual client's

idiosyncratic and personal reaction as the basis for classifying an event rather than seeking a rigid normative standard. This recommendation supports the idea that the meaning ascribed to an event has a strong influence on the impact the event will have on an individual.

In a study of 203 adults born between 1935 and 1944 who were child survivors of the Holocaust, van der Hal-van Raalte et al. (2008) evaluated the participants' adaptation to post-Holocaust life. The researchers utilized the 13-item version of Antonovsky's (1987) original 29-item sense of coherence scale, the Posttraumatic Stress Diagnostic Scale devised by Edna Foa, a Holocaust Survival Exposure Questionnaire they created and a physical health self-report questionnaire developed by the Herczeg Institute on Aging. The results showed that even six decades after World War II, for the child survivors who endured the most severe Holocaust survival exposure, a strong sense of coherence moderated the association between traumatic experiences and evidence of posttraumatic stress. Survivors with a low sense of coherence exhibited the highest level of present day posttraumatic stress complaints.

In this study of Holocaust survivors, a post hoc analysis was conducted to clarify the nature of the significant interaction and the authors found in those with a low sense of coherence, a significant relationship between the number of transitions between camps during the war and PTSD. The number of transitions was understood to potentially increase the threat to the survivor's lives and a repetition of the original separation trauma. The authors interpreted this as support for Antonovsky's original thesis that a sense of coherence serves as a protective factor in mitigating the effects of stress (van der Hal-van Raalte et al., 2008).

A limitation of the van der Hal-van Raalte et al. (2008) study was because it is correlational, it is not possible to know if a strong sense of coherence mitigated the effect of stress or if a third, unmeasured factor, such as strong post event support may have contributed to both the development of a strong sense of coherence and the mitigation of the symptoms. Another weakness of this study is the reliance on participant's 60-year old autobiographical memory for the assessment of trauma severity. While the event may feel as vivid as if it occurred a short time ago, time may have distorted the accuracy of the details (Walls, 2004).

According to the sense of coherence construct (Antonovsky, 1987), individuals who score high on the scale have a sense of meaning following a traumatic event, can comprehend what has happened and have a sense of manageability. This concept was applied to an unselected consecutive subsample of 51 severely injured road traffic accident patients from an initial sampling of 179 patients who were involved in severe road traffic accident in the region around Freiburg, Germany (Frommberger et al., 1999). All 179 patients were assessed a few days after the accident using the Injury Severity Score (ISS), a structured diagnostic clinical interview according to the DSM-III-R (the Diagnostisches Inventar für Psychische Störungen, DIPS), a self-constructed interview of the assessment of first reactions to the accident, the Impact of Event Scale (IES), the Posttraumatic Stress Scale (PSS), the Symptoms Check list 90 (SCL-90-R), a self rating scale for premorbid personality traits, the Munich Personality Test (MPT) and a measure of attributional style: Levenson's IPC (Internality, Powerful others, Chance) scale. The subsample was assessed again at 6-months using the structured diagnostic clinical interview (DIPS) again, a self constructed interview for the assessment of physical,

psychological and social sequelae of the accident and the 29-item version of the Sense of Coherence-Scale (Frommberger et al., 1999). The results indicated that the total sense of coherence score was the most significant predictor of response and it correlated negatively with the development of posttraumatic psychopathology, psychological disorders and anxious cognitions.

The Sense of Coherence-Scale was originally designed to measure a global orientation that expresses the extent to which one has a pervasive, enduring though dynamic feeling of comprehensibility, manageability and meaningfulness. In Antonovsky's (1987, 1992, 1996) theoretical view, the three components are facets of a sense of coherence rather than factors in the sense of factor theory. In the study described above, Frommberger et al. (1999) found in a factor analysis of the sense of coherence total score and its subscales that the subscales were not empirically distinctive. This is consistent with other studies where the factorial structure of the sense of coherence seems to be a unidimensional construct rather than breaking down into three distinct factors of comprehensibility, manageability and meaningfulness (Klepp, Mastekaasa, Sørensen, Sandanger, & Kleiner, 2007; Frenz et al., 1993; McSherry & Holm, 1994; van der Hal-van Raalte et al., 2008). A limitation of this study is that all of the pre-trauma measures are administered post the traumatic event while the patients were still in the hospital and thus not truly either pre or post trauma.

In Frommberger et al.'s (1999) study, sense of coherence was measured only at follow-up because the authors accepted Antonovsky's (1987) hypothesis that it is an enduring trait. However, other research has found that sense of coherence tends to increase with age through the entire lifespan (Eriksson & Lindström, 2005; Frenz et al.,

1993; Nilsson et al., 2010). There is also the possibility is that an individual may lose “comprehensibility, manageably and meaningfulness” in the aftermath of a severe traumatic event. Fontana and Rosenheck (2004) found that certain combat experiences, such as killing the enemy, may lead to a weakening of meaning and faith in some veterans. This possibility will not be tested in this present study.

Some of the worst atrocities in recent history have occurred in the Eastern Democratic Republic of Congo. In a cross-sectional survey of 2,635 adult residents of Eastern Democratic Republic of Congo researchers found that a sense of coherence, as measured by the 13-item Sense of Coherence-Scale (SOC-13), is inversely correlated with cumulative exposure to violence and symptoms of PTSD. Each additional type of violent exposure experienced by the respondents resulted in a significantly lower sense of coherence. Additionally, the number of exposures to violent atrocities was also correlated with an increase in score on the Posttraumatic Stress Disorder Checklist – Civilian Version (PCL-C) and an increase on the Johns Hopkins Depression Symptom Checklist (HDSC) (Pham, Vinck, Kinkodi, & Weinstein, 2010). This may indicate that a sense of coherence may not be a stable construct over the life span, but may be impacted by the frequency and intensity of traumatic experience. This finding is in apparent conflict with the studies that supported Antonovsky’s (1987) original hypotheses that a sense of coherence remained relatively stable personality factor (Feldt, Leskinen, Kinnunen & Mauno, 2000; Feldt et al., 2007; Feldt & Rasky, 1998).

One of the criticisms of using the sense of coherence as a predictive variable is that many of the studies have been cross-sectional so causality could not be assumed. In Sommer and Ehlert’s (2004) study of sense of coherence and PTSD in Swiss mountain

guides, they concluded sense of coherence could only be recognized as a marker for psychological health rather than a protective factor. It has been argued that the very high negative correlation between sense of coherence and mental health measures suggests that sense of coherence is a measurement of psychological health and not a separate construct (Geyer, 1997).

In a longitudinal study, which spanned 19 years, 8,029 individuals who worked for a large multi-national industrial company in Finland were surveyed (Kouvonen et al., 2010). An initial strong sense of coherence was found to be associated with about a 40% lower risk of psychiatric morbidity as measured by hospital admission for non-substance induced psychiatric disorders, substance abuse disorders or a suicide attempt. This association was not accounted for by mental health-related baseline characteristics such as gender, age, marital status, education, occupational status, work environment, risk behaviors or psychological distress. These researchers hypothesized that a sense of coherence and mental health scales may measure the same phenomena.

In her 2005 review of the literature on PTSD, Friedman states the criteria for success must be based on wellness, not illness. The process must be focused on health enhancing behaviors. In their research synthesis, Baird and Kracen (2006) identified the coping ability of the therapist as a protective factor against vicarious trauma. In keeping with Antonovsky's (1987) construct of sense of coherence, the variables that lead to thriving -- protection and growth -- are as important, if not more important, than the factors that lead to risk and vulnerability to compassion fatigue. Perhaps this is a way to make sense of the otherwise puzzling research by Bober and Regehr (2006) who found (in conflict with Baird and Kracen) there was no association between time devoted to

traditional coping strategies and traumatic stress scores used to measure the effectiveness of commonly recommended forms of prevention of secondary traumatic response in therapist. Perhaps the intervening variable that was missing was whether the coping behaviors had some personal meaning for the 259 trauma therapists who participated.

Measurement

A review of the literature reveals several potentially useful instruments in measuring aspects of compassion fatigue. As will become apparent, the most appropriate choice of an instrument is based in part on the definition of compassion fatigue and in part on established validity and reliability.

Compassion fatigue self test and professional quality of life scale (ProQOL).

One of the early measures of compassion fatigue is the Compassion Fatigue Self Test developed by Figley in 1995. It was revised the following year to include a component of compassion satisfaction, resulting in the Compassion Satisfaction and Fatigue Test, an instrument widely used today (Stamm, 2002). Further research led to its replacement by the Professional Quality of Life Scale: Compassion Satisfaction, Burnout and Fatigue Scale, Version IV (ProQOL) (Stamm, 2005). Figley, later supported by Stamm (1999, 2002, 2005), was interested not only in the impact of compassion fatigue on therapists, but also in understanding the positive benefits a therapist derives from working with victims of trauma. In their ongoing research, these researchers hope to pinpoint factors that protect both the primary and secondary trauma victim from the negative psychological effects of trauma and compassion fatigue.

Stamm (2002) learned that the key to a therapist's hardy resistance to compassion fatigue is similar to factors that mediate an adaptive primary stress response: (a) A sense

of control over one's environment, (b) A commitment to one's work and (c) The belief that change is a challenge with a purpose. When hardy resistance is present, under girding all of these factors is a sense of meaning and purpose.

Figley's Compassion Satisfaction and Fatigue Test has been widely used in three versions despite a lack of published reliability (Conrad & Kellar-Guenther, 2006; Linley & Joseph, 2007; Jenkins & Baird, 2002; Valent, 2002; Stamm, 2002) While copyrighted, Figley has given permission for it to be copied and used for personal evaluation and research as long as it is credited and not altered. Subscale psychometric difficulties have been noted by researchers (Figley & Stamm, 1996; Jenkins & Baird, 2002; Larsen, Stamm, & Davis, 2002).

In 2005, Stamm, with the support of Figley, released the revised fourth version and renamed the instrument The Professional Quality of Life Scale (ProQOL), citing recognized difficulties with the psychometric properties of the Compassion Satisfaction and Fatigue Test. Caveats similar to the Compassion Satisfaction and Fatigue Test are offered for the free use of the Pro QOL (Stamm, 2005). This revision purports to address difficulties separating burnout and secondary/vicarious trauma and reduces participant burden by shortening the test from 66 to 30 items. The revision, based on over 1000 participants from multiple studies, was developed by retaining the strongest, most theoretically salient items. Specifically, items were retained if they met both high item-to-scale criteria and were theoretically good representatives of the subscale construct.

Stamm (2005) reports that quantitative decisions were made using Cronbach's alpha, factor analysis, and multigroup factorial invariance, however she does not give the data on these decisions. Each new subscale in the ProQOL has 10 items: seven items

from the previous Compassion Satisfaction and Fatigue Test version and three new items designed to strengthen the overall theory of the subscale. The ProQOL now consists of three subscales: Compassion Satisfaction, Burnout, and Compassion Fatigue. Stamm reports that initial data suggest that these subscales have excellent internal consistency. However, no review of the instrument's psychometric properties has yet been published. This may be due to on going research or it may be due to further problems with the instrument's reliability. Due to this lack of documented reliability or validity, this instrument, even though it is one of the few to directly attempt to measure compassion fatigue, will not be utilized in this study.

It is interesting to note the construct similarity with Antonovsky's sense of coherence. Figley's sense of control over one's environment can be understood to correlate to Antonovsky's construct of manageability. Figley's commitment to one's work and the importance of understanding what you are doing and why correlates to Antonovsky's construct of comprehensibility. The third construct Figley proposes, believing that change is a challenge with a purpose, correlates to Antonovsky's concept of meaningfulness (Antonovsky, 1987; Figley, 2002).

Structured interview for disorders of extreme stress (SIDES). The Structured interview for disorders of extreme stress has been validated through research focused primarily on survivors of early sexual abuse. The interview was validated during the DSM-IV field trials (Pelcovitz et al., 1997; Scoboria, Ford, Lin, & Frisman, 2008; van der Kolk et al., 2005; Zlotnick & Pearlstein, 1997). Because the disorders of extreme stress criteria specify enduring personality changes, including systems of meaning, as a response to traumatic exposure, the structured interview for disorders of extreme stress

may have a useful application as an instrument for furthering research on the hypothesized personality changes that occur in vicarious trauma as a subset of compassion fatigue.

There has been no published research that utilized the structured interview for disorders of extreme stress; however, its broader range of traumatic response may prove to be a valuable research tool. The structured interview for disorders of extreme stress is a 48 item interview measuring current and lifetime alterations in the following seven broad categories of disorders of extreme stress: (a) Regulation of affect and impulses, (b) Attention or consciousness, (c) Self-perception, (d) Perception of the perpetrator of the trauma, (e) Relations with others, (f) Somatization, (g) Systems of meaning (Zlotnick, & Pearlstein, 1997). Because all of these areas are hypothesized to be impacted by compassion fatigue, this instrument may also be a useful tool in a future study for comparing primary and secondary traumatic response. (Pelcovitz et al., 1997; van der Kolk et al., 2005; Zlotnick & Pearlstein, 1997). This study will focus attention on these domains, particularly on the impact of vicarious exposure on systems of meaning, that have been identified by the structured interview for disorders of extreme stress as potential maladaptive responses to traumatic exposure.

The Impact of Event Scales. The original impact of event-scale (IES) was developed in 1979 (Horowitz, Wilner & Alvarez) as a measure of traumatic response before PTSD was initially included in the *DSM-III* (1980). The original impact of event-scale included subscales for intrusion and avoidance, but not for hyperarousal. Later, seven additional items (six items targeting hyperarousal and one item to parallel the diagnostic criteria for PTSD) were validated and incorporated into the original scale in

order to have the scale more accurately reflect the diagnostic criteria for PTSD, and presented as the Impact of Event Scale-Revised (Weiss & Marmar, 1997).

The Impact of Event Scale-Revised was not designed to make a categorical diagnosis, however it does discriminate between varieties of traumatized groups from non-traumatized groups in general population studies. Weiss (2004) states that a cutoff score for the Impact of Event Scale-Revised was neither envisioned in the design nor appropriate because it was not designed as a diagnostic instrument. Despite this, some researchers have proposed cutoff scores ranging from 24 (Asukai et al., 2002) to 33 (Creamer, Bell & Failla, 2003) by correlating Impact of Event Scale-Revised scores to other measures of PTSD. The Impact of Event Scale-Revised was designed and validated using a specific traumatic event as a reference point in the directions to the subject while administering the instrument. A specific time frame of noting only symptoms that have been present in the past seven days is specified.

The Impact of Event Scale-Revised has been used both clinically and in research internationally and translated into Chinese, French, German, Japanese, Spanish, Bosnian, Dutch, Italian, Norwegian, Persian, Lithuanian, Portuguese and Turkish. The instrument consistently shows impressive levels of internal consistency, test-retest stability and correlations of the three subscales. The Impact of Event Scale-Revised is intended to be a measure based strictly on DSM-IV-TR criteria for PTSD (Weiss, 2007). In this study, compassion fatigue is defined as the syndrome experienced by an individual who meets the full criteria for posttraumatic stress disorder (PTSD), with a qualifying event for criterion A1 that is not personal experience, but a vicarious learning about an event

experienced by a close associate with whom they have a helper-client relationship (Figley, 1995a, 2002).

Numerous studies have subsequently substantiated validation and reliability of the impact of event scale (Adkins, Weathers, McDevitt-Murphy, & Daniels, 2008; Creamer et al., 2003; Beck et al., 2008; Briere, 2004a; Briere & Elliott, 1998; Olde, Kleber, van der Hart, & Pop, 2006; Weiss, 2004). In one recent study of motor vehicle accident survivors Cronbach's Alpha coefficients of each subscale were computed as follows: Intrusion, $\alpha = .90$; Avoidance, $\alpha = .86$; Hyperarousal, $\alpha = .85$; and total, $\alpha = .95$. Pearson correlations were computed to examine associations within the obtained subscales of the Impact of Event Scale-Revised and the observed correlation was in the high range (range .71-.86). Individuals with PTSD were compared to individuals without PTSD with significantly different scores on each subscale for each of the two groups: Intrusion, $t(180) = -5.88$, $p < .0001$, 16.1% variance accounted for; Avoidance, $t(180) = -4.18$, $p < .0001$, 8.9% variance; Hyperarousal, $t(180) = -6.16$, $p < .0001$, 17.4% variance (Beck et al., 2008).

The Impact of Event Scale-Revised demonstrated high internal consistency in a study of male Vietnam veterans for the total scale (Cronbach's alpha = 0.96), as well as for the three subscales (intrusion: 0.94; avoidance: 0.87; hyperarousal: 0.91) (Creamer et al., 2003). The hyperarousal subscale added by Weiss and Marmar in 1995 has good predictive validity with regard to trauma (Briere, 1997; Creamer et al., 2003; Weiss, 2004), while the intrusion and avoidance subscales detect relevant differences in the clinical response to traumatic events of varying severity (Beck et al., 2008).

African Americans have been shown to score higher than Whites on the impact of event scale in general population studies, an effect that diminished with increasing exposure to violence among groups. This effect appears to be due to racial differences in self reported histories of potentially traumatizing events. Controlling for potentially traumatizing event history has been shown to eliminate the race effect entirely (Briere & Elliott, 1998, p. 175).

Most of the studies on the psychometric properties of the Impact of Event Scale-Revised have focused on the internal consistency and factorial structure. Studies have found the internal consistency high to very high (Adkins et al., 2008; Beck et al., 2008; Creamer et al., 2003; Olde et al., 2006). Creamer et al. (2003) did not find support for a three-factor (intrusion, avoidance and hyperarousal) solution using confirmatory factor analysis. Similar results were also found by Olde et al. (2006).

Compassion fatigue is associated with the cognitive schema of the therapist manifested by the symptoms of PTSD. Using Figley's (1995a) definition of compassion fatigue as PTSD experienced by an individual in a helper relationship with an individual who has experienced a traumatic event, the Impact of Event Scale-Revised is a valid instrument to measure PTSD.

Sense of coherence scales. In his target review of the literature on individual and/or collective capacity to rebound from a crisis, Almedom (2005) evaluated the research on the constructs most prevalent in the literature on resilience and found Antonovsky's sense of coherence scales to be the most robust. Using a 13-item sense of coherence-scale, Pallant and Lae (2002) found correlations with sense of coherence and (a) physical and psychological health, (b) personality (self-esteem, optimism, perceived

control), and (c) dispositional coping. Eriksson and Lindström (2005) reviewed 458 scientific publications and 13 doctoral theses on the sense of coherence and found the internal consistency measured by Cronbach's α ranges from 0.70 to 0.95. The test-retest correlation shows stability, and ranges from 0.69 to 0.78 (1 year), 0.64 (3 years), 0.42 to 0.45 (4 years), and 0.54 (10 years). They found that longitudinal studies confirmed the predictive validity of the Sense of Coherence-Scale for a good quality of life. Further research into the relationship between sense of coherence and the ability to navigate the impact of secondary trauma would be beneficial.

Interventions

The debate continues as to why all individuals exposed to the same traumatic event do not all develop a mental disorder. The debate in the literature appears to focus on this individual variation in response as a result of differences in pre-existing strengths and vulnerabilities, a result of the intensity and duration of the trauma, a result of post-event resources and support received, or some combination of these. While risk factors for PTSD have been identified, the human impetus appears to be toward resilience. Most people do not go on to develop PTSD following even horrific trauma (Litz et al., 2002; Pham et al., 2010). People move through pain. The American Psychological Association (2008) defines this resilience as "the process of adapting well in the face of adversity, trauma, tragedy, threats." In seeking to understand the prevention of compassion fatigue it is important to examine what has been successful in preventing, mitigating and treating PTSD.

Critical Incident Stress Management (CISM). Currently, one of the most widely used interventions by trained crisis response teams is the Critical Incident Stress

Management (CISM) model (Halpern, & Tramontin, 2007; Jacobs, Horne-Moyer, & Jones, 2004; Litz et al., 2002). The basic premise of CISM is if individuals get appropriate early support and are encouraged to process a traumatic event in the aftermath of the event, integration of the thoughts and emotions is facilitated and the avoidance and disassociation that is associated with PTSD is mitigated, even prevented. CISM is an organized and very structured system of services that includes a wide array of components, programs and interventions for schools, communities, individuals, families, groups and organizations. CISM includes Critical Incident Stress Debriefing (CISD) as one component (Everly, Flannery & Mitchell, 2000, 2002; Everly & Mitchell, 1997, 1998; Mitchell, 1983; Mitchell & Everly, 2001; Prichard, 2004).

Critical incident stress debriefing (CISD) was first formulated by Mitchell (1983) as a group process aimed at mitigating the effects of critical incident stress on helping professionals. Critical incidents are defined in this model as traumatic events that have the potential to be sufficiently overwhelming that the individual may have difficulty functioning and may resort to distorted thinking and maladaptive coping. These can present as fear, intrusive recollections, intense anxiety, depression, avoidance, substance abuse, relationship difficulties, or other problems. Everly and Mitchell (1997, 1998) conceptualize CISM as a comprehensive, integrated multicomponent crisis intervention system that runs the gamut from pre-incident education and preparation to follow-up services and referral. They have stressed in their training and research literature that neither CISD nor any other single component is intended to be used out of the context of the entire CISM system (Everly et al, 2000, 2002; Everly & Mitchell, 1997, 1998; Mitchell, 1983; Mitchell & Everly, 2001; Prichard, 2004).

The CISM/CSID model has inspired a passionate loyalty by researchers, providers and participants who testify to its efficacy (Everly et al., 2000; Roberts & Everly, 2006). CISM has also inspired an equally passionate but acrid research response claiming it is more than ineffective, that it is actually harmful in that it can exacerbate the symptoms of traumatic response and impair natural healing (American Psychiatric Association, 2004; Friedman, 2005; Lilienfeld, 2007; Rose, Bisson, Churchill, & Wessely, 2009). Proponents of CISM stress it is an integrated, comprehensive, multicomponent crisis intervention system, not a one off technique. They claim that it is inappropriate to implement just the debriefing phase (CISD) as is sometimes done by crisis intervention workers. CISM is considered comprehensive because it consists of multiple crisis intervention components which functionally span the entire temporal spectrum of a crisis. CISM interventions range from the pre-crisis phase through the acute phase and into the post crisis phase (Everly et al., 2002; Everly & Mitchell, 1997, 1998; Mitchell & Everly, 2001; Roberts & Everly, 2006). Because of the intense conflict between research and positive anecdotal reports, this intervention warrants further careful study. My purpose here is not to resolve the debate on the efficacy or harm of the CISM model, but to note that it is a widely used crisis intervention model for the prevention of PTSD that depends heavily on meaningful peer and organizational support, factors I have already noted as identified in current research on compassion fatigue as protective.

Art therapy. Art therapy has not been extensively researched, however a number of small studies have yielded encouraging results for individuals with PTSD (Nanda et al., 2010). Art therapy interventions attempt to provide a symbolic emotional container for the posttraumatic response through a non verbal medium.

One application uses Jung's concept of the mandala, a circular, graphic depiction of the whole personality (Jung, 1959). Jung found that drawing mandalas had a calming effect on his patients while facilitating psychic integration of the event and a sense of meaning. Henderson, Rosen & Mascaro (2007) published promising research on the use of mandalas as an art therapy for trauma symptoms. They examined what individuals suffering from clinical levels of traumatic distress gained from the non-verbal processing of their trauma through drawing mandalas filled with representations of the feelings or emotions related to their trauma. They found a significantly greater decrease in symptoms of trauma at the one month follow-up compared to individuals assigned to the control group who were given the same supplies but were instructed to draw objects. This study was limited by a relatively small sample size (n=36) composed of a convenience sample of undergraduate students. There was no comparison with other control groups utilizing a different treatment.

Peritraumatic dissociation (dissociation that occurs at the time of trauma) is one of the most consistent predictors of the development of PTSD across traumatic experiences (Brewin et al., 2000; Ozer et al., 2008). It may be that part of the efficacy of the Mandala treatment and other forms of art therapy relate to artistic expression facilitating a cognitive and emotional integration of the traumatic experience. Other treatments, such as prolonged exposure therapy (Foa et al., 2007; Foa & Rauch, 2004; Rauch et al., 2004) are based on the concept of integrating the cognitions and emotions of the traumatic experience.

Prolonged exposure therapy (PE). Prolonged exposure therapy involves repeated imaginal exposure to the traumatic memory (trauma reliving) along with

repeated in-vivo exposure to safe situations that are avoided. Prolonged exposure therapy has been one of the most researched and recommended evidence-based treatments for PTSD (American Psychiatric Association, 2004).

Prolonged exposure therapy incorporates two necessary factors in the treatment of PTSD. First, the fear response is activated through the imaginal and in vivo exposure and then corrective information is incorporated in to the fear structure to alter the inappropriate and maladaptive associations. One goal of exposure therapy is to form a new cognitive structure that contains these more realistic associations among the elements of the trauma, such that safe stimuli are no longer viewed as dangerous (Foa et al., 2007; Rauch et al., 2004).

The technique of prolonged exposure therapy is related to flooding in that a hierarchy of anxiety provoking situations is developed and then intentionally experienced until the noxious stimuli no longer produces a fear response. However, in flooding, the most anxiety producing situations are first addressed, sometimes for hours during a first session, while in prolonged exposure therapy the least anxiety provoking situations are first experienced and a progression is made up the anxiety hierarchy (Foa et al., 2007), The goal of prolonged exposure therapy is to decrease PTSD symptoms of fear, avoidance and anxiety by allowing the victim of the traumatic experience to directly confront previously unbearable emotions, stimuli and memories with courage and calm. In prolonged exposure therapy, the therapist carefully monitors the client to insure that the repeated imaginal and in vivo exposures to the traumatic stimuli do not result in sensitization (as can result from flooding), but work toward developing a controlled calm integration of the experience (Foa et al., 2000; Foa et al., 2007; Rauch, et al, 2004).

In the process of confronting the event, cognitions about the event and the emotions elicited by the event, a manageable integration of the whole experience is achieved. This therapy does not focus on making meaning out of an unbearable event, *per se*, but focuses on the healing that comes from the ability to directly face a painful situation with courage (Foa et al., 2000; Foa et al., 2007; Rauch, et al, 2004).

Supportive therapy. Supportive therapy is any form of treatment intended to relieve symptoms, eliminate situations precipitating symptoms, or help a client live with them rather than attempt changes in cognition or character structure (Lipsitz et al., 2008). Prospective studies have shown that most trauma survivors display a range of symptoms in the initial weeks after a critical incident, but that most people adapt effectively within approximately three months and do not go on to develop diagnosable PTSD (Litz et al., 2002). While PTSD can manifest for the first time years after a critical incident, those who fail to recover by this time are at risk for chronic PTSD. There are both humanitarian and clinical reasons to provide interventions to victims of critical incidents soon after exposure. The research on PTSD has so far shown the primary risk factors for PTSD are correlated with domains such as age at exposure, length of exposure, intensity of trauma, history of previous trauma, if the trauma was man made or a natural disaster, if the trauma was perpetuated by a trusted other, the individual's previous level of adaptive functioning and the support and practical resources available following the incident (American Psychiatric Association, 2004; Brewin et al., 2000; Halpern & Tramontin, 2007). Supportive therapy focuses on the latter.

Attending to basic human needs such as shelter, health care, sanitation, food and comfort can ease some of the discomfort and distress following trauma. Immediate

emotional support, information, and practical help in the form of resources are accepted as valuable to trauma victims. Early assessment and referral can help to identify immutable risk factors that are not so easily ameliorated (Halpern & Tramontin, 2007; Hobbs & Mayou, 2000; Norris, Galea, Friedman, & Watson, 2006; Roberts, 2005). The American Psychiatric Association (2004) and the National Institute for Clinical Excellence (2005) in the United Kingdom recommend early supportive therapy as one of the best early treatments for PTSD. This understanding may be applied to vicarious traumatic exposure as well, correlating with the importance of supportive environments and professional peer support.

Eye movement desensitization and reprocessing (EMDR). EMDR is a form of psychotherapy that includes an exposure based therapy requiring recall and verbalization of traumatic memories of an event. What makes this therapy unique is the inclusion of eye saccades believed to facilitate the reintegration of thoughts and emotions following a trauma. The American Psychiatric Association (2004) and the National Institute for Clinical Excellence (2005) recommend EMDR for PTSD.

During EMDR, the therapist will ask their client to think about the distressing thoughts, feelings, and images of their traumatic experience while also focusing on tracking the therapist's finger moving back and forth to elicit saccadic eye movements. As the client processes their traumatic experience, alternative, more adaptive cognitions are brought into the session. The theory behind EMDR is that trauma causes a neural obstruction and that inducing rapid eye movements while exposing a patient to their trauma can help release this blockage (Shapiro, 1995).

Various studies have demonstrated the efficacy of EMDR for the treatment of trauma-related conditions. (Davidson & Parker, 2001; Rothbaum, 1997). Other studies, however, have shown that the role of the rapid eye movements is not a central feature in the effectiveness of this treatment. EMDR's effectiveness appears to be due to the exposure and processing element of the therapy, not the inducement of saccadic eye movements. EMDR appears to be no more effective than other exposure techniques, and evidence suggests that the eye movements integral to the treatment, and to its name, are unnecessary (Lohr, Tolin, & Lilienfeld, 1998; Pitman et al., 1996; Renfry & Spates, 1994).

Cognitive behavior therapy (CBT) and cognitive processing therapy (CPT).

There exists much in the way of evidence-based literature to support the efficacy of cognitive behavior therapy with victims of trauma. Cognitive behavior therapy represents a broad class of therapies unified by a shared emphasis on observable outcomes, symptoms amelioration, time-limited and goal oriented intervention with the expectation that victims of traumatic exposure will assume an active role in the treatment process (Follette & Ruzek, 2006). The underlying behavioral assumption for the endorsement of cognitive behavior therapy is the belief that trauma is caused by high anxiety related to behaviorally conditioned fear responses. In addition to the behavioral response, the cognitive theory states that the erroneous perception of the world as a highly dangerous place combined with the belief that oneself was and continues to be incompetent in handling this danger contributes to the development and perpetuation of PTSD (Hembree & Foa, 2003). Cognitive behavior therapy is one the few treatments for

traumatic exposure recommended by The American Psychiatric Association (2004) and the National Institute for Clinical Excellence (2005).

Cognitive processing therapy was originally developed by Resick and Schnicke (1992) as a structured cognitive behavior therapy technique for rape-related PTSD. It has since shown efficacy with a variety of other populations with PTSD such as combat veterans and adolescents who have been victims of other traumas (Monson et al., 2006; Zappert & Westrup, 2008). Clients are taught to identify faulty or irrational thinking patterns that have developed as a result of trauma. They are also exposed to their traumatic experience through writing a detailed recollection of the trauma and repeatedly reading this account. The account is used to generate the client's "stuck points," which are defined as difficult moments the client is avoiding due to the distress involved. These "stuck points" receive particular attention during cognitive processing therapy. Concepts such as safety, intimacy, esteem, and trust are discussed with the therapist in relation to the trauma. Research has demonstrated that this model is effective when treating PTSD (Chard, 2005), albeit outcome measures were equal to prolonged exposure therapy when a comparison study was done (Resick, Nishith, Weaver, Astin, & Feuer, 2002). Cognitive processing therapy limitations include drop-out rates, lots of homework that some clients may find cumbersome, and a heavy reliance on good reasoning and logic skills, which may be difficult for patients that lack abstract reasoning ability to comprehend.

Salutogenic treatment. Antonovsky (1987, 1992, 1996) claimed that the stronger a person's sense of coherence, the more that person will be able to cope with the inevitable stressors of life (1987). One pilot study has been published using

Antonovsky's sense of coherence and the salutogenic model as a theoretical basis for an intervention with people who are suffering from mental health problems. This study was conducted in nine psychiatric outpatient sectors in Norway with 116 participants who were randomized into a therapy group and a control group. All participants in both groups received regular care including weekly home visits by a mental health worker and visits several times per week to a mental health activity center. The therapy group participants also completed a 19 week long group therapy program based on salutogenic principals. The main goal of the intervention was to increase the participants' awareness of their potential, their internal and external resistance resources (such as personal qualities, coping abilities and social support), and their ability to use these qualities as part of increasing coping. Sense of coherence was measured using the 29-item scale before treatment and one week after the end of the 19 week program. An analysis of variance with the sense of coherence scores at baseline as the covariate showed that the change in the mean score before and after the intervention was significantly higher in the experimental group than the control group ($p=0.03$). There was an increase of 5.6 points in sense of coherence for the salutogenic treatment group and a decrease of 2.3 points for the control group during the same period (Langeland et al., 2006).

The Symptom Checklist -90-Revised (SCL-90-R) was used for a single assessment of the participants' mental health status at baseline, however a follow up assessment was not conducted. Other research has correlated a higher sense of coherence score in non-clinical than in clinical participants (Frenz et al., 1993). This study could have been strengthened by administering the SCL-90-R one week after the intervention was complete.

In a cluster randomized, controlled trial with individuals who had psychiatric disabilities, a 12 month lifestyle intervention that focused on physical activity, healthy living, and sense of coherence study circles was implemented with residents of a supported living program in Sweden. The control group received only the physical activity and healthy living intervention. A significant increase in sense of coherence and a decrease in psychiatric morbidity was found in the treatment group (Forsberg, Björkman, Sandman, & Sandlund, 2010).

These studies seem to refute Antonovsky's (1987) hypotheses that a sense of coherence remains stable after the age of 30. They also seem to indicate that a sense of coherence can be taught and deliberately developed.

Application of interventions to compassion fatigue. It appears to be intuitive that a synthesis of what is known about the impact of trauma on clients is an important piece of understanding secondary traumatic experience. It also appears from a review of the literature that there is too great a divide in the approach to integrating the understanding of what we know about primary traumatic response with compassion fatigue. Based on a review of the literature, compassion fatigue is defined as PTSD in a helper when the qualifying event is experienced vicariously. This vicarious experience of the trauma as compared to a primary experience of the trauma may impact the vulnerability toward, manifestation of and treatment of a maladaptive response; however, it is a good starting point to begin with what is known about primary traumatic response.

Other disciplines, such as medicine and law, have well developed programs to assist members in distress. Currently only nine states have active colleague assistance programs for psychologists (Rand, 2006). Compassion fatigue is a potential safety hazard

of the mental health profession. Much like the precautions taken as protection against the safety hazards of other professions; with knowledge, education and care, steps can be taken to both prevent compassion fatigue and mitigate its severity.

Research is beginning to show the efficacy of traditional clinical supervision in strengthening therapists as clinicians and as individuals, as well as providing a protective factor against compassion fatigue (Halpern & Tramontin, 2007; Linley & Joseph, 2007; Pearlman & Mac Ian, 1995; Rothschild & Rand, 2006). Yet, supervision appears to be inconsistent across the field (Bernard & Goodyear, 2004). It is important understand how we can apply what we know about helping our clients to helping our peers, even to helping ourselves.

Critical analysis and synthesis of the findings

In analyzing and synthesizing the fairly large body of research on posttraumatic stress disorder, a disorder just barely beginning to be understood, with the relatively new field of research on compassion fatigue, it is important to understand the impact of the vicarious experience. Rothschild and Rand (2006) had the following to say:

Even when a therapist was not actually involved in the client's trauma, she can still vicariously experience it in her nervous system. The result is similar to feeling vicarious excitement while watching someone on a roller coaster ride on television, or hearing a breathless detailed description of a horseback ride. The observers and listeners have not actually been exposed to the event, though they can really feel it. A pornographic movie has a similar mechanism and sometimes a more recognizable effect. (p. 15).

This concept parallels Bandura's (1977) social learning theory which purports that observation alone can lead to an experience sufficiently meaningful to reinforce cognition and learning. Bandura's research demonstrates we have the ability to vicariously assimilate the consequences we observe in others (Bandura, Adams, & Meyer, 1977; Bandura, 1977).

In their 2006 book *Help for the Helper: Self-Care Strategies for Managing Burnout and Stress*, Rothschild and Rand define the concepts of burnout, compassion fatigue and vicarious trauma and to identifying what puts therapists at risk for developing these syndromes. They theorize that if we can understand what makes our clients vulnerable to the impact of trauma, perhaps we can apply that same knowledge to our own vulnerabilities to the vicarious experience of their pain when we choose to walk alongside them. What is striking about their book is how basic and foundational their recommendations are for countering the impact of this journey. As therapists we could benefit by following the ways we teach our clients - such as taking time for self-care, controlling our personal self-talk, and regulating our empathic imagery. The effort to analyze and synthesize the literature on compassion fatigue is an exercise in furthering what is known about traumatic response and applying that knowledge to the humanity of both the primary and secondary trauma victim.

As mentioned earlier, much research has focused on why all individuals exposed to the same traumatic event do not all develop a mental disorder (Almedom, 2005; Bonanno et al., 2007; Harvey, 2007; Ozer et al., 2008). If an individual meets DSM-IV-TR diagnostic criteria for PTSD, 80-88 % of the time they will also meet criteria for one or more additional diagnoses (van der Kolk et al., 2005). Most often these co-morbid

diagnoses include major affective disorders, dysthymia, alcohol or substance abuse disorders, somatoform disorders, anxiety disorders, or personality disorders. When a trauma survivor exhibits the full criteria necessary for a diagnosis of chronic PTSD with delayed onset plus six of the nine criteria for a major depressive episode, many clinicians will give the survivor both diagnoses. This highlights the categorical versus the dimensional debate about the nature of PTSD. Does the survivor really have two distinct diagnoses? Did the depression diagnosis co-morbid to PTSD exist sub-clinically prior to the traumatic exposure and become exacerbated by it, or is it a response to the trauma, born at the moment of exposure, or perhaps does it develop in response to the event? Are the depressive symptoms a further manifestation of the individual's reaction to stress? Is an individual suffering from a disorder in addition to PTSD -- a true comorbidity -- or are the symptoms that may lead to the additional diagnosis actually manifestations of a complex form of PTSD that includes difficulties with the regulation of affective arousal, impaired capacity for cognitive integration of experience (as in dissociation), impairment in the capacity to differentiate relevant from irrelevant information and disturbances in relation of self to others. This complex form of PTSD has also been termed "Disorders of Extreme Stress" (Pelcovitz et al., 1997; van der Kolk & Pelcovitz, 1999; van der Kolk et al., 2005; Zlotnick & Pearlstein, 1997). Is the high rate of apparent diagnostic co-morbidity seen with PTSD actually due to limitations of the current posttraumatic stress syndrome diagnostic criteria? These are further questions that may also apply to compassion fatigue.

Evaluation of compassion fatigue. With the possible exception of warriors who chose to go into battle, people do not generally make a conscious choice to be

traumatized. Another exception might be a therapist who chooses, for whatever reason, to expose his or her self vicariously to the trauma of others. Prior to going into training for battle, military recruits are vetted rather thoroughly for their work. An attempt is made to match each warrior with work for which they are best suited, based on his or her individual strengths and weaknesses. Still, up to 30% of warriors return from battle with symptoms of posttraumatic stress syndrome (Schlenger et al., 1992). It might be seen as unacceptable if 30 % of therapists exhibited signs of PTSD. Due to the rigors of the working with victims of trauma, perhaps it would help to prevent some of the later pain if screening, using what we know to date about vulnerabilities and resilience, was a routine part of the decision making process about trauma work.

Understanding correlations between compassion fatigue and independent predictor variables. The primary ethical rule for any therapeutic intervention is *First Do No Harm* (American Counseling Association, 2005; American Psychological Association, 2010; Lilienfeld, 2007; Phipps & Byrne, 2003; Rothschild & Rand, 2006; Webb, 2006). Understanding factors that contribute to the prevention of and vulnerability to compassion fatigue, such as developing a strong sense of coherence, receiving specific training in working with victims of trauma, the vulnerabilities that a personal history of trauma, and childhood abuse may bring and the resilience that may be offered by age and experience can support both client and therapist in avoiding unnecessary psychological fallout. If, following current understanding about countertransference, a therapist's unmanaged negative reactions to a client's traumatic sequelae can harm both the therapist and the client, it is imperative to understand and prevent compassion fatigue when possible. It is important to integrate what the extant research literature has documented

about effective treatment for acute stress disorder and posttraumatic stress disorder, with what the emergent literature is investigating in the area of disorders of extreme stress with the literature that exists on managing countertransference, and with what research has shown about psychological resiliency in order to further what researchers and clinicians have learned about compassion fatigue. This integration could lead to the development of additional techniques useful in treating trauma response.

Identifying protective factors that may provide resilience to and perhaps accelerate recovery from maladaptive psychological distress may accomplish several functions. Identification of specific protective qualities would allow an individual therapist to consciously develop personality traits prior to working with clients who are victims of trauma. It will identify skill areas where an individual therapist may choose to seek additional work or training. Potentially this process of identifying protective and risk factors may help therapists recognize if they are well suited for trauma work.

Once the predictive variables have been identified, these focus areas could be addressed as a part of pre-traumatic exposure training. There is some evidence in a non-clinical population that pre-event skill training and preparation can lessen the impact of a traumatic event (Phipps, Byrne, & Deane, 2007, Phipps & Byrne, 2003; Richards, 2001; Roberts & Everly, 2006). This principle applies to training those who work alongside the victims of trauma. Understanding what to expect, having a repertoire of skills to manage personal stress and having the tools to work effectively with the victims have all been shown to be balancing factors that help to build a sense of manageability that may strengthen a trauma worker against the impact of compassion fatigue (Figley, 2006; Phipps & Byrne, 2003; Sprang et al., 2007). Adequate training may lead to a sense of

self-efficacy and professional mastery which has been shown to be a protective factor against exposure to actual trauma (Bryant, & Guthrie, 2007). Adams et al. (2006) found that trauma workers who had a higher self-assessment of their mastery of crisis intervention techniques were less distressed when exposed vicariously to traumatic events. Training and preparation can also contribute to a sense of coherence; a sense that despite the pain and suffering the trauma worker can offer a sense of manageability, comprehensibility or even demonstrate grounding in a context of meaning greater than the chaos. The construct of personal coherence has been found to provide some initial correlation with protection against the impact of vicarious trauma (Linley & Joseph, 2007; Pallant, & Lae, 2002; Sagy, & Antonovsky, 2000). It may be vitally important to support developing therapists in their journey toward developing their own personal sense of coherence during their training and beyond.

Early identification of individual risk factors would not necessarily prohibit an individual from effectively working with victims of trauma. However, awareness of the propensity for a certain trait to increase vulnerability to compassion fatigue could provide an incentive for additional training and skill building in that area prior to exposure (Rothschild & Rand, 2006).

A heavy case load of trauma victims has been identified in some research as a risk factor for compassion fatigue, although the critical numbers of clients or clinical hours are not identified (Bober & Regehr, 2006; Figley, 2006; Linley & Joseph, 2007; Pearlman & Mac Ian, 1995). The size of an appropriate case load for each therapist may well be a very individualized limit, based on a multitude of variables. Recommendations on case load range from varying a trauma worker's case load with clients who exhibit

less stressful symptomology to frequent breaks in the workload. Screening to identify when therapists are carrying a case load that is reaching their personal critical mass may help prevent or mitigate symptoms.

Basic self-care that involves sufficient rest, nutrition and physical exercise is often recommended by therapists for their clients as an important factor in dealing with stress; however, many therapists do not engage in these personal stress-reducing habits (Bober & Regehr, 2006). The accumulation of stories and vicarious trauma experiences build up as a tense physical component in our finite physical bodies. Left unattended, stress can leave a multitude of negative and unexpected physical limitations. Self-care strategies have been shown to be effective with some therapists as well as their clients (Antonovsky, 1987; Rothschild & Rand, 2006). I hope that results from this study can be used to put the focus back on the personal development necessary for a therapist to effectively engage in the challenging and rewarding work of support for victims of trauma.

Appropriate clinical supervision, a key element of the therapist's work environment, has been shown to provide an additional protective factor in and of itself (Baird, & Kracen, 2006; Cormier, Nurius, & Osborn, 2009; Linley & Joseph, 2007; Pearlman & Mac Ian, 1995; Rothschild & Rand, 2006; Sprang et al., 2007). Clinical supervision can be a supportive factor in strengthening a therapist's personal sense of coherence, especially as it relates to the work he or she does. Strong clinical supervision helps a therapist to develop skills. In addition, clinical supervisors monitor their supervisees for signs of impairment or distress (Bernard & Goodyear, 2004). A good

clinical supervisor who is attuned to the strengths, weakness and caseload of their supervisee will be alert for signs of compassion fatigue.

Although the extant research literature strongly indicates that appropriate ongoing clinical supervision does make a protective difference, many work environments do not give adequate attention to clinical supervision once licensure has been earned. For all clinicians, not just those dealing with victims of trauma, the confluence of emotions in clients creates stress in the therapists as well. Having a safe, open environment in which to humanly process the experience without fear of reprisal appears foundational (Bernard & Goodyear, 2004; Campbell, 2000). However, there remain clinical environments where time and resources are too tight or too chaotic to allow for appropriate supervision. Anecdotal observation seems to indicate that the more stressful work environments may have the least effective clinical supervision protocols. Because burnout is seen as the debilitating result of non-supportive working environments (Adams et al., 2006; Jenkins & Baird, 2002; Maslach, 2003; Pines & Maslach, 1978; Rasmussen, 2005; Rothschild & Rand, 2006; Valent, 2002), if systems are to be effective, then work may be needed that even extends beyond establishing a clinical supervision structure in settings where the structure may be counterproductive to the therapeutic work.

Social desirability. Socially desirable responding is the reluctance to admit unpopular beliefs or behaviors in order to avoid making a negative impression. Admitting distress in the general population may be seen as a sign of weakness or as an inability to meet a challenge. A common measure of social desirability for over 50 years has been one of several versions of the Marlowe-Crowne social desirability scale (Barger, 2002;

Crowne & Marlowe, 1960; Fraboni & Cooper, 1989; Mandell, 2008; Strahan, 2007; Strahan & Gerbasi, 1972).

Therapists are trained to assist others in the amelioration of their personal distress. It may be that admitting distress on the part of a therapist could be construed as an undesirable behavior that reflects a lack of competence. In a study of 342 city bus drivers, Brunet, Boucher and Boyer (1996) used a short 13-item form of the Marlowe-Crowne social desirability scale and found that social desirability did play a marginal role as a moderator variable in the assessment of distress. In an interesting twist, participants who had diagnosable levels of PTSD had lower social desirability scores than those with out a diagnosis. However, individuals who reported a significant traumatic event either at work or home and no PTSD scored higher on the Marlowe-Crowne than those with no such events. The authors hypothesized that the relationship between traumatic events on social desirability was influenced by other, unknown variables.

My review of the literature has not found an application of this to a therapist's unwillingness to report distress. The findings from research studies suggest that misreporting about sensitive topics is quite common in general and that it is largely situational based on the respondent's belief that an honest response may be somehow discrediting or embarrassing to them (Tourangeau & Yan, 2007). However, Frenz et al. (1993) found a significant positive correlation between sense of coherence and socially desirable responses on the Marlowe-Crowne. They suggest that the sense of coherence items may be somewhat transparent and therefore vulnerable to a tendency toward a social desirability response bias (p. 152). Due to the self-report nature of this study, it may be important to control for socially desirable responding.

The therapist as instrument. The hypothesis that a strength of coherence is an attribute contributing to personal life satisfaction and to professional efficacy is at the heart of this study. If this is a true hypothesis, the idea of a sense of coherence as a protective variable for therapists can be utilized to identify and support individual strengths for working in the trauma field. One goal of this research is to clarify the influence the domains of comprehensibility, manageability, and the belief that life has value and meaning contribute to protection against the negative psychological impact of trauma (Pallant & Lae, 2002; Sagy & Antonovsky, 2000).

Personal development training in these areas could become part of basic training in therapy programs, as well as a requisite part of ongoing professional development. C. S. Lewis's truism "none can give to another what he does not possess himself" (1970, p. 116) reflects the idea that the therapist, with his or her unique strengths and weaknesses is an instrument of the healing process. The importance of the therapist attending to his or her personal development as a protective factor is well documented (Figley, 2002; Friedman, 2005; Hayes & Frederickson, 2008; Harrison & Westwood, 2009; Hernández et al., 2010). There is much recommended in the literature, but little in the way of empirical validation to support the efficacy of personal growth therapy for clinicians involved in traumatic work (Figley, 1995; Motta, 2008; Phelps et al., 2009). If, as therapists, we truly seek to support our clients as they deal with finding hope in a difficult world, we must be willing to honestly do that work ourselves. The scope of personal growth therapy could include addressing negative cognitions and emotional regulation, difficulties therapists may be unwilling or unable to acknowledge in themselves.

Furthering the theoretical development of compassion fatigue. Research on the construct of compassion fatigue began with Figley in 1995. The research has continued to grow for the past 15 years (Baird & Kracen, 2006; Newell & MacNeil, 2010). Developing an understanding of predictor variables can help to further clarify and identify the construct of compassion fatigue.

Both clinicians and non-clinicians benefit from the reassurance that it is normal to experience strong emotional, cognitive, even physiological reactions to stress. Life is difficult. Exposure to trauma, either as the primary victim or through vicarious exposure, only highlights this difficulty. Coming face to face with the difficulty of life can also enhance an individual's sensitivity toward others and provide an opportunity for growth. As Viktor Frankl (1959, 1992) states, this individual "...facing a fate he cannot change, may rise above himself, may grow beyond himself, and by so doing change himself. He may turn a personal tragedy into a triumph" (p. 147).

Our growing knowledge of the etiology of posttraumatic stress disorder, disorders of extreme stress and disorders of compassion, coupled with our understanding of countertransference and emotional and mental protective factors, will lead to further theories and understanding of how to promote growth, coherence and the treatment of the disorders. Understanding more about the predictive variables of compassion fatigue offers the possibility of an additional tool to facilitate this process.

Research Hypothesis

There is a relationship between compassion fatigue and risk factors that has been identified through a review of the literature. There also exist salutogenic, or protective factors, that can increase a therapist's adaptive response when working with individuals

who have been impacted by trauma. It is important to identify both of these in order to better equip clinicians to be as effective as they can be. A sense of coherence defined by Antonovsky (1987) as a pervasive feeling of confidence that life events are comprehensible, that one has the resources to manage the demands, and that these demands are meaningful and worthy of engagement may be one such protective factor. Based on the review of the literature my primary research question is: How does a sense of coherence, training in trauma therapy, past traumatic experience, and counseling experience with victims of trauma contribute to compassion fatigue after controlling for Social Desirability? I have five hypotheses based on this primary research question:

Hypothesis 1: I hypothesize a significant correlation between compassion fatigue (CF) and sense of coherence (SOC).

Hypothesis 2: I hypothesize a significant correlation between compassion fatigue (CF) and training in trauma therapy (TTT).

Hypothesis 3: I hypothesize a significant correlation between compassion fatigue (CF) and past personal traumatic exposure (PPTE).

Hypothesis 4: I hypothesize a significant correlation between compassion fatigue (CF) and counseling experience working with victims of trauma (CEVT).

Hypothesis 5: I hypothesize a significant difference in the predictive correlation of the predictor sense of coherence (SOC) and the other predictor or independent variables of training in trauma therapy (TTT), past personal traumatic exposure (PPTE) and counseling experience working with victims of trauma (CEVT) on the dependent variable compassion fatigue (CF).

Summary

In order to better understand the correlation between a sense of coherence and compassion fatigue and other variables have been noted in the literature, such as training in trauma therapy, a personal history of childhood abuse, past personal traumatic exposure and experience working with victims of trauma, it will be necessary to sample the population of therapists who provide clinical support to victims of trauma. In the next chapter I will outline the proposed research methodology I have designed toward testing my research questions and hypothesis.

Chapter 3: Methodology

The purpose of this study has been to understand the correlation between compassion fatigue and the relative contribution of several independent predictor variables that are hypothesized to influence its development. The variables that are hypothesized to influence compassion fatigue are strength of coherence, training in trauma therapy, past personal traumatic exposure and counseling experience working with victims of trauma. I have investigated whether these predictor variables are influenced by the effects of social desirability in therapists. Compassion fatigue is defined as the syndrome experienced by a helper who meets the full criteria for posttraumatic stress disorder (PTSD), with a qualifying event for criterion A1 that is not personal experience, but a vicarious learning about an event experienced by a close associate with whom they have a helper-client relationship (Figley, 1995a, 1995b, 1999, 2002). The methodology in this chapter provides the statistical process used to explore whether such a correlation does in fact exist, which variable is the best predictor of compassion fatigue, how well this set of variables is able to predict compassion fatigue and if reporting compassion fatigue is influenced by social desirability. The hypotheses used for this analysis were as follows:

Question 1: Is there a significant correlation between compassion fatigue and a sense of coherence?

Hypothesis 1: I hypothesize a significant correlation between compassion fatigue and a sense of coherence.

Question 2: Is there a significant correlation between compassion fatigue and training in trauma therapy?

Hypothesis 2: I hypothesize a significant correlation between compassion fatigue and training in trauma therapy.

Question 3: Is there a significant correlation between compassion fatigue and past personal traumatic exposure?

Hypothesis 3: I hypothesize a significant correlation between compassion fatigue and past personal traumatic exposure.

Question 4: Is there a significant correlation between compassion fatigue and counseling experience working with victims of trauma?

Hypothesis 4: I hypothesize a significant correlation between compassion fatigue and counseling experience working with victims of trauma.

Question 5: Is there a difference in the influence of a sense of coherence and the predictor or independent variables of training in trauma therapy, past personal traumatic exposure and counseling experience with victims of trauma on the dependent variable compassion fatigue?

Hypothesis 5: I hypothesize a significant difference in the predictive correlation of sense of coherence and the other independent variables of training in trauma therapy, past personal traumatic exposure, and counseling experience working with victims of trauma on the dependent variable compassion fatigue.

Participants

My target population has been those who work with victims of trauma: therapists, therapists in training, and crisis intervention workers. Because most crisis, disaster, and trauma workers undergo continuing education and complete additional certification following their professional preparation programs, it was advantageous to work collaboratively with organizations that provide this type of training. Three organizations that provide trauma training or certification initially offered verbally to recruit participants for this study. These organizations are the Kentucky Community Crisis Response Board, The Christian Appalachian Project and the Combat Stress Intervention Program. Of these, only the Kentucky Community Crisis Response Board and the Combat Stress Intervention Program actually participated due to The Christian Appalachian project not responding to two requests for a written letter of support.

Another population that was valuable to sample was graduate students in a mental health field who had begun their practica or internship experience. Verbal commitment to recruit participants had been given by professors in doctoral and master's level mental health training programs at West Virginia University and Marshall University. Two attempts were made to obtain a written letter of support from Marshall University. After these two unsuccessful attempts, Marshall University was dropped from the list of recruitment venues.

Additionally, two private practice agencies who work with victims of trauma, Wellness Promotion and the practice of Elizabeth Skibinski-Bortman, offered written support for providing their clinicians and practica students the opportunity to participate. This gave me the opportunity to gather data from a diverse sample of mental health

professionals who work with victims of trauma at various points in their professional development.

In order to produce results that are generalizable, I proposed to sample a minimum of 120 participants from these programs. I had selected this range based on a review of several respected theorists in the field. According to Stevens (1996, p. 72; as cited in Pallant, 2007) the recommendation for social science research is about 15 subjects per predictor for a reliable equation. I originally identified five independent potential predictor variables of compassion fatigue: 1.) Sense of Coherence, 2.) Training in trauma therapy, 3.) Past personal traumatic exposure, and 4.) Counseling experience with victims of trauma based on my review of the literature. I controlled for social desirability using the Marlowe- Crowne 2(10) social desirability Scale. Training in trauma therapy was originally conceived as one predictor variable, however because it was measured as four categories and not as a continuous variable on the background information form (Appendix A), three of the four response categories were been counted as a predictor variables (with no training in trauma therapy as the reference category) resulting in three categories for training rather than one. This resulted in a total of seven predictors. According to Stevens' guidelines, I required a minimum subject pool according of:

$$\text{Number of predictors} \times 15 = N$$

Where N = minimum number of subjects required

$$7 \text{ predictors} \times 15 = 105 \text{ subjects}$$

Tabachnick and Fidell (2007, p. 123) recommend:

$$N > 50 + 8m$$

Where N = minimum number of subjects required and
 m = number of independent variables

This recommendation gave me a minimum subject pool of:

$$N > 50 + 8 (7 \text{ predictors})$$

$$N > 50 + 56$$

$$N > 106$$

Tabachnick and Fidell's formula results in a minimum subject pool at an alpha level of .05 and a medium effect. Field (2005) endorses this formula for the *minimum* acceptable sample size as a guideline for testing the model over all. Green (1991) (as cited in Field) recommended that if you want to test the individual predictors then utilize a minimum sample size of:

$$104 + k = N$$

Where k = the number of predictors

$$104 + 7 \text{ predictors} = 111$$

Field (2005) further delineated guidelines for sample size based on the anticipated effect size. Using Cohen's (1988) benchmark 0.8 for a high level of power, Field (p. 173) provided a graph (cited from Miles & Shevlin, 2001) that showed the sample size for seven predictors for a large effect would be about 55, for a medium effect would be about 120 and for a small effect would be over 500. I anticipated a large effect for sense of coherence and a medium to large effect for the other predictor variables of training in trauma therapy, past personal traumatic experience, and counseling experience with victims of trauma. A sample of 120 participants met all the criteria for both a large and a

medium effect. Based on consideration of all of these recommendations, I set the 120 as my ideal minimum sample size.

In order to generate the minimum sample of 120 participants, I distributed 250 surveys to the post degree venues (The Kentucky Community Crisis Response Team, the Combat Stress Intervention Program, Wellness Promotion, and the practice of Elizabeth Skibinski-Bortman). I also distributed another 100 surveys to graduate level mental health training programs at West Virginia University. Surveys were given to the masters in counseling program, the doctorate in counseling psychology program and to the doctorate in clinical psychology program at West Virginia University. My goal was to get a response rate of better than 50 %, allowing me to collect completed surveys totaling at least my target number of 120 participants. My response rate was actually better than anticipated. I received 213 of the 350 surveys back, giving me a response rate of 60.8%. However, 82 of these surveys were judged unusable due to incompleteness, so only 131 surveys were utilized in the final regression analysis.

Design

Hierarchical ordinary least squares regression with blocked stepwise entry was planned to develop a prediction equation for the dependent variable, compassion fatigue as measured by the Impact of Event Scale - Revised (IES-R) (Weiss, 2004). The independent or predictor variables were designed to be strength of coherence as measured by the nine-item version of Antonovsky's (1987) original Sense of Coherence-Scale (Klepp et al., 2007); and training in trauma therapy (as noted this was entered as three predictors), past traumatic exposure and counseling experience as measured by the self-developed information form (Appendices A & G). The Marlowe Crowne Social

Desirability Scale 2(10) [MC 2(10)] (Strahan & Gerbasi, 1972) was planned to be used to control for those respondents who may not have given valid responses due to a desire to appear more socially desirable, stronger, or more competent. Each predictor variable was assessed in terms of what it added to the model for the prediction of the dependent variable, compassion fatigue, after controlling for social desirability.

One identified limitation of this design was that the data was all self report and thus subjective in nature. DeVellis (2003) noted that in self report surveys some respondents might be motivated to respond in a way that society regards as positive, and thus distort the validity of the item responses. The influence of social desirability was understood as potentially being particularly strong in the venues (academic programs, certification classes) where data was collected due to their evaluatory nature. Use of the Marlowe-Crowne Social Desirability Scale 2 (10) allowed me to assess how strongly a particular respondent may have been influenced by a tendency toward socially desirable responding.

A second identified limitation was the correlational design that did not allow causal inference to be measured. While I had hypothesized a correlation with compassion fatigue and the identified predictor variables, this correlational design will not ascertain that the predictor variables, in and of themselves, either protect against or enhance vulnerability for compassion fatigue. The possibility remained that the predictor variables may be a result of compassion fatigue or its absence, or some other unidentified influence.

Instrumentation

Impact of Event Scale-Revised (IES-R). The most commonly used measure of traumatic response remained the Impact of Event Scale-Revised (IES-R) (Beck et al., 2008; Creamer et al., 2003; Follette & Ruzek, 2006; Weiss, 2004; Wilson & Keane, 2004). Because Figley's (1995a, 1995b, 1999, 2002) definition of compassion fatigue as PTSD where the traumatic event is experienced vicariously in a helper was used for this study, the impact of event-scale was selected with the qualifying event designated as "the most troubling event experienced as a therapist working with a victim of a traumatic event" (Appendix B). In order to anchor the responses to a specific client and event, the participant was asked to identify the date of the troubling therapeutic interaction. For purposes of this study, the Impact of Event Scale-Revised was not broken down into its three factors of intrusion, avoidance and hyperarousal. The Impact of Event Scale-Revised has a possible range of 0 to 88.

As described in some detail in Chapter two, numerous studies have substantiated the validity and reliability of the Impact of Event Scale-Revised (Adkins et al., 2008; Beck et al., 2008; Briere, 2004a; Briere & Elliott, 1998; Olde et al., 2006; Weiss, 2004). The Impact of Event Scale-Revised has demonstrated high internal consistency (Cronbach's alpha = 0.96) (Creamer et al., 2003).

Figley and Stamm (Stamm, 2005) developed and published a scale to directly measure compassion fatigue, the Professional Quality of Life Scale. While it is frequently used in the literature and in training workshops on compassion fatigue, it does not yet have published data on reliability and validity, so I chose not to use it.

Nine-item Sense of Coherence-Scale. Various versions of Antonovsky's Sense of Coherence-Scale had previously been used to measure the salutogenic of this construct in 458 scientific publications and 13 doctoral theses between 1992 – 2003 (Eriksson & Lindström, 2005). While each the constructs of comprehensibility, manageability, and meaningfulness may be measured as three subscales of the sense of coherence scale, some psychometric evaluation of Antonovsky's (1987) Sense of Coherence-Scale has suggested it is a unidimensional instrument, not a three factor instrument (Klepp et al., 2007; Frenz et al., 1993). Antonovsky (1987) originally conceptualized sense of coherence as one clear dominant factor with three components and found data to support this (1993, 1998). However, some studies found the factorial structure of the sense of coherence was multidimensional, with three distinct factors of comprehensibility, manageability, and meaningfulness (Eriksson & Lindström, 2005). Resolving this debate was not one of the goals of this study and the design measured sense of coherence as a unidimensional construct.

The Sense of Coherence-Scale has been used in at least 33 languages in 32 countries with at least 15 different versions of the questionnaire. In 124 studies using the 29-item Sense of Coherence-Scale, Cronbach's coefficient alpha ranges from 0.70 to 0.95 indicating good reliability. The alpha values in 127 studies using SOC-13 range from 0.70 to 0.92, and in 60 studies using a modified Sense of Coherence-Scale range from 0.35 to 0.91. Test-retest correlations show stability and range from 0.69 to 0.78 (1 year), 0.64 (3 years), 0.42 to 0.45 (4 years), 0.59 to 0.67 (5 years) and 0.54 (10 years). The means of the original 29-item Sense of Coherence-Scale range from 100.50 (SD 28.50)

to 164.50 (SD 17.10) points and the means of the 13-item Sense of Coherence-Scale range from 35.39 (SD 0.10) to 77.60 (SD 13.80) points (Eriksson & Lindström, 2005).

Klepp et al. (2007) developed a nine-item Sense of Coherence-Scale(SOC-9) by means of a survey of a rural community in Norway. The confirmatory factor analysis established goodness-of-fit and an almost perfect correlation between the original 29-item scale and this nine-item version. A recently developed three-item Sense of Coherence-Scale does not have an acceptable reliability, with a Cronbach's alpha of 0.39 (Olsson, Gassne, & Hansson, 2009). Therefore, I decided to use the nine-item Sense of Coherence-Scale(Appendix D) in this study. The nine-item Sense of Coherence-Scale seems to be a reliable, valid, and cross culturally applicable instrument measuring how people manage stressful situations and stay well. The nine-item Sense of Coherence-Scale has a range of nine to 63. The weighted mean for this nine-item scale was calculated at 45.25 with a standard deviation of 14.11.

Marlowe-Crowne social desirability scale 2(10). Social desirability bias is defined as “the tendency for individuals to portray themselves in a generally favorable fashion” (Holden, 1994, p. 492). The Marlowe–Crowne Social Desirability scale (Crowne & Marlowe, 1960) is widely used to assess and control for social desirability response bias in self-report research. Socially desirable responding in self report instruments is hypothesized to interfere with accurate inferences from the scores. Frenz et al. (1993) found a significant positive correlation between the Sense of Coherence-Scale and social desirability.

Several abbreviated versions of the original 33 item Marlowe–Crowne scale have been proposed and validated. The psychometric properties of the original Marlowe–

Crowne social desirability scale appear to have been maintained in several short 10-item versions (Barger, 2002). The reliability of the short forms was acceptable (.76) compared to the standard, full scale version. (Fraboni & Cooper, 1989; Ray, 1982; Strahan, 2007; Strahan & Gerbasi, 1972; Zook & Sipps, 1985). In order to help determine the validity of the responses in this study, a short 10-item form of the Marlowe-Crowne Social Desirability Scale (Appendix C) developed by Strahan and Gerbasi (1972) was administered. This established scale was used to screen for therapists who desire to present, albeit anonymously, an imagined positive self-image. Possible scores on this version range from zero to 10, with higher scores indicative of greater socially desirable responses.

Background information form – self developed. A background information form was developed to identify demographic factors that were important to this study. This form is included in Appendix A. The participants in the study were asked to provide their age, sex, race, ethnicity and the highest degree they have obtained in a mental health field. The participants were also asked if they were currently students in a degree conferring mental health program, and if so, what type of degree they were seeking. The participants were asked how much formal training they have received in working with victims of trauma. They were asked how much actual experience they had working with victims of trauma. The next question inquired about how much formal one on one supervision they had received concerning their experience working with victims of trauma. The final questions asked the participant to disclose their personal past traumatic exposure by responding to six questions about (a) involvement in a natural disaster, (b) participation in combat, (c) having been a victim of a violent crime, (d) physical, sexual

or emotional abuse as a child, (e) physical, sexual, or emotional abuse as an adult, and (f) having witnessed someone being seriously injured or killed. All information forms were anonymous.

Scantron form. The instruments described above; the Impact of Event Scale-Revised, the nine-item Sense of Coherence Scale, the Marlowe-Crowne social desirability scale 2 (10) and the self-developed background information form were entered into a Scantron form specifically for this study using the Scantron equipment at Washington & Jefferson College (Appendix G). This self-developed Scantron form was utilized as the actual survey instrument.

Procedures

This study was approved on May 13, 2009 by the doctoral committee serving for this dissertation, followed by approval by the West Virginia University Department of Counseling, Rehabilitation Counseling and Counseling Psychology. Approval was then given to pursue West Virginia University Institutional Review Board approval for this doctoral dissertation research by The West Virginia University College of Human Resources and Education. The on-line West Virginia University Collaborative Institutional Training Initiative (CITI), Human Research Curriculum was completed on May 24, 2009. The West Virginia University Institutional Review Board approved this study with exempt status on March 19, 2010.

Following the West Virginia University Institutional Review Board approval, voluntary participants who were mental health professionals, mental health professionals in training at the graduate level, or crisis intervention workers were recruited through the approved venues. Colleagues from a half dozen organizations had given tentative verbal

support, pending Institutional Review Board approval, to support this research by recruiting participants from their graduate classes, professional development continuing education classes or from their internal professional development trainings. Initially individuals from four organizations outside of West Virginia University verbally committed to allow participants to be recruited. Two of these actually provided written letters of support (Appendix H: The Kentucky Community Crisis Response Board and Wellness Promotions). Despite previous verbal commitments to allow participants to be recruited from their programs, two organizations did not respond to a request for a letter of support: The Christian Appalachian Project and Marshall University Department of Counseling. After two follow up requests for a letter of support, these two organizations were dropped from the list of data collection venues. In order to ensure sufficient participation, two organizations not included in the original prospectus were approved by the West Virginia University Institution Review Board: The Combat Stress Intervention Program at Washington and Jefferson College, and the psychology practice of Elizabeth Skibinski-Bortman. All participants and data collection sites were located in West Virginia, Pennsylvania, and Kentucky.

The survey instruments were administered to clinicians at various levels of professional development who work with victims of trauma. Because personal questions about their own traumatic exposure were asked on the background information form, a signed informed consent that might link participants to their confidential responses was waived by the West Virginia University Institution Research Board. The research scripts describe the process of informed consent and were either read (Appendix E: Script 1) to each of the participants prior to the distribution of the research surveys or distributed

attached to the surveys (Appendix E: Script 2). Ample opportunity to decline participation at any point during the process was facilitated by stressing the voluntary nature of participation and by stating that surveys could be returned incomplete or blank.

Due to the sensitive nature of some questions that could potentially have triggered a resurgence of unpleasant memories of past traumatic exposure, the mental health professional administering the surveys was available at each site following completion of the surveys in the event any of the participants desired to process their reactions to inquiries about a history of traumatic exposure. In addition, a list of local licensed mental health providers in the region of each administration was provided to all participants, listing licensed providers in their specific region should they have desired to talk in more depth about memories that may have been triggered by the survey (Appendix F).

Data was collected in one of two formats. Dr. Jennifer Adams, the principal investigator for this study, or I personally administered the surveys in a group format to many of the participants. When either the principal investigator or I administered the survey, the script “Informed Consent Script to Recruit Participants” was read (Appendix E: Script 1). The second format involved identifying a mental health professional in one of the participating organizations to administer the surveys. In this format, the alternate script “Informed Consent for Voluntary Participants” that notes “The following script will be attached to the survey at sites where the administrators (Dr. Jennifer Adams or Mary E. Schaffer) are not personally and directly administering the survey” (Appendix E: Script 2) was attached to each survey.

The surveys not administered and collected by Dr. Adams or Mary Schaffer were mailed or hand carried, with the informed consent script and list of area mental health

professionals attached to each survey, to the identified mental health professionals to administer. A self addressed pre-paid stamped mailing box for the return of the entire packet of surveys was provided for each administration with the exception of students in the West Virginia University doctoral program in clinical psychology. These participants were each given a preaddressed stamped envelope with each survey to return the completed surveys anonymously by mail to Mary Schaffer.

Three-hundred and fifty (350) of these Scantron survey forms were distributed to counseling, counseling psychology, and clinical psychology graduate students and faculty at West Virginia University and the four crisis support and/or training organizations who wrote letters of support (Appendix H) for this project. These four organizations were The Kentucky Community Crisis Response Board, the Combat Stress Intervention Project at Washington and Jefferson College, Wellness Promotions in Uniontown, Pennsylvania and the psychology practice of Elizabeth Skibinski-Bortman in Washington, Pennsylvania.

The survey instruments were administered between March 20, 2010 and April 20, 2010. No surveys were distributed or completed outside of this time frame. Of the 350 survey forms that were distributed, 213 forms were returned. Of these, 82 were not utilized in the regression analysis set due to the participant's failure to complete sufficient portions of the instrument. The primary reason forms were judged incomplete was participant's failure to complete the Impact of Event Scale-Revised response portion of the Scantron survey form. One-hundred and thirty-one Scantron survey forms were returned, judged complete and utilized in this analysis. The surveys were promptly returned, thus follow up was not necessary on any of the distributed survey sets.

The completed Scantron forms were scanned into a Statistical Package for the Social Sciences (SPSS) data base using the Scantron equipment at Washington & Jefferson College. This equipment also provides a Portable Document Format (PDF) file of all scanned surveys. Each one of the actual surveys was visually compared to the PDF file generated by Scantron and then to SPSS data file for accuracy. Several errors due to either light markings or check marks outside of the Scantron box were found and corrected. During this process surveys missing significant data were dropped from the data file. The surveys have been maintained in a secure location at all times, and will be kept until the defense of this dissertation project, and then will be shredded. The mental health professionals who provided distal administration were instructed to keep the surveys secure until they were mailed directly back to me at my home address. The raw data will be kept in both the electronic SPSS file and the electronic PDF for each survey for five years after any publication of this study.

Coding of Data

The background information form (Appendix A and the Scantron form in Appendix G) had the most data to be coded. Age was coded in years. Sex was coded as male, female or other. Race was coded based on categorical responses. Degrees were coded based on none, Associate, Bachelors, Masters, or Doctorate. Student status was coded dichotomously as yes or no. Type of degree was coded based on categorical response. Formal training in trauma therapy was coded based dichotomous responses to each of the four categories of less than three hours (the reference category), three to eight hours, more than eight hours but less than a full graduate level two credit hour semester long courses or a full graduate level two credit hour semester long courses or more.

Counseling experience with victims of trauma was coded in number of years. Supervision was coded in one of six categories: none, one hour or less, one to less than three hours, three to less than five hours, five to ten hours, and over ten hours. The traumatic events were coded by the number of types of events. The types of potentially traumatic events were listed by six categories and were (a) being involved in a natural disaster, (b) participation in combat, (c) being a victim of a violent crime, (d) physical, sexual or emotional abuse as a child, (e) physical, sexual, or emotional abuse as an adult, or (f) witnessing someone being seriously injured or killed.

In addition to the background information form (Appendix A), additional instruments used in this study were previously published and validated with proscribed coding. The Impact of Event Scale-Revised (Appendix B) was a 22 item likert type response coded 0 to 4 for each item, with a total score that could range from 0 to 88. In this scale, 0 indicated no impact of the event and 4 indicated the participant was extremely bothered by the event (Weiss, 2004). The ten true/false responses on the Marlowe-Crowne 2(10) (Appendix C) are each coded with a value of 1 or 0, resulting in a score that ranged from 0 (reflecting no responses indicating a socially desirable response bias) to 10 (reflecting an endorsement of all items indicating a high socially desirable response bias) (Strahan & Gerbasi, 1972). The nine-item Sense of Coherence-Scale(Appendix D) was coded from 1 to 7 for each item, with higher scores indicating a greater measured sense of coherence. The total possible range on the nine-item Sense of Coherence-Scale was nine to 63 (Klepp et al., 2007).

Data Analysis

The following independent predictor variables were entered simultaneously into the equation in the second block:

1. Nine-item Sense of Coherence-Scale (SOC-9) (Appendix D). I chose not to calculate the secondary scales of comprehensibility, manageability and meaningfulness as a part of the secondary analysis for this study. While these scales may prove useful in a later analysis, psychometric evaluation of Antonovsky's (1987) Sense of Coherence-Scale has suggested it is a unidimensional instrument (Klepp et al., 2007; Frenz et al., 1993) and the sub-scales have less value.
2. Training in Trauma Therapy (TTT) (Appendix A) was entered as the dichotomous responses to three categories.
3. Past Personal Traumatic Exposure (PPTE) (Appendix A). For purposes of this study the data was be entered as the discrete number of types of lifetime traumatic events.
4. Counseling Experience with Victims of Trauma (CEVT) (Appendix A). For purposes of this study the data was entered as the discrete number of years of counseling experience.

Additional data that were part of the model were the dependent variable compassion fatigue as measured by the impact of event scale – revised (Appendix B) and the Marlowe-Crowne social desirability scale 2(10) (Appendix C). They were entered using the following values:

- Impact of Event Scale – Revised (IES-R) (Appendix B) The Impact of Event Scale-Revised was used to measure the dependent variable, compassion fatigue based on the most troublesome event experienced as a therapist. The scale has a possible range of 0 to 88 and was reported as a whole number in this range. I did not utilize the options of calculating the subscales of intrusion, avoidance or hyperarousal for this study. While the Impact of Event Scale-Revised was not designed as a diagnostic instrument for PTSD, it is common for a cut-off score of 33 to be used in research literature, providing a sensitivity of 0.91, a specificity of 0.82, a positive predictive power of 0.90 and a negative predictive power of 0.84 (Creamer et al., 2003).
- Marlowe-Crowne 2(10) Social Desirability Scale [MC 2(10)] (Appendix C). The scoring algorithm for the MC 2(10) had a possible range from 0 (when no responses indicated a socially desirable response) to 10 (when all responses indicated a socially desirable response).

Descriptive statistics of the demographic data of age, sex, race, ethnicity, highest degree, discipline of mental health and professional or student status, including means, standard deviations and correlations with the scales were computed. Descriptive statistics of each of the scales, including means, standard deviations and correlations with the remaining scale and the demographic data were also computed.

An overview of the hierarchical ordinary least squares regression analysis procedures that I used is provided in this section. I followed this section with a summary of my hypothesis and what I had anticipated this study will contribute to the current understanding of compassion fatigue. The initial model with the Marlowe-Crowne Social

Desirability Scale 2(10) was used to control for socially desirable responses is presented. The second step of the model used backward stepwise entry of the variables for sense of coherence (SOC), training in trauma therapy (TTT), past personal traumatic exposure (PPTE), and counseling experience with victims of trauma (CEVT).

SPSS-18 was used to generate a hierarchical ordinary least squares regression. The independent variables were entered into the equation with blocked stepwise entry. In the first block social desirability as measured by the MC 2(10) was entered as a covariate.

The following six predictor variables had been identified and were entered simultaneously in a second block:

1. Sense of coherence (SOC-9)
2. Minimum training in trauma therapy (minTTT)
3. Multiple trainings in trauma therapy (mulTTT)
4. Graduate level training in trauma therapy (glTTT)
5. Past personal traumatic exposure (PPTE)
6. Counseling experience with victims of trauma (CEVT)

Antonovsky (1987) found sense of coherence was a significant predictor of mental health in concentration camp survivors. A primary purpose of this present study was to see if a sense of coherence was a significant predictor of mental health in therapists, contributing more to protection against compassion fatigue than the variables of training, past exposure to trauma, and counseling experience with victims. Adams and Riggs (2008) found that trauma-specific training was independently negatively correlated to vicarious trauma symptoms in therapist trainees. Bober and Regehr (2006) identified therapists who had an undifferentiated personal trauma history and the total number of

weekly hours spent providing therapy to traumatized clients as the strongest positive correlation with levels of vicarious trauma.

The compassion fatigue prediction models have been based on the following equations:

CF Model 1.

$$\hat{CF} = b_0 + b_1 [MC\ 2(10)]$$

Where:

$\hat{CF}$ = Compassion Fatigue, as measured by the Impact of Event Scale-Revised (the outcome I wanted to predict)

b_0 = intercept of the regression line

b_1 = Marlow Crowne Social Desirability Scale 2(10)

Initially I examined the change in R squared (ΔR^2) in order to determine the proportion of variance explained by social desirability alone. Then I determined which other variables add to the equation, after I controlled for multicollinearity. At this point, I did not expect a strong correlation between any two or more of my predictor variables.

CF Model 2.

$$\hat{CF} = b_0 + b_1 [MC\ 2(10)] + [b_2 (SOC) + b_3 (minTTT) + b_4 (mulTTT) + b_5 (glTTT) + b_6 (PPTE) + b_7 (CEVT)]$$

With the addition of:

b_2 = sense of coherence: SOC

b_3 = Minimal Training in Trauma Therapy (minTTT)

b_4 = Multiple Training in Trauma Therapy (mulTTT)

b_5 = Graduate level Training in Trauma Therapy (glTTT)

b_6 = Personal Past Traumatic Experience: PPTE

b7 = Counseling Experience working with Victims of Trauma: CEVT

The data were entered into SPSS-18 in a hierarchical ordinary least squares regression model blocked for backward stepwise entry. SPSS-18 dropped any insignificant variables and continued running this model until all of the predictor variables were significant. In the final model, I examined the change in R squared (ΔR^2) in order to determine the proportion of variance explained by each of the significant predictor variables.

In order to explore my initial question about how well sense of coherence (SOC), training in trauma therapy, past personal traumatic exposure, and experience working with victims of trauma can predict compassion fatigue, I used hierarchical ordinary least squares regression analysis in SPSS-18. I used SPSS-18 to check the correlation between each of my predictor variables to insure they were not too high. I had made the assumption that the predictor variables were discrete variables and multicollinearity did not exist. In order to check for multicollinearity, I ensured that the independent variables were not highly correlated in my output data correlation matrix from SPSS-18. I had determined not to include any two variables with a bivariate correlation of .7 or more in this analysis. If this had happened, I had planned to omit the independent variable(s) that were lower on my hierarchy. I had established my hierarchy as:

1. Sense of Coherence (SOC)
2. Minimal Training in Trauma Therapy (minTTT)
3. Multiple Training in Trauma Therapy (mulTTT)
4. Graduate level Training in Trauma Therapy (glTTT)
5. Past Personal Traumatic Exposure (PPTE)
6. Counseling Experience with Victims of Trauma (CEVT)

The sense of coherence remained the variable highest in my hierarchy because understanding its impact on compassion fatigue is the primary focus of this research. The next variables, indicating training in trauma therapy, are important because of the lack of substantive research trauma specific training can make in the mitigation of compassion fatigue. The variable of personal trauma history follows next because a recent meta-analysis of the extant literature has documented these as consistent predictor variables for PTSD (Brewin et al., 2000).

Because SPSS-18 can also perform collinearity diagnostics on my variables as part of the regression procedure, I used this function to diagnose any problems with multicollinearity that may not have been evident in the correlation matrix. The model summary output from SPSS-18 is displayed in the next chapter. A regression plot has been be graphed for each of the significant predictor variables.

I selected a hierarchical ordinary least squares regression analysis with blocked stepwise entry for this study in order to determine how much of the variance in Compassion fatigue as experienced by mental health professionals is explained by sense of coherence (SOC), training in trauma therapy, past personal traumatic exposure and experience working with victims of trauma. I controlled for Social Desirability by using the Marlow Crowne 2(10) Social Desirability Scale. Preliminary analyses was conducted to ensure no violation of the assumptions of normality, linearity, multicollinearity and homoscedasticity. In the SPSS-18 data out put in the model summary box the value given under the heading R Square described how much of the variance in compassion fatigue is explained by this model. The Adjusted R square statistic corrected this value to provide a better estimate of the true population value.

I have also checked the statistical significance of each unique contribution to the equation. I am also interested in the semi partial correlation coefficients in order to understand how much of the total variance in compassion fatigue is uniquely explained by each of my predictor variables and how much the total R square would drop if that predictor variable was omitted.

Post hoc analysis. It has been noted that African Americans have been shown to score higher than whites on the impact of event scale in general population studies (Briere & Elliott, 1998). Because this effect appears to be due to race differences in self reported history of potentially traumatizing events, a post hoc analysis was planned to be conducted on the predictor variable of past personal traumatic exposure (PPTE) to see if elevated scores in those domains correlated with elevated Impact of Event Scale-Revised scores. This post hoc was not done because only one participant indicated his or her race was African-American.

Chapter 4: Results

The purpose of this study has been to understand the relative contribution of several independent predictor variables that were hypothesized to predict compassion fatigue. Hierarchical ordinary least squares regression with blocked stepwise entry was used to develop a model prediction equation to determine the influence of each variable. The variables hypothesized to influence compassion fatigue were sense of coherence as defined by Antonovsky (1987), training in trauma therapy, past personal traumatic exposure, and counseling experience working with victims of trauma. In addition, the equation controlled for the effects of socially desirable responding.

The data was analyzed with the objective of testing the five hypotheses developed for this study:

Hypothesis 1: I hypothesized a significant correlation between compassion fatigue and sense of coherence.

Hypothesis 2: I hypothesized a significant correlation between compassion fatigue and training in trauma therapy.

Hypothesis 3: I hypothesized a significant correlation between compassion fatigue and past personal traumatic exposure.

Hypothesis 4: I hypothesized a significant correlation between compassion fatigue and counseling experience working with victims of trauma.

Hypothesis 5: I hypothesized a significant difference in the predictive correlation of sense of coherence and the other predictor variables of training in trauma therapy, past personal traumatic exposure and counseling experience working with victims of trauma on the dependent variable compassion fatigue.

Statistical Model

Hierarchical ordinary least squares regression with blocked stepwise entry was used to develop a prediction equation for the dependent variable, compassion fatigue (CF) as measured by the Impact of Event Scale - Revised (IES-R). The Marlowe Crowne Social Desirability Scale 2(10) [MC 2(10)] was used to control for those respondents who may not have given valid responses due to a desire to appear more socially desirable, stronger, or more competent and was entered in the first block.

The following six predictor variables were entered in a second block:

1. Sense of Coherence (SOC)
2. minimal Training in Trauma Therapy (minTTT)
3. multiple Training in Trauma Therapy (mulTTT)
4. graduate level Training in Trauma Therapy (glTTT)
5. Past Personal Traumatic Exposure (PPTE)
6. Counseling Experience with Victims of Trauma (CEVT)

Each predictor variable was assessed in terms of what it added to the regression model for the prediction of the dependent variable, compassion fatigue, after controlling for social desirability with the Marlowe-Crowne 2(10).

Four categories were developed for training in trauma therapy. The categorical nature of the method used to measure this predictor made it necessary to use dummy coding to create three dichotomous predictor variables which represented whether participants had minimal training or not, multiple training or not, or a full graduate level class in trauma therapy or not. The category of no training in trauma therapy served as

the reference category. All participants responded utilizing the Scantron form with these four categorical response options.

Separate predictor variables were originally identified for personal past traumatic experience and history of childhood abuse. These variables were collapsed into the inclusive category of past personal traumatic experience which is the total number of types of traumatic experiences endorsed by each participant. The influence of childhood abuse was examined separately part of an exploratory analysis following the analysis of the regression model using the inclusive predictor category of past personal traumatic experience.

The compassion fatigue prediction models were based on the following equations:

$\hat{CF}$ model 1.

$$\hat{CF} = b_0 + b_1 [MC\ 2(10)]$$

Where:

$\hat{CF}$ = Compassion fatigue, as measured by the Impact of Event Scale-Revised (the outcome I want to predict)

b_0 = intercept of the regression line

b_1 = Marlow Crowne Social Desirability Scale 2(10)

Initially I examined the change in R squared (ΔR^2) in order to determine the proportion of variance explained by social desirability alone. I then assessed for multicollinearity, and in model 2 added the other variables to the equation.

CF model 2.

$$\hat{CF} = b_0 \text{ (nTTT)} + b_1 \text{ (MC)} + [b_2 \text{ (SOC)} + b_3 \text{ (minTTT)} + b_4 \text{ (mulTTT)} + b_5 \text{ (glTTT)} + b_6 \text{ (PPTE)} + b_7 \text{ (CEVT)}]$$

Where:

$\hat{CF}$ = Compassion fatigue, as measured by the Impact of Event Scale-Revised (the outcome I want to predict)

b_0 = intercept of the regression line, no training in trauma therapy (nTTT)

b_1 = Marlow-Crowne Social Desirability Scale 2(10)

b_2 = Sense of Coherence: SOC

b_3 = minimal Training in Trauma Therapy: minTTT

b_4 = multiple Trainings in Trauma Therapy: mulTTT

b_5 = graduate level Training in trauma therapy: glTTT

b_6 = personal past traumatic experience: PPTE

b_7 = counseling experience working with victims of trauma: CEVT

Descriptive Statistics

One hundred and thirty-one surveys were analyzed for the regression analysis in SPSS-18 after eliminating 82 incomplete surveys from the final analysis. Tables reporting the descriptive statistics on age (Table 1), sex (Table 2), race (Table 3), highest degree (Table 4), student status (Table 5) and the research instruments (Table 6) follow.

Age (Table 1). Participants were required to be a minimum of 18 years of age and endorsed age by category. The range in age of the participants spanned all sequential categories from 18-21 years old to 80+ years old.

Table 1

Age Range	<i>Age</i>		
	Frequency	Percent	Cumulative Percent
18-21	2	1.5	1.5
22-25	15	11.5	13.0
26-30	16	12.2	25.2
31-39	19	14.5	39.7
40-49	18	13.7	53.4
50-59	40	30.5	84.0
60-69	19	14.5	98.5
70-79	1	.8	99.2
80+	1	.8	100.0
Total	131	100.0	100.0

Table 1 breaks down the ages of the participants by sequential category. Fifty-three percent of the participants were 49 or younger, leaving 47 % age 50 or older. The modal age group for the participants was 50-59 years old, with

30.5 % of the participants reporting their age in this category. The range of the age of the participants per category was from two participants in the age 18-21 category to one participant in the over 80 years old category.

Sex (Table 2). For sex, males were coded as 1 and females were coded as 2. For the 129 respondents who indicated their sex in this sample, 62.6% were female and 35.9% were male. No participants responded to either of two additional categories provided on the survey form: transgendered and other. Two individuals completing this study did not endorse any of the sex categories. Because this did not influence the study results, their responses were included in the total sample that was analyzed.

Table 2

	<i>Sex</i>	
	Frequency	Percent
Female	82	62.6
Male	47	35.9
Sub-total	129	98.5
Missing	2	1.5
Total	131	100.0

Race (Table 3). Participants were asked to select the racial category “that most describes you.” The categories offered in order were Hispanic, White, African American, Asian, Bi-Racial, Native American, Middle Eastern, and other.

Table 3

	<i>Race</i>	
	Frequency	Percent
Hispanic	1	.8
White	124	94.7
African American	1	.8
Asian	1	.8
Bi-Racial	2	1.5
Native American	1	.8
Other	1	.8
Total	131	100.0

The majority, 94.7 %, of participants in this study reported their race as white. Seven participants (5.3%) endorsed a race other than white, with 1 participant selecting “other” to designate his or her race.

Highest Degree (Table 4). Participants were asked to select a category for the “highest degree you have obtained in a mental health field.” This phrasing may have created confusion for psychiatrists participating in this study, in that participants who were psychiatrists may not have considered a Medical Doctorate a mental health degree.

It is unknown if any medical doctors chose to endorse “doctorate” as their highest degree in a mental health field.

Table 4

<i>Highest Degree</i>			
Degree	Frequency	Percent	Cumulative Percent
None	15	11.5	11.5
Associate	2	1.5	13.0
Bachelor	22	16.8	29.8
Masters	65	49.6	79.4
Doctorate	24	18.3	97.7
Sub-total	128	97.7	97.7
Missing	3	2.3	
Total	131	100.0	100.0

Three participants did not select a category for their highest degree obtained. This may or may not have been due to ambiguity in categories. Their data was still included in the final analysis because the type of degree did not influence the analysis of the hypotheses in this study. Of the participants who responded, 11.7 % reported not having obtained any degree, 1.6 % reported obtaining an associates degree, 17.2 % reported obtaining a bachelors degree, 50.8 % reported obtaining a masters degree, and 18.8 % reported obtaining a doctorate. It is noteworthy that the Kentucky Community Crisis Response Board only requires crisis responders to hold a high school diploma before completing crisis response certification. Some of the trained crisis responders may have been firemen, firewomen, police, state troopers, or other first responders who did not hold a mental health degree.

Student status (Table 5). Because participants were recruited in graduate mental health programs, in professional training programs where students might enroll and from

a crisis response board that allowed student participation, the question “Are you currently a student in a degree conferring mental health program?” was asked to determine the academic status of the participants.

Table 5

<i>Are You Currently a Student in a Degree Conferring Mental Health Program?</i>		
	Frequency	Percent
Yes	44	33.6
No	87	66.4
Total	131	100.0

Of the 131 participants, 33% reported they were currently a student and 66.4 % reported they were not currently a student.

Descriptive Statistics of Instruments (Table 6). Four instruments were used to develop the Scantron survey form completed by participants in this study: the background information form developed for this research, the Impact of Event Scale-Revised (IES-R), the Marlowe-Crowne 2(10) [MC 2(10)] and the nine-item Sense of Coherence-Scale (SOC-9).

One hundred thirty one participants completed all of the four key instruments on the Scantron form. The scores on the Impact of Event Scale-Revised ranged from 0 to 68, with a mean of 8.98 and a standard deviation of 10.26. The possible range for the Impact of Event Scale-Revised is 0 to 88, with higher scores indicating a greater impact of the event on the participant. The Impact of Event Scale-Revised was not designed to make a categorical diagnosis, however it does discriminate between varieties of traumatized and non-traumatized groups. Weiss (2004) states that a cutoff score for the Impact of Event Scale-Revised is neither envisioned in the design nor appropriate. Despite this, some researchers have used cutoff scores ranging from 24 (Asukai et al., 2002) to 33 (Creamer et al., 2003). These cut off scores are noted not for diagnostic purposes, but to give an

indication of potentially troublesome traumatic response. Sixteen participants gave responses on the Impact of Event Scale-Revised over 24, which is the cut-off score recommended for PTSD screening by Asukai et al. (2002). Six participants gave responses on the Impact of Event Scale-Revised that resulted in scores over 33 which is the cut off score for PTSD screening recommended by Creamer et al. (2003). Using the lower cutoff of 24, this data may be interpreted to indicate that 16 of the 131 respondents, or 12.21%, reported responses to the trauma of their clients that fell within screening guidelines for compassion fatigue. These elevated scores are considered noteworthy even though the Impact of Event Scale-Revised was not developed for the purpose of diagnosis (Weiss, 2004).

The scores in this study on the Marlowe-Crowne 2(10) ranged from 0 to 10 with a mean of 5.19 and a standard deviation of 2.47. The possible range for the Marlowe-Crown 2(10) is 0 to 10 with the higher scores indicating a greater tendency for the participant to present in a socially desirable manner.

The participant's scores on the nine-item Sense of Coherence-Scale ranged from 18 to 63 with a mean of 50.64 and a standard deviation of 8.29. The possible range of scores on the SOC-9 is from 9 to 63 points with higher scores indicating a greater sense of coherence. Antonovsky (1987) viewed health and a sense of coherence as a continuum rather than as a dichotomous variable people either had or did not have. In their general population study on the nine-item Sense of Coherence Scale, Klepp et al. (2007) reported descriptive statistics for each of the nine sense of coherence items, but an overall mean and standard deviation were not given. Using the data in their descriptive statistics, a

weighted mean for this general population in rural Norway was calculated as 45.25 with a standard deviation of 14.11.

Table 6

Descriptive Statistics of Instruments

	Percent	Minimum	Maximum	Mean	Standard Deviation	N
IES-R Total		0	68	8.98	10.25	131
Possible range 0-88						
MC 2(10) Total		0	10	5.19	2.46	131
Possible range 0-10						
SOC-9 Total		18	63	50.64	8.29	131
Possible range 9-63						
noTTT	9.92 %					13
minTTT	17.56 %					23
mulTTT	52.67 %			.		69
glTTT	19.85 %			.		26
CEVT (units: years)		<1	55	8.21	10.19	131
PPTE		.00	4.00	1.30	1.19	131
Number of types of events						
Possible range 0-6						

Note. IES-R = impact of event scale – revised; MC 2(10) = Marlow Crowne 2(10); SOC-9 = nine-item sense of coherence scale; noTTT = no trauma specific training or less than 3 contact hours; minTTT = minimal (one workshop or one 3 -8 hour seminar); mulTTT = multiple workshops (a full undergraduate class or more than 8 contact hours, but have never taken a full graduate level, 2 credit hour or more semester long course); glTTT = a full graduate level, 2 credit hour semester long course (or more training) specifically in trauma treatment; CEVT = how much experience have you had working with victims of trauma in a work environment, in a practicum, internship or volunteer experience?; PPTE = past personal traumatic exposure.

Four dichotomous categories were used for training in trauma therapy. For these, 9.92% of participants indicated they had no formal training in trauma therapy (or less than 3 contact hours of training), 17.56 % of participants reported they had minimal

training, 52.67% indicated they had attended multiple workshops, and 19.85 % reported they had taken at least a full graduate level class in trauma therapy.

The experience reported by the participants in working with victims of trauma ranged from less than one year to 55 years. The mean for this sample was 8.21 years with a standard deviation of 10.2 years.

Types of potentially traumatizing events reported by the participants ranged from zero to four. The range for the number of potentially traumatizing events in this survey was zero to six, and included (a) being involved in a natural disaster, (b) participation in combat, (c) being a victim of a violent crime, (d) physical, sexual or emotional abuse as a child, (e) physical, sexual or emotional abuse as an adult, and (f) witnessing someone being seriously injured or killed. The mean number of types of traumatizing events for this sample of individuals who work with victims of trauma was 1.3 with a standard deviation of 1.19. In the original design it was planned to also examine the participant's age at exposure to each traumatic event. However, a significant number of participants either left the age matrix on the Scantron form blank, or incorrectly completed this portion. Due to apparent difficulties participants exhibited with the age matrix portions of the forms, these descriptive statistics were not calculated.

Statistical Assumptions

In order to draw conclusions applicable to the population of therapists about the role of a sense of coherence in the prevention of compassion fatigue from this hierarchical linear regression analysis, several statistical assumptions need to be verified before examining the results. The purpose of this preliminary analysis is to ensure the following statistical assumptions are not violated: the assumptions of linearity among

variables, no multicollinearity exists, there is a continuous scale of measurement for the criterion variable, there is either a continuous or a dichotomous scale for each of the predictor variables, there is normality of the residuals and there is homogeneity of residuals. As will be noted, two assumptions were violated: normality of the residuals was not established, neither was homogeneity of the residuals established.

Linearity among variables. In order for a regression analysis to be appropriate, an assumption of linearity of the regression model was necessary. The predictors were expected to have a straight-line relationship with the criterion variable, in this case compassion fatigue. Following the step-wise entry, the only two predictors that remain in the regression model were sense of coherence and social desirability. Figure 1 shows a partial regression plot of sense of coherence (SOC-9) and compassion fatigue (IES-R).

Figure 1:

A visual inspection of the partial regression plot between Impact of Event Scale-Revised and the nine-item Sense of Coherence-Scale indicates a negative relatively linear relationship (Figure 1). In visually examining the relationship, at best there is no clear visual indication of a curvilinear relationship. In Figure 1, the higher the sense of coherence, the less variability exists in the Impact of Event Scale-Revised score. This is a visual indication of heteroscedasticity.

A visual examination of the second partial regression plot between compassion fatigue as measured by the Impact of Event Scale-Revised (IES-R) and social desirability [MC 2(10)] indicates a linear relationship and shows no visual indication of a curvilinear relationship (Figure 2).

Figure 2

Figure 2 depicts a visual indication of heteroscedasticity. It is visually apparent that there is less predictive accuracy of the Impact of Event Scale-Revised as the social desirability score becomes higher because the data points are more dispersed indicating greater variability at higher social desirability scores. This indicates that the greater the social desirability manifested by a participant, the more variability exists in the measurement used to measure compassion fatigue as measured by the Impact of Event Scale-Revised (IES-R).

No Multicollinearity. I did not expect to find a strong relationship between any two or more of my predictor variables. No perfect, strong, or even medium correlation was found between any of the predictors.

Table 7

<i>Multicollinearity</i>		
	Collinearity Statistics	
	Tolerance	VIF
Multiple Trauma	.873	1.145
Social Desirability: MC 2(10) Total	.911	1.097
Compassion Fatigue: IES-R Total	.935	1.069
CEVT	.895	1.117
minTTT	.849	1.178
mulTTT	.849	1.178
glTTT	.900	1.112

Note. MC 2(10) = Marlow Crowne 2(10); IES-R = impact of event scale – revised; CEVT = how much experience have you had working with victims of trauma in a work environment, in a practicum, internship or volunteer experience?; minTTT = minimal (one workshop or one 3 -8 hour seminar); mulTTT = multiple workshops (a full undergraduate class or more than 8 contact hours, but have never taken a full graduate level, 2 credit hour or more semester long course); glTTT = a full graduate level, 2 credit hour semester long course (or more training) specifically in trauma treatment.

A small correlation was detected between the predictor variables of a sense of coherence and social desirability ($r = .146$), but this is not sufficient to indicate multicollinearity. A correlation indicating the possibility of multicollinearity would need

to be greater than 0.7. To verify this, multicollinearity statistics were run and recorded in Table 7 above. Both the tolerance and variance inflation factor (VIF) for each of the predictor variables are close to 1 indicating a lack of multicollinearity.

Lack of Autocorrelation. Another assumption of regression is that the errors of the predictors are independent of one another. This is termed a lack of autocorrelation. Autocorrelation would violate the assumption that the error terms are uncorrelated. For any two observations, the residual terms need to be uncorrelated. The Durbin-Watson test (Table 11) is a test for first-order serial correlation (autocorrelation) in the residuals of regression. A value of 2.0 for the Durbin-Watson statistic indicates that there is no autocorrelation.

Scale of measurement. Regression analysis requires the data to be measured in a continuous scale or entered as a dichotomous response. The scales of measurement used in this analysis were continuous for the Impact of Event Scale-Revised (IES-R), the Sense of Coherence Scale (SOC-9), and the social desirability [MC 2(10)] scale. A continuous scale that counted the number of types of traumatic events was used for past personal traumatic exposure. Experience working with victims of trauma was a continuous scale measured in the number of years.

The responses for training in trauma therapy were presented as categorical responses (none, minimal, multiple or graduate level training, see Appendices A & G) and not as a continuous scale. These categories were translated to a dichotomous response for coding (either the item for each category was endorsed or it was not endorsed). No trauma specific response became the reference category and minimal or not, multiple or not, and graduate level or not each were coded as three separate

dichotomous predictors, increasing the number of predictors in the original design equation from five to seven.

Normality of residuals. An important statistical assumption for a hierarchical linear regression analysis is that the residuals in the model will be random, normally distributed variables with a mean of zero. Residuals are the differences between the obtained score and the predicted score on the dependent variable, in this case the Impact of Event Scale-Revised score. Outliers are the data points with standardized residual values above about 3.3 or less than -3.3 (Tabachnick & Fidell, 2007, p. 128). The distribution of the Impact of Event Scale-Revised residuals was not normally distributed, but was positively skewed with three outlier residuals falling in the four to six range (see Table 8, Table 9 and Figure 3).

Table 8

<i>Residuals Statistics^a</i>					
	Minimum	Maximum	Mean	Standard Deviation	N
Predicted Value	1.5	23.54	8.94	3.83	142
Residual	-17.13	55.39	.69	10.23	142
Std. Predicted Value	-1.89	3.694	-.01	.97	142
Std. Residual	-1.79	5.80	.07	1.07	142

a. Dependent Variable: IES-R Total

Note. IES-R = Impact of Event Scale-Revised.

The number of surveys analyzed in both Table 8 above and Figure 3 below is 142 because this is the number of participants who completed both the impact of event scale and the nine-item Sense of Coherence-Scale in their entirety.

Figure 3

The extreme outliers shown in the positive skew in Figure 3 are depicted in more detail in Table 9, where these three most extreme three outliers are shown to all exceed 3.28. This reflects a much higher than predicted score on the Impact of Events Scale-Revised for these outliers.

Homogeneity of residuals. A visual examination of the scatterplot of the dependent variable: Impact of Event Scale-Revised (IES-R) total (Figure 4) indicates there is heterogeneity of standardized residuals across the range of standardized predicted values. This is a violation of the assumption of homogeneity necessary for a regression.

At the point where the data are tighter, the prediction is more accurate. As the predicted value of compassion fatigue increases, the data become more diffuse indicating less predictive accuracy for the model.

Figure 4

Casewise Diagnostics. The casewise diagnostics in Table 9 below indicate which cases are extreme outliers from the predicted value in the regression model.

Table 9

<i>Casewise Diagnostics^a (Outliers)</i>						
Case Number	MC 2(10)	SOC-9	Std. Residual	IES-R Total	IES-R Predicted Value	Residual
13	9	59	3.647	43.00	8.1868	34.81316
38	6	50	5.803	68.00	12.6066	55.39335
118	7	44	4.224	51.00	10.6829	40.31707

a. Dependent Variable: IES-R Total

Note. SOC-9: nine-item sense of coherence scale; IES-R = impact of event scale-revised.

The casewise diagnostics in Table 9 show the three cases that have a standardized residual less than negative three or greater than three. Three outliers are identified by higher Impact of Event Scale-Revised scores than the model predicts. With a sample size of 131, it is reasonable to expect 5%, or about six to seven cases to have standardized residuals outside of the limits, but within a range of 1.96 to 3.28. The standardized residuals of the three outliers all exceed 3.28. As noted in Figure 4, the data become more diffuse as the predicted value of Impact of Event Scale-Revised rises, indicating less predictive accuracy for the model.

It is noteworthy that these three outliers are the three highest scores in this data set on the Impact of Event Scale-Revised, indicating the highest levels of compassion fatigue found in this sample. This may in part reflect the decrease in predictive accuracy of this model at higher levels of the dependent variable. The three identified outliers also reported relatively high scores on the nine-item Sense of Coherence-Scale compared to the sample mean in this study of 50.82 and the population mean documented in the literature of 45.25 (Klepp et al., 2007).

Perhaps most interesting is the Marlowe-Crowne 2(10) scores of these three outliers. The Marlowe-Crowne 2(10) measures socially desirable responding, which is

the reluctance to admit unpopular beliefs or behaviors. Higher scores, on a scale of zero to ten, indicate more socially desirable responding. All three of these outliers gave responses resulting in a Marlowe-Crowne 2(10) score that was above the mean of 5.19 for this sample.

Concern over Violation of Statistical Assumptions

Due to the violation of two statistical assumptions, the lack of normality of residuals and the lack of homogeneity of residuals, the hierarchical linear regression with step wise entry was run with the three outliers removed from the data set. The pattern of results was similar. The hierarchical linear regression with step wise entry was run a third time with all standardized residuals greater than 1.96 (a total of eight cases) removed from the data set, this time with results that reflected a more normal distribution of the residuals, however there still remained a lack of homogeneity. Again, these eight cases with standardized residuals greater than 1.96 all reflected higher Impact of Event Scale-Revised scores than predicted rather than lower scores.

Inferential Statistics

Hierarchical ordinary least squares regression with blocked stepwise entry was used to develop a prediction equation for the dependent variable, compassion fatigue as measured by the Impact of Event Scale-Revised (IES-R). The Marlowe-Crowne social desirability scale 2(10) variable was entered as block 1 in order to control for social desirability. The following predictor variables were simultaneously entered as the second block:

- Social Desirability [MC 2(10)]
- Sense of Coherence (SOC-9)

- Training in Trauma Therapy (TTT)
 - Minimal (one workshop or one three to eight hour seminar)
 - Multiple workshops, a full undergraduate class or more than eight contact hours, but have never taken a full graduate level, two credit hour or more semester long course
 - A full graduate level, two credit hour semester long course (or more training) specifically in trauma treatment
- Past Personal Traumatic Exposure (PPTE)
- Counseling Experience with Victims of Trauma (CEVT)

After controlling for social desirability, SPSS-18 dropped non-significant variables and continued running this model until all of the included predictor variables were significant.

Antonovsky's (1987) sense of coherence as measured by the nine-item Sense of Coherence-Scale (Klepp et al., 2007) was found to be the only significant predictor variable. ($p = .001$) (see Table 10).

Table 10

Model	<i>Variables Entered/Removed^b</i>		
	Variables Entered	Variables Removed	Method
1	MC 2(10) Total ^a		Enter
2	SOC-9 Total		Stepwise (Criteria: Probability-of-F-to-enter $\leq .050$, Probability-of-F-to-remove $\geq .100$).

a. All requested variables entered.

b. Dependent Variable: IES-R Total

Note. MC 2(10) = Marlow Crowne 2(10); SOC-9 = nine-item sense of coherence scale; IES-R = impact of event scale – revised.

Interpretation of output from hierarchical multiple regression with blocked stepwise entry

As mentioned in the previous section of this chapter on statistical assumptions, several statistical assumptions needed to be verified. I have noted that some of these assumptions were violated. Of specific concern are the lack of normality in the residuals and the lack of homogeneity in the residuals. Both reflect the concern that as greater amounts of the criterion variable, compassion fatigue, are measured there is less predictive accuracy in this model. This will be examined in more detail in Chapter 5.

After each of the two blocks were entered into SPSS-18, the following data was generated for the hierarchical ordinary least squares regression with blocked stepwise entry to develop a prediction equation for the dependent variable, compassion fatigue as measured by the Impact of Event Scale-Revised.

Model summary.

Table 11

<i>Model Summary^c</i>										
Model				Std. Error of the Estimate	Change Statistics					
	R	R ²	Adjusted R ²		R ² Change	F Change	df1	df2	Sig. F Change	Durbin- Watson
1	.13 ^a	.02	.01	10.20	.018	2.35	1	129	.13	
2	.38 ^b	.15	.13	9.54	.130	19.45	1	128	.001	2.0

a. Predictors: (Constant), MC 2(10) Total

b. Predictors: (Constant), MC 2(10) Total, SOC-9 Total

c. Dependent Variable: IES-R Total

Note. MC 2(10) = Marlow Crowne 2(10); SOC-9 = nine-item sense of coherence scale; IES-R = impact of event scale – revised.

In Table 11, after the Marlow Crowne 2(10) scale for social desirability was entered in block 1, the overall model explains 1.8 % of the variance (R squared change = .018; percent of variance = $R^2 \times 100\%$ so $.018 \times 100\% = 1.8\%$).

In block 2 (Table 11) the only remaining variables are sense of coherence (SOC-9) and the small contribution of social desirability [MC 2(10)]. All other variables were excluded due to a lack of significance. This final model as a whole explains 15 % (block 2: R^2 of .148 x 100 %) of the variance.

In Model 2 the R square change value is 0.13 which means that sense of coherence (SOC-9) explains an additional 13 % (0.13 x 100 %) of the variance in compassion fatigue (IES-R) after controlling for the effects of socially desirable responding. This is a statistically significant contribution, as indicated by the Sig. F change value for this line (.001).

Table 12

<i>ANOVA^c</i>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	245.42	1	245.42	2.35	.13 ^a
	Residual	13436.55	129	104.16		
	Total	13681.97	130			
2	Regression	2018.18	2	1009.09	11.07	.001 ^b
	Residual	11663.79	128	91.12		
	Total	13681.97	130			

a. Predictors: (Constant), MC 2(10) Total

b. Predictors: (Constant), MC 2(10) Total, SOC-9 Total

c. Dependent Variable: IES-R Total

Note. MC 2(10) = Marlow Crowne 2(10); SOC-9 = nine-item sense of coherence scale; IES-R = impact of event scale – revised.

Analysis of variance (ANOVA). The analysis of variance allowed testing the impact of the independent variables on the criterion compassion fatigue as measured by the Impact of Event Scale-Revised (IES-R).

The analysis of variance (Table 12) indicates model 2 (which included both blocks of variables) was significant [$F(2, 130) = 11.07, p = .001$]. Model 1 was not significant [$F(1, 130) = 2.35, p = .13$].

Standardized beta coefficients. Standardized beta coefficients are the estimates resulting from a regression analysis carried out on variables that have been standardized so that their variance is 1. They refer to the expected change in standard deviation units of the dependent variable, in this case, compassion fatigue, per each change in standard deviation in the predictor variable. A positive standardized beta indicates an increase in the dependent variable and a negative standardized beta indicates a decrease in the dependent variable for each standard deviation of increase in the predictor variable. In block 1 the Marlow Crowne 2(10) scale for social desirability was entered in the regression equation to control for social desirability.

Table 13

Standardized Beta Coefficients

<u>Model</u>		<u>Standardized Beta Coefficients</u>	<u>Sig.</u>
1	(Constant)		.004
	MC 2(10)	.134	.127
2	(Constant)		.001
	MC 2(10)	.187	.025
	SOC-9	-.364	.001

Note. MC 2(10) = Marlow Crowne 2(10); SOC-9 = nine-item sense of coherence scale; IES-R = impact of event scale – revised.

In model 1, the standardized beta coefficient of .134 for the predictor Marlow-Crowne 2(10) indicates a non-significant ($p = .127$) increase in compassion fatigue (as measured by the Impact of Event Scale-Revised; where $SD = 10.25$) of $.135 \times 10.25 =$

1.38 for each standard deviation increase in the Marlow-Crowne 2(10) (MC 2(10) SD = 2.46).

A statistically significant contribution to the final regression equation in Model 2 is made by the Marlow Crowne 2(10) ($p = .025$) and by the nine-item Sense of Coherence-Scale ($p = .001$) when the insignificant variables: Training in Trauma Therapy (minimal, multiple and graduate level), Past Personal Traumatic Exposure (PPTE), and Counseling Experience with Victims of Trauma (CEVT) are removed.. The standardized beta coefficient of the Marlow-Crowne 2(10) is .187. This indicates a significant increase of .187 standard deviation in the Impact of Event Scale-Revised (IES-R SD = 10.25) for each standard deviation of change in the Marlow-Crowne 2(10), resulting in an increase of 1.92 points in the impact of event-revised scale ($.187 \times 10.25 = 1.92$).

The standardized beta coefficient of the nine-item Sense of Coherence-Scale (SOC-9) is -.364. This standardized beta coefficient represents the unique contribution of sense of coherence after controlling for the influence of socially desirable responding. The standardized beta coefficient of sense for coherence in Model 2 tells us that compassion fatigue, as measured by the Impact of Event Scale-Revised, will change by -.364 standard deviations ($-.364 \times 10.82 = -3.94$) as a result of each change of one standard deviation of the measured sense of coherence (SD of SOC-9 = 8.15). This means that a linear relationship is expected between compassion fatigue and a sense of coherence in that for each increase of 8.15 points on the nine-item Sense of Coherence Scale, an accompanying decrease of 3.94 points on the Impact of Event Scale-Revised is predicted. As noted previously, the predictive value of this linear regression equation does begin to break down when higher levels of compassion fatigue are reported.

Excluded Variables. Table 14 records the contribution to the regression model of the excluded predictors from the step-wise entry. In the first model, the Marlowe-Crowne social desirability scale 2(10) variable was entered in block 1 to control for social desirability. In this first block, as shown in table 13, the standardized beta coefficient for social desirability (MC 2[10]) of .134 is not significant ($p = .127$). Social desirability alone does not predict compassion fatigue.

Table 14

<i>Excluded Variables^c</i>				
Model		Standardized beta		Collinearity
		coefficient	Sig.	Statistics: Tolerance
2	minTTT	.039 ^b	.640	.980
	mulTTT	-.015 ^b	.858	.996
	glTTT	.075 ^b	.359	.992
	CEVT	-.020 ^b	.813	.979
	PPTE	.082 ^b	.326	.960

a. Predictors in the Model: (Constant), MC 2(10) Total

b. Predictors in the Model: (Constant), MC 2(10) Total, SOC-9 Total

c. Dependent Variable: IES-R Total

Note. SOC-9 = nine-item sense of coherence scale; MC 2(10) = Marlow Crowne 2(10); IES-R = impact of event scale – revised; minTTT = minimal (one workshop or one 3-8 hour seminar); mulTTT = multiple workshops (a full undergraduate class or more than 8 contact hours, but have never taken a full graduate level, 2 credit hour or more semester long course); glTTT = a full graduate level, 2 credit hour semester long course (or more training) specifically in trauma treatment; CEVT = how much experience have you had working with victims of trauma in a work environment, in a practicum, internship or volunteer experience?; PPTE = past personal traumatic exposure in number of types of events.

In the second block, the predictors sense of coherence and social desirability remain significantly in the model, but the standardized beta coefficients indicate a lack of significance for the additional predictors. The standardized beta coefficient for minimal training in trauma therapy (minTTT) is a non-significant .039. The standardized

beta coefficient for multiple trainings in trauma therapy (mulTTT) is a non significant -.015. The standardized beta coefficient for graduate level training in trauma therapy (glTTT) is a non-significant .075. Counseling experience with victims of trauma (CEVT) is a non-significant -.020. Past personal traumatic exposure (PPTE) is a non significant .082. The tolerance for each of the predictor variables is close to 1 indicating a lack of multicollinearity in both models.

Exploratory Tests

The surveys provided sufficient data to conduct an exploratory test on two additional constructs found in the literature. One is the relationship of a history of childhood abuse to PTSD and compassion fatigue. The other is the question of the relationship of age to sense of coherence.

Childhood abuse and compassion fatigue. A history of childhood abuse has been identified across numerous studies as the most consistent pre-event risk factor for the development of PTSD following exposure to a traumatic event as an adult (Brewin et al., 2000; Briere, 2004b; Bryant, 2010; Gahm et al., 2007; Herman, 1992a, 1992b). Research on compassion fatigue indicates a history of childhood abuse increases vulnerability for compassion fatigue as well (Pearlman & MacIain, 1995; van der Kolk & Pelcovitz, 1999; van der Kolk et al., 2005; Zlotnick & Pearlstein, 1997). Due to the persuasive evidence presented in the literature about the contribution of childhood abuse, it was important to specifically examine the correlation between a history of childhood abuse and compassion fatigue. Childhood abuse was examined separately from the multiple trauma statistics in Table 14. A correlation between childhood abuse and

compassion fatigue was not found in this sample ($r = .052$, $p = .528$) as shown in Table 15.

Table 15

<i>Correlation Between Childhood Abuse and IES-R</i>		
Have you ever personally been a victim of physical, sexual or emotional abuse as a child?		
IES-R Total	Pearson	.052
	Correlation	
	Sig. (2-tailed)	.528
	N	147

Note. IES-R = impact of event scale – revised.

One hundred forty-seven survey participants answered the question about childhood abuse and also completed the Impact of Event Scale-Revised. The results of this examination indicate a lack of correlation between compassion fatigue and a history of childhood abuse.

Age and sense of coherence. Antonovsky (1987) originally hypothesized a sense of coherence as a relatively stable personality factor after about the age of 30. This stability has been substantiated in research (Feldt et al., 2000; Feldt et al., 2007; Feldt & Rasky, 1998).

However, additional recent research has found that sense of coherence tends to increase with age through the entire lifespan. (Eriksson & Lindström, 2005; Frenz et al., 1993; Nilsson et al., 2010; Pallant & Lae, 2002). Because data to examine this question was available from the surveys, a correlation was run between age and sense of coherence.

Table 16

<i>Correlation Between Age and Sense of Coherence</i>	
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		SOC-9
		Total
Age	Spearman's rho	.098
	Sig. (2-tailed)	.238
	N	147

Note. SOC-9 = nine-item sense of coherence scale.

Contrary to the current literature, no correlation was found between age and sense of coherence ($r_s = .098$, $p = .238$). Spearman's rho was used because age was measured in categories as ordinal data. One hundred and forty seven participants answered the question about age and completed the sense of coherence scale.

Post hoc analysis

It was noted earlier that African Americans have been shown to score higher than whites on the Impact of Event Scale-Revised in general population studies (Briere & Elliott, 1998). A post hoc analysis was planned for the predictor variable of past personal traumatic exposure to see if elevated scores in that predictor correlated with elevated Impact of Event Scale-Revised scores. However, because this sample only contained one individual who reported African American for race, it isn't possible to do a meaningful post hoc analysis. The participants in this sample were from the Appalachian region of West Virginia, Kentucky and southwestern Pennsylvania where an overall lack of racial diversity exists compared to the rest of the nation (Pollard, 2004).

Results of the Statistical Analysis for each Hypothesis

Hypothesis 1: I hypothesize a significant correlation between compassion fatigue and a sense of coherence. Sense of coherence is a significant predictor in the model as shown in Table 14. In the final regression model, the standardized beta coefficient of $-.364$ indicates that after controlling for social desirability, the Impact of Event Scale-Revised will change by $-.364$ standard deviations ($-.364 \times 10.82 = -3.94$) as a result of each change of one standard deviation of the measured sense of coherence (SD of SOC-9 = 8.15) at a significance of $p = .001$. Table 13 shows the change in R^2 as $.130$ for model two, indicating that sense of coherence, the only predictor remaining in the model explains 13 % of the variance in compassion fatigue after controlling for the effects of socially desirable responding. This hypothesis was supported by these results.

Hypothesis 2: I hypothesize a significant correlation between compassion fatigue (CF) and training in trauma therapy (TTT). Training in Trauma Therapy (TTT) was measured with 4 dichotomous categories:

- no training in trauma therapy (used as reference category)
- minTTT: Minimal (one workshop or one 3 -8 hour seminar)
- mulTTT: Multiple workshops, a full undergraduate class or more than 8 contact hours, but have never taken a full graduate level, 2 credit hour or more semester long course
- glTTT: A full graduate level, 2 credit hour semester long course (or more training) specifically in trauma treatment

No training in trauma therapy served as the reference category. All of the predictor variables for training in trauma therapy were dropped in the final model due to a lack of significant contribution (Table 13).

Table 14 gives the standardized beta coefficients for each of the three categories of training in trauma therapy. In model 2, the standardized beta coefficients show that the predictors of training in trauma therapy do not make a significant contribution to this final model. Minimal training in trauma therapy has a standardized beta coefficient in model 2 of .039. Multiple trainings in trauma therapy had a standardized beta coefficient of -.015. Graduate level training in trauma therapy has a standardized beta coefficient of .075. None of these standardized beta coefficients are significant. Thus, this hypothesis was not supported by the results.

Hypothesis 3: I hypothesize a significant correlation between compassion fatigue and past personal traumatic exposure (PPTE). Past personal traumatic exposure was measured as a total of the number of types of traumatic exposure reported by each participant. As a predictor, past personal traumatic exposure (PPTE) was dropped from the final model due to lack of significance as shown in Table 13. The standardized beta coefficients in Table 14 indicate that past personal traumatic exposure was excluded from the final model because it did not contribute significantly to the model. The standardized beta coefficient for past personal traumatic exposure (PPTE) was a non significant .082. Thus, the results of this analysis did not support hypothesis 3.

Hypothesis 4: I hypothesize a significant correlation between compassion fatigue (CF) and counseling experience working with victims of trauma (CEVT).

Table 13 indicates that the predictor of counseling experience working with victims of

trauma was excluded because it did not contribute significantly to the final model. In Table 14 for the second block, the standardized beta coefficient for counseling experience working with victims of trauma is a non significant $-.020$. These results did not support the hypothesis that there was a significant correlation between compassion fatigue and counseling experience working with victims of trauma.

Hypothesis 5: I hypothesize a significant difference in the predictive correlation of the predictor sense of coherence (SOC) and the other predictor or independent variables of training in trauma therapy (TTT), past personal traumatic exposure (PPTE) and counseling experience working with victims of trauma (CEVT) on the dependent variable compassion fatigue (CF). Based on the above findings, there is support for the hypothesis that there exists a significant correlation between sense of coherence and compassion fatigue as measured by the Impact of Event Scale-Revised after controlling for social desirability with the Marlowe-Crowne 2(10). No correlation was found between compassion fatigue and the other predictor variables of minimum training in trauma therapy, multiple trainings in trauma therapy, graduate level training in trauma therapy, past personal traumatic exposure and counseling experience working with victims of trauma on the dependent variable compassion fatigue. Therefore, a significant difference in the predictive correlation of a sense of coherence and the other predictor variables was established in the final model.

Chapter 5: Implications of the Findings

The primary question of interest for this study concerned the hypothesis that a well developed sense of coherence provided protection against compassion fatigue in a therapist or other helper who works with victims of trauma. The importance of a sense of coherence was contrasted with protective and risk factors found in the literature after controlling for social desirability: training in trauma therapy, personal traumatic exposure, and counseling experience working with victims of trauma. Hierarchical ordinary least squares regression with blocked stepwise entry was used to develop a prediction equation for the dependent variable, compassion fatigue as measured by the Impact of Event Scale-Revised. The independent or predictor variables were strength of coherence - as measured by Antonovsky's nine-item Sense of Coherence-Scale (Antonovsky, 1987), training in trauma therapy, past traumatic exposure, and counseling experience as measured by the self-developed background information form. The Marlowe Crowne Social Desirability Scale 2(10) (Strahan, 2007) was used to control for those respondents who may not have given valid responses due to a desire to appear more socially desirable, stronger, or more competent.

I hypothesized a significant negative correlation between compassion fatigue and sense of coherence, after controlling for the possible effect of social desirability (Almedom, 2005; Antonovsky, 1987; Flannery & Flannery, 1990; Frommberger et al., 1999; Linley & Joseph, 2007; McSherry & Holm, 1994; Ortlepp & Friedman, 2001; Pallant & Lae, 2002). I also predicted a correlation between compassion fatigue and the predictor variables of training in trauma therapy (Adams & Riggs, 2008; Figley, 2002; Pearlman & Mac Ian, 1995), past personal traumatic exposure (Brewin et al., 2000) and

experience working with victims of trauma (Adams & Riggs, 2008; Figley, 2002; Pearlman & Mac Ian, 1995). I hypothesized a significant negative correlation between compassion fatigue and training in trauma therapy. I hypothesized a significant correlation between compassion fatigue and past personal traumatic exposure. I hypothesized a significant correlation between compassion fatigue and experience working with victims of trauma. I hypothesized the negative correlation between compassion fatigue and sense of coherence would be stronger and thus more predictive, than the correlation between compassion fatigue and the other predictor variables.

As hypothesized, a significant difference in the predictive correlation was found between a sense of coherence and compassion fatigue. A small correlation was found between a sense of coherence and social desirability. However, a correlation was not established with the other hypothesized predictor variables of training in trauma therapy, personal traumatic exposure or counseling experience working with victims of trauma.

Two assumptions for a regression were violated by the data: a lack of normality in the residuals and a lack of homogeneity in the residuals. Both reflect the concern that as greater amounts of the criterion variable, compassion fatigue, are measured there is less predictive accuracy in this model.

Discussion

Some previous researchers have indicated the relationship between compassion fatigue and experience working with victim of trauma may not be entirely linear, so I need to be prepared for this in my results. Bober and Regehr (2006) found an increase in distress based on time and experience working with victims of trauma, but also found that those therapists who were older had lower levels of distress. Because this was a

correlational study, it is unclear if this is because therapists who may have been adversely impacted by their work with victims of trauma moved on to another field before becoming older therapists or if the older therapists had developed a cognitive schema or another form of coping that provided them with resilience. Due to this uncertainty in the extant research literature, and because it may be an important corollary to the importance of a sense of coherence, the relationship between compassion fatigue, experience working with victims of trauma and sense of coherence has been examined closely.

Support was not found in this study for Antonovsky's (1987) original hypothesis that a sense of coherence remains relatively stable after the age of 30. Neither was support found that a sense of coherence correlates positively with age. While no correlation was found in this present study between age and a sense of coherence, previous researchers have documented that a sense of coherence increases with age (Eriksson & Lindström, 2005; Frenz et al., 1993; Nilsson et al., 2010; Pallant & Lae, 2002). In the general population, powerful life experiences appear to be able to influence a sense of coherence in both a positive (Langeland et al., 2006) and a negative (Pham et al., 2010) direction. Learning to use experience to move toward the healthy end of the continuum, which Antonovsky (1987) called a sense of coherence, may be important in terms of both life satisfaction and protection against the trials of life.

Some research has found that many older, more experienced therapists are better able to manage their response to working with victims of trauma (Dutton & Rubinstein, 1995; Pearlman & Mac Ian, 1995). A possible hypothesis for the increased ability of older therapist to manage the distress of working with victims of trauma may be correlated with the growth and development of their sense of coherence. As mentioned

an increase in sense of coherence has been found in some recent studies to increase with age over the whole life span, with the oldest people showing the highest mean scores on the Sense of Coherence-Scale (Eriksson & Lindström, 2005; Frenz et al., 1993; Nilsson et al., 2010; Pallant & Lae, 2002).

Furthering the understanding of the correlates of compassion fatigue will accomplish several functions. It will identify skills an individual therapist could benefit by developing prior to working with clients who are victims of trauma. It will identify areas where an individual therapist may need additional work or training. It may also help therapists recognize if they have personal variables that may correlate with either resilience or vulnerability for the risks of trauma work.

Once variables that may influence compassion fatigue have been identified, these variables may be addressed as a part of pre-traumatic exposure training. There is some evidence in a non-clinical population that pre-event skill training and preparation can lessen the impact of a traumatic event (Phipps et al., 2007, Phipps & Byrne, 2003; Richards, 2001). This principle may be applied to training mental health professionals who work alongside the victims of trauma. Understanding what to expect, having a repertoire of skills to manage personal stress, and having the tools to work effectively with the victims, have all been shown to be balancing factors that help to inoculate a trauma worker against the impact of compassion fatigue (Figley, 2006; Phipps & Byrne, 2003; Sprang et al., 2007). Adequate training may lead to a sense of self-efficacy which has been shown to be a protective factor against exposure to actual trauma (Bryant, & Guthrie, 2007). Adams et al. (2006) found that trauma workers who had a higher self-assessment of their mastery of crisis intervention techniques were less distressed when

exposed vicariously to traumatic events. Training and preparation can also contribute to a sense of personal coherence, a sense that despite the pain and suffering the trauma worker can offer some sense of manageability, some comprehensibility, even demonstrate grounding in some context of meaning large than the chaos. The construct of personal coherence has been found in some initial studies to provide some protection against the impact of vicarious trauma (Pallant, & Lae, 2002; Sagy, & Antonovsky, 2000). Yet, how may clinical preparation programs for mental health professionals devote curricular emphasis to supporting students in developing a personal Sense of Coherence?

It is noteworthy that in this sample of individuals who work with victims of trauma the mean score on the nine-item Sense of Coherence-Scale was 50.64 with a standard deviation of 8.29. The possible range of scores on the nine-item Sense of Coherence-Scale (SOC-9) is from 9 to 63 points with higher scores indicating a greater sense of coherence. The mean of 50.64 in this sample was higher than the weighted mean calculated from the data provided by Klepp et al. (2007) on the nine item Sense of Coherence-Scale of 45.25. Based on the data provided by Klepp et al., it is not possible to run an analysis of variance on the two samples. However, visual inspection supports the conjecture that the current sample of individuals who work with victims of trauma reflect a greater sense of coherence than the sample in Klepp et al.'s (2007) general population sample. If these samples reflect the populations they represent, then the deduction that helpers who work with victims of trauma have a more developed sense of coherence than the population at large is tentatively appropriate.

The hierarchical linear regression with step-wise entry resulted in a model with a standardized beta coefficient of -.364 between the predictor variable of a sense of

coherence and the criterion, compassion fatigue. This reflects a moderate effect size. However, as noted, some of the statistical assumptions were violated. The results reflected a lack of normality and a lack of homogeneity in the residuals. Both reflect the concern that as greater amounts of the criterion variable, compassion fatigue, are measured there is less predictive accuracy in this model.

One possible explanation for this decrease in predictive accuracy may be due to the debilitating effects of vicarious exposure to the trauma of clients. Research on PTSD has identified intensity and duration of exposure as a significant factor in the subsequent development of PTSD (Herman, 1992a, 1992b; Tummala-Narra, 2007; van der Kolk et al., 2005). Hypothesis 4 did ask about years of experience working with victims of trauma which was not found to be a significant predictor in any direction of the participant's Impact of Event Scale-Revised scores. However, experience in years is not precisely the same as duration of exposure in that two therapists may have worked with trauma victims for the same number of years, but each may have had significantly different case loads of trauma victims during these identical time periods. It may be that for therapists who have been exposed to the most horrific trauma in their clients for the most expended periods, additional supervision and/or treatment may be necessary to manage the higher levels of traumatic exposure.

The three extreme outliers in this regression were the cases with the highest impact of event scores. These outlier Impact of Event Scale-Revised scores of 43, 68 and 51 exceed both proposed cutoff scores for PTSD, that of 24 (Asukai et al., 2002) and 33 (Creamer et al., 2003) indicating a significant level of personal impairment. This observation may indicate that higher levels of compassion fatigue are not mitigated by a

sense of coherence. This is also in keeping with recent research reflecting the finding that extreme trauma may be correlated with lower sense of coherence and increased signs of PTSD (Pham et al., 2010).

A small, but not significant correlation ($r = .146$, $p = .096$) was found between sense of coherence and social desirability. A small influence was made by social desirability in the final regression equation. In another study, Pallant and Lae (2002) found a small, but statistically significant correlation between sense of coherence and social desirability as measured by the ten-item Marlowe-Crowne ($r = 0.26$, $p < 0.001$). A previous study had also found a significant positive correlation between sense of coherence and social desirability ($r = .39$, $p < .0001$) (Frenz et al., 1993). The authors of the 1993 study interpreted the correlation to suggest that the sense of coherence items may be somewhat transparent and thus vulnerable to social desirability response bias.

The study cited earlier on social desirability and trauma (Brunet et. al., 1996) documented a modest but significant negative correlation between scores on social desirability and actual traumatic events. In their study, participants with a PTSD diagnosis were associated with lower scores on the Marlowe-Crowne. In contrast individuals who reported a trauma, but no PTSD, scored higher on the Marlowe-Crowne. This would seem to indicate that those who experience traumatic events leading to PTSD are less likely to feel the need for a false front of socially desirable responses.

In this present study the results suggest a small effect in the increase in socially desirable responding as compassion fatigue increases, contrary to what Brunet et al. (1996) had found. Because many factors may be involved, it is not possible to draw any definitive conclusions from these results. A tentative understanding may be proposed

that in this population of therapists there is an understanding of what a therapist “should” be like, including ability for their self to be an instrument of healing. It may be that their awareness of the negative impact of an event may be self-interpreted as a lack of personal healing ability. As their own negative psychological sequelae increases in the form of compassion fatigue, this possibly could result in less willingness to be fully transparent.

An interesting question concerns the lack of correlation in this study between compassion fatigue and the other predictors found in the literature, training in trauma therapy, personal traumatic exposure or counseling experience working with victims of trauma. The writing of Walter Mischel (2009) may provide a basis for conceptualizing this discrepancy between the literature and the present findings.

Mischel (2009) has written a thoughtful perspective on 40 years of reaction to his 1968 book *Personality and Assessment*. In his earlier work he had raised concerns about the disappointing results of personality assessment research. Mischel (2009) writes that many who read his 1968 book were focused on the debate prevalent at the time concerning the influence of the person versus the situation on behavior. He states this dichotomy creates an unanswerable question (situation versus person) and proposes that a better question is to examine what situations are psychologically meaningful for the individual. Mischel quotes his earlier writing “ „In the present view, the assessor’s concern is with the particular meaning that stimuli have acquired (Mischel, 1968, p. 300)’ ” (Mischel, 2009, p. 283). He writes that the failure of tests and studies to accurately predict what people actually do may be a result of the untenable assumption that the variables are primarily a function of the person in the environment. Rather than a particular event or situation accurately predicting behavior, he proposes the meaning each

individual ascribes to various events gives the best insight into his or her subsequent behavior.

Applying Mischel's thinking to this current study, it may be that training in trauma therapy, personal traumatic exposure or counseling experience working with victims of trauma are less important as predictors than the meaning the therapist has ascribed to his or her work with victims of trauma. The results of this current study which show a negative correlation between the sense of coherence endorsed by the individual therapist and their compassion fatigue are congruent with Mischel's perspective that meaning is an important predictive variable. Therapists in this study did not report a significant correlation between their personal experience of trauma and the symptoms of compassion fatigue. The amount of training and their level of experience did not correlate with the level of compassion fatigue either. For these therapists, a sense of coherence was more protective against compassion fatigue than either experience working with victims of trauma or formal training in trauma therapy. The greater the comprehensibility, manageability and meaningfulness reported by the participating therapists on the nine-item Sense of Coherence-Scale used in this study, the lower their score on the Impact of Events Scale-Revised. This finding could be further explored through a qualitative follow-up from a constructionist perspective that argues that knowledge and meaning are constructed from an interaction between experiences and cognitions.

Other research has documented significantly higher sense of coherence scores in non-clinical than in clinical mental health participants using Antonovsky's (1987) 29-item Sense of Coherence-Scale (Frenz et al., 1993) possibly indicating a correlation

between mental health and a sense of coherence. Based on an analysis of existing literature that documents a high negative correlation between sense of coherence and mental health measures, Geyer (1997) proposed that sense of coherence may actually be a measure of mental health. A sense of coherence has been found to be negatively associated with anxiety, anger, burnout, demoralization, hostility, hopelessness, depression and PTSD (Flannery & Flannery, 1990). However, longitudinal studies of mental health and sense of coherence dispute the idea that a sense of coherence is merely a measure of mental health and provide support for the hypothesis that a sense of coherence is in fact a protective factor (Kouvonen et al., 2010).

It has been demonstrated in Langeland et al.'s (2006) study that it is possible to intentionally develop a sense of coherence. This has interesting implications for the training of mental health workers. C. S. Lewis was quoted at the beginning of this study as writing "none can give to another what he does not possess himself" (1970, p. 116). Researchers have emphasized the importance for therapists to deliberately attend to his or her personal development as a protective factor (Figley, 2002; Friedman, 2005; Hayes & Frederickson, 2008; Harrison & Westwood, 2009; Hernández et al., 2010). However, despite evidence for the importance of self development, few training programs have a well developed structure for supporting this in fledgling therapists. Due in part to increasing awareness of this need, the Council for Accreditation of Counseling and Related Educational Programs (CACREP, 2009) has recently required self-care strategies appropriate to the counselor role be taught as a part of professional orientation and ethical practice in counselor education programs accredited by this body. CACREP now requires "systematic developmental assessment of each student's progress throughout the

program, including consideration of the student's academic performance, professional development, and personal development" (p. 5), but implementation and evaluation of this is left up to the counselor education program. The American Psychological Association does not have specific guidelines for the personal development of psychology trainees in APA accredited programs, but does require "respect for and understanding of cultural and individual diversity is reflected in the program's policies for the recruitment, retention, and development of faculty and students, and in its curriculum and field placements" (American Psychological Association, 1995, p. 6). It remains incumbent on professionals to further research the most effective ways to develop the personal attributes, skills and abilities that will lead to strength, resilience and even a sense of coherence in mental health professionals. Using self development interventions that have been successful at increasing a sense of coherence would be a good model for beginning work in this area. Self development interventions could be implemented at all levels of professional development, from graduate training to continuing education requirements.

Limitations

As noted, past personal traumatic exposure was not found to influence compassion fatigue in this study. Past personal traumatic exposure was not found to be a contributor to the regression model. This may be due to Mischel's concept as noted earlier, or it may be due to the way data was collected for this portion of the analysis. Data was coded as the number of types of past personal traumatic exposure. Previous research has indicated the intensity and duration of the trauma may be equally important (Herman, 1992a, 1992b; Tummala-Narra, 2007; van der Kolk et al., 2005). Intensity and

duration of personal traumatic exposure were not measured in this study, calling into question the insignificant results of this hypothesis. Due to the significant results in other studies on the influence of past personal traumatic exposure, this area warrants further study.

Given the correlational nature of this study, it is not possible to identify the direction of causality in the relationship between sense of coherence and compassion fatigue. Although a strong sense of coherence may provide protection for an individual therapist against the impact of their client's trauma, an equally plausible argument may be suggested that therapists who have not been negatively impacted by their client's trauma are able to report higher levels of a sense of coherence. This bears more investigation in longitudinal studies.

Future Research

Based on Walter Mischel's (2009) ideas on the influence of meaning, the research of Langeland et al. (2006) on developing a sense of coherence, and the results of this study negatively correlating a sense of coherence with compassion fatigue, meaning making appears to be a variable worth further study. It may be informative to study the process used by individual therapists who have experienced trauma, to develop their manageability, comprehensibility and meaning. It is worth further exploration to understand how and if the choice to become a therapist may be a part of a meaning making process for some individuals. This possibility of posttraumatic growth deserves further inquiry to allow a more detailed understanding of the factors and the processes involved.

It would be informative to conduct a qualitative analysis of the schemas of therapists who endorse both a very high and a very low sense of coherence. Investigation into how the therapists with a strong sense of coherence came to this orientation may provide insight for both self development and professional training. This may provide insight into additional factors that influence and inhibit comprehensibility, manageability and meaningfulness. The idea of studying factors that contribute to excellence in therapists is not new (Larsson, Kaldø, & Broberg, 2010; Van Wagoner et al., 1991). However, specifically studying the development of a sense of coherence in therapists is a new research direction.

It was noted that the mean sense of coherence in the sample in this study of therapists (50.82) was higher than the sample in Klepp et al.'s (2007) study (45.25). While it makes intuitive sense that therapists could have a higher sense of coherence than the general population, these comparisons need to be made with caution because Klepp et al.'s (2007) study was with a rural community in Norway. Due to cultural and geographical differences, the mean from Klepp et al.'s (2007) study may not apply to the general population in the United States. Caution needs to be used in generalizing their findings. Further studies on the general population mean for a sense of coherence in the United States would provide more in-depth and accurate comparisons. Comparing a sense of coherence in therapists with samples from their general population is necessary to see if the difference noted in this study is replicated.

Antonovsky (1987) conceptualized a sense of coherence as a relatively stable facet of an individual's cognition and world view. However, there are indications that a sense of coherence may increase across the life span (Eriksson & Lindström, 2005; Frenz

et al., 1993; Nilsson et al., 2010; Pallant & Lae, 2002), and also that it may be amenable to further increase with therapeutic intervention (Langeland et al., 2006). Additionally there is some research supporting the idea that a decrease in meaning may occur with traumatic exposure (Fontana & Rosenheck, 2004; Pham et al., 2010). Longitudinal study of the impact of life events, traumatic and positive, on an individual's sense of coherence is warranted to begin to understand the cause versus effect conundrum presented by the current literature.

It may also be informative to begin a longitudinal study of a sense of coherence specifically in therapists. Baseline data could be gathered when therapists start training, with follow-up data at the end of training, after field experience and at specified points in their career. This type of longitudinal study could include the impact of sense of coherence on personal satisfaction in the field and therapeutic efficacy. The impact of participation in a class on personal development, including a sense of coherence, in therapist training could also be addressed.

It was noted in the literature review that theoretical orientation has been linked to compassion fatigue and burnout in the therapist (Linley & Joseph's 2007). The topic of theoretical orientation was not addressed in this study, but would provide an interesting and informative variable for future study.

Because the factors of training in trauma therapy, past personal traumatic exposure and counseling experience have been found to influence compassion fatigue in other studies, it is important to continue to evaluate their effect on therapists. While this study supports the idea that it is the meaning ascribed to events more than the events

themselves that provides protection against compassion fatigue, this is one study with a relatively small sample size ($n = 131$).

In conclusion, the results of this study are interpreted to support the idea that a sense of coherence is correlated with prevention of compassion fatigue. As knowledge in this area expands, it is likely additional factors will be identified that contribute to both the development of a sense of coherence and toward strengthening therapists in their work and their personal lives.

Summary

Identification of significant correlates of compassion fatigue could make an important contribution to the fields of traumatology and therapist education. Resilience could be intentionally developed in mental health professional as more is learned about its predictors: antecedents, correlates and contributors. Identification of risk factors in an individual mental health professional would not necessarily prohibit an individual from effectively working with victims of trauma. However, individual awareness of personal vulnerability for compassion fatigue could provide an incentive for additional training and skill building in an identified domain prior to exposure (Rothschild & Rand, 2006).

Based on the results of this study, I hope an increased understanding of compassion fatigue and its predictor variables will emerge. Future research into the construct of compassion fatigue and its predictor variables could strengthen both training programs and the ability of therapists to effectively and compassionately perform their work. An increased understanding of this syndrome will hopefully lead to a mitigation, or elimination of its impact. If we can learn to mitigate or even prevent compassion fatigue, we can increase the quality and effectiveness of service provided to victims of

trauma. In addition, therapists suffering from compassion fatigue experience painful psychological sequelae which potentially add their names to the list of trauma victims (Rothschild & Rand, 2006; Figley, 2002; Stamm, 1999; Pearlman & Mac Ian, 1995).

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Appendix A: Background Information

Age: _____ Sex: _____ Race: _____ Ethnicity: _____

What is the highest degree you have obtained in a mental health field? (Please list both the discipline and the level of the degree, for example, BA in social work or Ph. D. in counseling psychology or NA)

Are you currently a student in a degree conferring mental health program? **Yes or No**

If **Yes**, what type of degree are you currently seeking? (Please list both the discipline and the level of the degree, for example, BA in social work or Ph. D. in counseling psychology)

How much formal training have you experienced in **working with victims of trauma**?

- _____ No trauma specific training or less than 3 hours
- _____ Minimal (one workshop or one 3 -8 hour seminar)
- _____ Multiple workshops, undergraduate classes or more than 8 contact hours, but have never taken a full graduate level, 2 credit hour or more semester long course (If selecting this option please note approximately how many formal hours of training you have experienced: _____)
- _____ A full graduate level, 2 credit hour semester long course (or more training) specifically in trauma treatment

How much experience have you had working with victims of trauma in a work environment, in a practicum, internship or volunteer experience? (please list in terms of months and or years)

_____ month(s) _____ year(s)

How much formal, one on one supervision have you received in the experience of working with victims of trauma?

- _____ None
- _____ One hour or less
- _____ One to less than Three Hours
- _____ Three to less than Five Hours
- _____ Five to Ten Hours
- _____ Over Ten Hours

Have you ever personally been involved in **(Please list the number of lifetime events):**

Approximate # events

- _____ A natural disaster? (if yes, age(s) _____)
- _____ A witness or participant in combat? (if yes, age(s) _____)
- _____ A victim of a violent crime? (if yes, age(s) _____)
- _____ A victim of physical, sexual or emotional abuse as a child?
{if yes, age(s) _____ & please circle type(s)}
- _____ An adult victim of physical, sexual or emotional abuse?
{if yes, age(s) _____ & please circle type(s)}
- _____ Involved in a physically abusive relationship? (if yes, age(s) _____)
- _____ A witness to someone being seriously injured or killed?
(if yes, age(s) _____)
- _____ Involved in a physically abusive relationship? (if yes, age(s) _____)
- _____ Another traumatic event? If yes, describe and give approximate age(s):

Appendix B: IES-R**IMPACT OF EVENT SCALE – REVISED**

INSTRUCTIONS: Below is a list of difficulties people sometimes have after stressful life events. Please read each item, and then indicate how distressing each difficulty has been for you **DURING THE PAST SEVEN DAYS** with respect to the most troubling event you have experienced as a therapist working with a victim of a traumatic event, which occurred on _____.
(please approximate date by month and year you worked with the victim of the traumatic event)

How much were you distressed or bothered by these difficulties?

Item Response Anchors are 0 = Not at all; 1 = A little bit; 2 = Moderately; 3 = Quite a bit; 4 = Extremely.

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

Scoring:

The Intrusion subscale is the **MEAN** item response of items 1, 2, 3, 6, 9, 14, 16, 20.

Thus, scores can range from 0 through 4.

The Avoidance subscale is the **MEAN** item response of items 5, 7, 8, 11, 12, 13, 17, 22.

Thus, scores can range from 0 through 4.

The Hyperarousal subscale is the **MEAN** item response of items 4, 10, 15, 18, 19, 21.

Thus, scores can range from 0 through 4.

Total IES-R score: _____

(Weiss, 2004, p. 186)

Appendix C: Short form of Marlowe-Crowne 2(10) Social Desirability Scale**Marlowe-Crowne 2(10) Social Desirability Scale**

Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide whether the statement is true or false as it pertains to you personally.

1. I never hesitate to go out of my way to help someone in trouble. (T)
2. I have never intensely disliked anyone. (T)
3. There have been times when I was quite jealous of the good fortune of others. (F)
4. I would never think of letting someone else be punished for my wrong doings. (T)
5. I sometimes feel resentful when I don't get my way. (F)
6. There have been times when I felt like rebelling against people in authority even though I knew they were right. (F)
7. I am always courteous, even to people who are disagreeable. (T)
8. When I don't know something I don't at all mind admitting it. (T)
9. I can remember "playing sick" to get out of something. (F)
10. I am sometimes irritated by people who ask favors of me. (F)

Scoring Algorithm

For each answer the respondent provides that matches the response given above (i.e., T=T or F=F) assign a value of 1. For each discordant response (i.e., the respondent provides a T in place of an F or an F in place of a T) assign a value of 0. Total score can range from 10 (when all responses "match") to 0 (when no responses "match").

(Strahan & Gerbasi, 1972)

1. (ME) (A4) Do you have the feeling that you don't really care about what goes on around you?						
1	2	3	4	5	6	7
very seldom or never						very often
2. (MA) (A9) Do you have the feeling that you're being treated unfairly?						
1	2	3	4	5	6	7
very often						very seldom or never
3. (C) (A12) Do you have the feeling that you are in an unfamiliar situation and don't know what to do?						
1	2	3	4	5	6	7
very often						very seldom or never
4. (ME) (A16) Doing the things you do every day is:						
1	2	3	4	5	6	7
a source of deep pleasure and satisfaction						a source of pain and boredom
5. (C) (A19) Do you have very mixed-up feelings and ideas?						
1	2	3	4	5	6	7
very often						very seldom or never
6. (C) (A21) Does it happen that you have feelings inside that you would rather not feel?						
1	2	3	4	5	6	7
very often						very seldom or never
7. (MA) (A25) Many people – even those with a strong character – sometimes feel like sad sacks (losers) in certain situations. How often have you felt this way in the past?						
1	2	3	4	5	6	7
never						very often
8. (ME) (A28) How often do you have the feeling that there's little meaning in the things you do in your daily life?						
1	2	3	4	5	6	7
very often						very seldom or never
9. (MA) (A29) How often do you have feelings that you're not sure you can keep under control?						
1	2	3	4	5	6	7
very often						very seldom or never

Short nine-item version of the Sense of Coherence Scale (Antonovsky, 1987).

(Klepp, Mastekaasa, Sørensen, Sandanger, & Kleiner, 2007)

Appendix E: Scripts

Script 1: Informed Consent Script to Recruit Participants

The following script will be read by the administrators of the Role of a Sense of Coherence in the Prevention of Compassion Fatigue Study.

Jennifer R. Adams, Ph.D., NCC, LPC (Primary Investigator)
Mary E. Schaffer, M.A., NCC, LPC (Doctoral Candidate)

Your participation is requested in this voluntary exploratory research project. It will take between 10 to 20 minutes to complete these four forms.

This research is being done to fulfill the requirements for a doctoral dissertation in Counseling Psychology by Mary Schaffer at West Virginia University. Dr. Jennifer R. Adams is the dissertation chair for this project and as such will be acting as the Principal Investigator for this study. A total of between 98 and 110 mental health practitioners are expected to participate in this study; of these, the researchers hope to enroll about 50 graduate student mental health practitioners.

The purpose of this project is to identify variables that may increase resilience or vulnerability to compassion fatigue in mental health providers and trainees. Compassion Fatigue is understood to be when a therapist experiences stress reactions based on their client's traumatic experience. This is a survey that includes questions about your exposure to trauma and experience working with victims of trauma. You may decide not to take the survey. If you decide to take the survey, you may omit questions you prefer not to answer.

Your individual responses will be treated as confidential information in so far as every attempt will be made to protect the individual identity of each participant. The data from the surveys will be compiled using Scantron equipment. The results of this study will be reported in the aggregate. Once the data has been analyzed; the survey instruments will be shredded.

Items to be administered:

- Background Information Form (developed by the researcher)
- Impact of Events Scale - Revised (IES-R)
- Marlowe-Crowne 2(10) Social Desirability Scale
- Sense of Coherence Scale

Participation is completely voluntary and will not affect your grades or course completion in any way. You may opt out of the study at any time simply by not completing the survey. If you would like to talk about any of the questions, I will be available to discuss your concerns individually and privately. If you would like to speak in depth to someone about your thoughts following completion of this survey, a list of local licensed mental health professionals has been provided.

Please read the cover letter that was distributed for further information. If you would like the results of this study, please notify us by e-mail and we will send them to

you as soon as they are available. Questions about this research project may be directed to Dr. Jennifer R. Adams at: Jennifer.adams@mail.wvu.edu

A few comments to clarify the directions for the Scantron form: Please use a ball-point pen or a thin felt tip and mark your response with an "X." If you decide to change a response, please completely fill in the box you wish to change and mark the new box you desire with a new "X." There are several matrixes for marking age or for marking a number of years. Please mark the years in whole numbers with the ones place on the bottom row and the tens place marked on the top row. Please round less than 6 months down to the lower year and greater than 6 months to the next year.

Please give your completed survey directly to me, the survey administrator and not to another participant. Thank you for your willingness to support this research.

Script 2: Informed Consent for Voluntary Participants

The following script will be attached to the survey at sites where the administrators (Dr. Jennifer Adams or Mary E. Schaffer) are not personally and directly administering the survey.

Jennifer R. Adams, Ph.D., NCC, LPC (Primary Investigator)

Mary E. Schaffer, M.A., NCC, LPC (Doctoral Candidate)

Department of Counseling, Rehabilitation Counseling and Counseling Psychology
Allen Hall
P.O. Box 6122
West Virginia University
Morgantown, WV 26506-6122
1-304-293-2244

Your participation is requested in this voluntary exploratory research project. If you choose to participate, it will take 10 to 20 minutes to complete this form. You may choose not to participate by not completing this survey, or by submitting a blank or partially complete survey.

This research is being done to fulfill the requirements for a doctoral dissertation in Counseling Psychology by Mary Schaffer at West Virginia University. Dr. Jennifer R. Adams is the dissertation chair for this project and as such will be acting as the Principal Investigator for this study. Approximately 200 mental health practitioners are anticipated to participate in this study; of these, the researchers hope to enroll about 55 graduate student mental health practitioners.

The purpose of this project is to identify variables that may increase resilience or vulnerability to compassion fatigue in mental health providers and trainees. Compassion Fatigue is understood to be when a therapist experiences stress reactions based on their client's traumatic experience. This is a survey that includes questions about your exposure to trauma and experience working with victims of trauma.

Your individual responses will be treated as confidential information in so far as every attempt will be made to protect the individual identity of each participant. Do not put any identifiers on the survey such as your name or location. The data from the surveys will be compiled using Scantron equipment. The results of this study will be reported in the aggregate. Once the data has been analyzed; the survey instruments will be shredded.

The following scales are included in this survey, along with a Background Information Form (developed by the researcher):

- Impact of Events Scale - Revised (IES-R)
- Marlowe-Crowne 2(10) Social Desirability Scale
- Sense of Coherence Scale

Participation is completely voluntary and will not affect your grades or course completion in any way. You may opt out of the study at any time simply by not completing the survey and submitting a blank or partially completed form. If you would

like to talk about any of the questions, I will be available to discuss your concerns individually and privately. If you would like to speak in depth to someone about your thoughts following completion of this survey, a list of local licensed mental health professionals has been provided. You may also have a copy of this research script for further reference.

Please read the cover letter that was distributed for further information. If you would like the results of this study, please notify us by e-mail and we will send them to you as soon as they are available. Questions about this research project may be directed to Dr. Jennifer R. Adams at: Jennifer.adams@mail.wvu.edu or by mail or phone at the address at the top of this page.

A few comments to clarify the directions for the Scantron form: Please use a ball-point pen or a thin felt tip and mark your response with an "X." If you decide to change a response, please completely fill in the box you wish to change and mark the new box you desire with a new "X." There are several matrixes for marking age or for marking a number of years. Please mark the years in whole numbers with the ones place on the bottom row and the tens place marked on the top row. Please round less than 6 months down to the lower year and greater than 6 months to the next year.

Please place your completed survey in the sealed box adjacent to the surveys if you choose to participate. Thank you for your willingness to support this research.

Appendix F**Counseling Services Referral List**

This list is not an endorsement of any particular counseling service;

It is merely a list of available resources

Questions about this research project may be directed to Dr. Jennifer R. Adams at:

Jennifer.adams@mail.wvu.edu

Department of Counseling, Rehabilitation Counseling and Counseling Psychology

Allen Hall

P.O. Box 6122

West Virginia University

Morgantown, WV 26506-6122

1-304-293-2244

National Crisis & Suicide Prevention Hotline

1-800-SUICIDE Or 1-800-273-TALK

Morgantown, WV

Impact Therapy

Dr. Ed Jacobs

457 Broadway Ave,

Star City, WV

(304) 599-0109

John & Jane Riffe Counseling

270 Walnut St.

Morgantown, WV

304-296-2357

Morgantown Pastoral Counseling Center, Inc.

1062 Maple Drive

Morgantown, WV

304-599-5751

Huntington, WV

New Hope Christian Counseling Center

1225 6th Avenue

Huntington, WV

304-526-9189

Pretera Center

3375 U.S. Route 60, East

Huntington, WV

304-399-7776

Washington, Pennsylvania

Washington Psychological 724-222-8525
 87 East Maiden Street
 Washington, PA 15301

Dr. Elizabeth Skibinski-Bortman (724) 942-4490
 4050 Washington Rd
 McMurray, PA 15317

Uniontown, PA

Mental Health Association of Washington County (724) 225-2061
 15 S. College St, Washington, PA 15301
 Uniontown, PA

WJS Psychological Services 724-430-0122
 99 Pennsylvania Avenue
 Uniontown, PA 15401

Area of Rough, Kentucky

Marilyn S. Neel, LCSW, LMFT 502.412.6444
 8149 New LaGrange Rd. Suite 101
 Louisville, KY

Kentucky-Therapist.com
 Louisville, KY 40107

Mitzi Richardson Counseling -
 334 Dixie Highway West,
 Elizabethtown, KY 42701-1762

Elizabethtown Partners-Counseling -
 204 North Main Street,
 Elizabethtown, KY 42701-1417

Mt. Sterling, KY

Lifespan Therapy Services -
 318 West High Street,
 Mt Sterling, KY 40353-1328

Rebound Counseling Services -
 223 Windsor Drive,
 Mt Sterling, KY 40353-1626

Staley Counseling Services -
 Mt Sterling, KY 40353

Appendix G: Scantron Survey Form

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Class Climate	The Role of a Sense of Coherence In The Prevention of Compassion Fatigue	SCANTRON
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Mark as shown: ☐ ☒ ☐ ☐ Please use a ball-point pen or a thin felt tip. This form will be processed automatically.

Correction: ☐ ☒ ☐ ☐ Please follow the examples shown on the left hand side to help optimize the reading results.

1. Background Information

Please use a ball-point pen or a thin felt tip and mark your response with an "X." If you decide to change a response, please completely fill in the box you wish to change and mark the new box you desire with a new "X."

1.1 Age

☐ 18-21☐ 22-25☐ 26-30☐ 31-39☐ 40-49☐ 50-59☐ 60-69☐ 70-79☐ 80 +

1.2 Sex

☐ male☐ female☐ transgendered☐ other

1.3 Race: check the one that most describes you

☐ Hispanic☐ White☐ African American☐ Asian☐ Bi Racial☐ Native American☐ Middle Eastern☐ Other

1.4 What is the highest degree you have obtained in a mental health field? (check all that apply)

☐ Doctorate☐ Masters☐ Bachelors☐ Associate☐ None☐ Clinical Counseling☐ Clinical Psychology☐ Counseling Psychology☐ Psychology (other)☐ Social Work☐ Counseling (other)

1.5 Are you currently a student in a degree conferring mental health program?

☐ Yes☐ No

1.6 If Yes, what type of degree are you currently seeking? (check all that apply)

☐ Clinical Psychology☐ Counseling Psychology☐ Psychology (other)☐ Clinical Counseling☐ Counseling (other)☐ Social Work☐ Associate☐ Bachelors☐ Masters☐ Doctorate1.7 How much formal training have you experienced in working with victims of trauma (including academic classes, continuing education, workshops, etc.) ?☐ No trauma specific training or less than 3 contact hours☐ Minimal (one workshop or one 3 -8 hour seminar)☐ Multiple workshops, a full undergraduate classe or more than 8 contact hours, but have never taken a full graduate level, 2 credit hour or more semester long course☐ A full graduate level, 2 credit hour semester long course (or more training) specifically in trauma treatment

1.8 How much formal, one on one supervision have you received specific to your experience of working with victims of trauma?

☐ None☐ One hour or less☐ One to less than Three Hours☐ Three to less than Five Hours☐ Five to Ten Hours☐ Over Ten Hours

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Class Climate	The Role of a Sense of Coherence In The Prevention of Compassion Fatigue	SCANTRON
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1. Background Information [Continue]

There are several matrixes for marking age or for marking a number of years. Please mark the years in whole numbers with the ones place on the bottom row and the tens place marked on the top row. Please round less than 6 months down to the lower year and greater than 6 months to the next year.

- 1.9 How much experience have you had working with victims of trauma in a work environment, in a practicum, internship or volunteer experience? (please mark in years, less than 6 months = 0; more than 6 months = 1)
- 10th ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
- 1th ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
- x0 x1 x2 x3 x4 x5 x6 x7 x8 x9
- 1.10 Have you ever personally been involved in a natural disaster? Yes ☐ No ☐
- 1.11 If yes, please indicate earliest age:
- 10th ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
- 1th ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
- x0 x1 x2 x3 x4 x5 x6 x7 x8 x9
- 1.12 Have you ever personally been a witness or participant in combat? Yes ☐ No ☐
- 1.13 If yes, please indicate earliest age:
- 10th ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
- 1th ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
- x0 x1 x2 x3 x4 x5 x6 x7 x8 x9
- 1.14 Have you ever personally been a victim of a violent crime? Yes ☐ No ☐
- 1.15 If yes, please indicate earliest age:
- 10th ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
- 1th ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
- x0 x1 x2 x3 x4 x5 x6 x7 x8 x9
- 1.16 Have you ever personally been a victim of physical, sexual or emotional abuse as a child? Yes ☐ No ☐
- 1.17 If yes, please indicate earliest age:
- 10th ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
- 1th ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
- x0 x1 x2 x3 x4 x5 x6 x7 x8 x9
- 1.18 Have you ever personally been an adult victim of physical, sexual or emotional abuse? Yes ☐ No ☐
- 1.19 If yes, please indicate earliest age:
- 10th ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
- 1th ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
- x0 x1 x2 x3 x4 x5 x6 x7 x8 x9
- 1.20 Have you ever personally been a witness to someone being seriously injured or killed? Yes ☐ No ☐
- 1.21 If yes, please indicate earliest age:
- 10th ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
- 1th ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
- x0 x1 x2 x3 x4 x5 x6 x7 x8 x9

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Class Climate	The Role of a Sense of Coherence In The Prevention of Compassion Fatigue	SCANTRON
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2. Sense of Coherence Scale - 9

- 2.1 Do you have the feeling that you don't really care about what goes on around you? very seldom or never ☐ ☐ ☐ ☐ ☐ ☐ ☐ very often
- 2.2 Do you have the feeling that you're being treated unfairly? very often ☐ ☐ ☐ ☐ ☐ ☐ ☐ very seldom or never
- 2.3 Do you have the feeling that you are in an unfamiliar situation and don't know what to do? very often ☐ ☐ ☐ ☐ ☐ ☐ ☐ very seldom or never
- 2.4 Doing the things you do every day is: a source of deep pleasure and satisfaction ☐ ☐ ☐ ☐ ☐ ☐ ☐ a source of pain and boredom
- 2.5 Do you have very mixed-up feelings and ideas? very often ☐ ☐ ☐ ☐ ☐ ☐ ☐ very seldom or never
- 2.6 Does it happen that you have feelings inside that you would rather not feel? very often ☐ ☐ ☐ ☐ ☐ ☐ ☐ very seldom or never
- 2.7 Many people - even those with a strong character - sometimes feel like sad sacks (losers) in certain situations. How often have you felt this way in the past? never ☐ ☐ ☐ ☐ ☐ ☐ ☐ very often
- 2.8 How often do you have the feeling that there's little meaning in the things you do in your daily life? very often ☐ ☐ ☐ ☐ ☐ ☐ ☐ very seldom or never
- 2.9 How often do you have feelings that you're not sure you can keep under control? very often ☐ ☐ ☐ ☐ ☐ ☐ ☐ very seldom or never

3. Impact of Event Scale-Revised

INSTRUCTIONS: Below is a list of difficulties people sometimes have after stressful life events. Please read each item, and then indicate how distressing each difficulty has been for you **DURING THE PAST SEVEN DAYS** with respect to the most troubling event you have experienced as a therapist working with a victim of a traumatic event, which occurred on _____.

(please approximate date by month and year you worked with the victim of the traumatic event)

How much were you distressed or bothered by these difficulties?

		Not at all	A little bit	Moderately	Quite a bit	Extremely
3.1	Any reminder brought back feelings about it.	☐	☐	☐	☐	☐
3.2	I had trouble staying asleep.	☐	☐	☐	☐	☐
3.3	Other things kept making me think about it.	☐	☐	☐	☐	☐

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Class Climate	The Role of a Sense of Coherence In The Prevention of Compassion Fatigue	SCANTRON
3. Impact of Event Scale-Revised [Continue]		

	Not at all	A little bit	Moderately	Quite a bit	Extremely
3.4 I felt irritable and angry.	☐	☐	☐	☐	☐
3.5 I avoided letting myself get upset when I thought about it or was reminded of it.	☐	☐	☐	☐	☐
3.6 I thought about it when I didn't mean to.	☐	☐	☐	☐	☐
3.7 I felt as if it hadn't happened or wasn't real.	☐	☐	☐	☐	☐
3.8 I stayed away from reminders of it.	☐	☐	☐	☐	☐
3.9 Pictures about it popped into my mind.	☐	☐	☐	☐	☐
3.10 I was jumpy and easily startled.	☐	☐	☐	☐	☐
3.11 I tried not to think about it.	☐	☐	☐	☐	☐
3.12 I was aware that I still had a lot of feelings about it, but I didn't deal with them.	☐	☐	☐	☐	☐
3.13 My feelings about it were kind of numb.	☐	☐	☐	☐	☐
3.14 I found myself acting or feeling like I was back at that time.	☐	☐	☐	☐	☐
3.15 I had trouble falling asleep.	☐	☐	☐	☐	☐
3.16 I had waves of strong feelings about it.	☐	☐	☐	☐	☐
3.17 I tried to remove it from my memory.	☐	☐	☐	☐	☐
3.18 I had trouble concentrating.	☐	☐	☐	☐	☐
3.19 Reminders of it caused me to have physical reactions, such as sweating, trouble breathing, nausea, or a pounding heart.	☐	☐	☐	☐	☐
3.20 I had dreams about it.	☐	☐	☐	☐	☐
3.21 I felt watchful and on-guard.	☐	☐	☐	☐	☐
3.22 I tried not to talk about it.	☐	☐	☐	☐	☐

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Class Climate	The Role of a Sense of Coherence In The Prevention of Compassion Fatigue	SCANTRON
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4. Marlowe-Crowne 2(10) Social Desirability Scale

4.1 I never hesitate to go out of my way to help someone in trouble.	True	☐	☐	False
4.2 I have never intensely disliked anyone.	True	☐	☐	False
4.3 There have been times when I was quite jealous of the good fortune of others.	True	☐	☐	False
4.4 I would never think of letting someone else be punished for my wrong doings.	True	☐	☐	False
4.5 I sometimes feel resentful when I don't get my way.	True	☐	☐	False
4.6 There have been times when I felt like rebelling against people in authority even though I knew they were right.	True	☐	☐	False
4.7 I am always courteous, even to people who are disagreeable.	True	☐	☐	False
4.8 When I don't know something I don't at all mind admitting it.	True	☐	☐	False
4.9 I can remember "playing sick" to get out of something.	True	☐	☐	False
4.10 I am sometimes irritated by people who ask favors of me.	True	☐	☐	False

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Class Climate	The Role of a Sense of Coherence In The Prevention of Compassion Fatigue	SCANTRON
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Appendix H: Letters of Support **Kentucky Community Crisis Response Board**

Steven Beshear
Governor

Department of Military Affairs
100 Airport Road, 3rd Floor
Frankfort, KY 40601-6161

Deborah M. Arnold
Executive Director

December 18, 2009

Institution Research Board
West Virginia University
Morgantown, West Virginia 26503

Members of the Board:

The Kentucky Community Crisis Response Board gives permission for Mary E. Schaffer to recruit voluntary participants from our Response Team for her research survey on "The Role of a Sense of Coherence in the Prevention of Compassion Fatigue." The purpose of this project is to identify variables that may increase vicarious resilience or vulnerability to compassion fatigue in mental health providers and trainees.

The participation of our team members in completing Ms. Schaffer's survey will be completely voluntary. Copies of the survey will be made available to team members at their regional team meetings. The survey will be administered according to the script and protocol provided by the researcher, Ms. Schaffer. They will be returned to Ms. Schaffer in a pre-paid mailer.

Sincerely,

A handwritten signature in cursive script that reads "Deborah M. Arnold".

Deborah M. Arnold
Executive Director

Combat Stress Intervention Program
Washington & Jefferson College
60 South Lincoln Street
Washington, Pennsylvania 15301
CopingAfterCombat.com

February 2, 2010

Institution Research Board
West Virginia University
University Avenue
Morgantown, West Virginia 26503

The Combat Stress Intervention Program (CSIP) at Washington & Jefferson College in Washington, Pennsylvania gives permission for Mary E. Schaffer to recruit voluntary participants from our 2nd annual conference on *Combat Stress: Working Effectively with Military Clients* on March 26th, 2010 for her research survey on "The Role of a Sense of Coherence in the Prevention of Compassion Fatigue." The purpose of this project is to identify variables that may increase resilience or vulnerability to compassion fatigue in mental health workers and trainees. Attendance of approximately 200 mental health professionals are anticipated at the CSIP conference.

The participation of our conference attendees will be completely voluntary. Copies of the survey will be made available to the conference attendees at the registration desk of the conference. The conference will be held at The Southpointe Golf Club, Canonsburg, Pennsylvania. The survey will be administered by Ms. Schaffer according to the script and protocol approved by the West Virginia Institution Research Board.

A handwritten signature in black ink, appearing to read 'M Crabtree'.

Michael Crabtree, Ph.D.
Licensed Psychologist
Principal Investigator
Combat Stress Intervention Program

Wellness Promotion, Inc.

78 Morgantown Street
Uniontown, Pa. 15401
Phone: 724-562-5312

To Whom It May Concern:

Wellness Promotion Inc. gives permission for Mary E. Schaffer to recruit voluntary participants from my students, team or staff for her research survey on "The Role of a Sense of Coherence in the Prevention of Compassion Fatigue." The purpose of this project is to identify variables that may increase resilience or vulnerability to compassion fatigue in mental health workers and trainees.

The participation of my staff will be completely voluntary. Copies of the survey will be made available to students, team members or staff at the Uniontown office @ 78 Morgantown, Street. The survey will be administered according to the script and protocol provided by the researcher, Ms. Schaffer. They will be returned to Ms. Schaffer in a pre-paid mailer.

If you should have any further question please feel to contact me.

Sincerely

Jo Ann Jankoski, Ed. D, LCSW, MS

Elizabeth Skibinski-Bortman, Ph.D

4050 Washington Road, McMurray, PA 724-942-4490

January 14, 2010

Institution Research Board
West Virginia University
Morgantown, West Virginia 26503

To Whom It May Concern:

Elizabeth Skibinski-Bortman gives permission for Mary E. Schaffer to recruit voluntary participants from our staff for her research survey on "The Role of a Sense of Coherence in the Prevention of Compassion Fatigue." The purpose of this project is to identify variables that may increase resilience or vulnerability to compassion fatigue in mental health workers and trainees.

The participation of our staff will be completely voluntary. Copies of the survey will be made available to staff at my private practice office at 4050 Washington Road, Mc Murray, PA. The survey will be administered according to the script and protocol provided by the researcher, Ms. Schaffer. They will be returned to Ms. Schaffer in a pre-paid mailer.

Sincerely,

Elizabeth Skibinski-Bortman, Ph.D.