

SECONDARY TRAUMATIC STRESS IN MILITARY HEALTHCARE PROVIDERS: AN
EXAMINATION INTO EMPATHY AND EMOTIONAL SEPARATION AS MODERATING
VARIABLES

by

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Under the Direction of Brian Bride

ABSTRACT

The purpose of this study was to explore rates of secondary traumatic stress (STS) as well as factors related to symptom development in a sample of 70 military primary and mental healthcare providers. This research also analyzed empathy and emotional separation as moderating variables between the relationship of exposure and STS. Participants completed surveys containing a demographic questionnaire, the Interpersonal Reactivity Index (IRI; Davis, 1983), the Maintenance of Emotional Separation Scale (MES; Corcoran, 1982) and the Secondary Traumatic Stress Scale (STSS; Bride et al., 2004). Demographics analyzed in the study included age, gender, experience, clinical responsibility, and current impact of personal trauma history. Descriptive and frequency statistics as well as t-tests and regression analyses were used to examine data. Results of data analysis found military participants in the sample to be experiencing relatively low rates of STS. Over half of the sample reported endorsing at least one symptom of STS occurring within the last week while eight percent of participants indicated moderate to high symptomatology. Findings also revealed current impact of personal trauma history to be the only demographic significantly related to STS scores. Neither empathy nor emotional separation was found to moderate the relationship between exposure and STS.

However, emotional separation had a significant main effect on STS scores. A post hoc regression analysis found three emotional separation (MES) items to be significantly related to STS. These involved losing sight of personal feelings, difficulty concentrating after exposure to client trauma and feeling the worries of the client. The implications of study findings point to the need for education and resources for military professionals in alleviating and preventing symptoms of STS. Findings also suggest emotional separation to be the primary mechanism through which trauma is transferred from the primary to secondary individual. Additional implications and recommendations for future research are outlined.

INDEX WORDS: Secondary traumatic stress, Exposure, Empathy, Emotional separation, Military healthcare, Moderation

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DOCTOR OF PHILOSOPHY

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DEDICATION

This dissertation is dedicated to my grandparents, Irvin and Agnes Kintzle and Richard and
Teddie Neis, for always making me believe I could be anything.

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CHAPTER 1

INTRODUCTION

Since the launch of Operation Enduring Freedom (OEF) in Afghanistan on October 7th 2001 and Operation Iraqi Freedom (OIF) on March 13th 2003, over 1.6 million American service men and women have served the United States in these combat operations - the longest since Vietnam (Alvarez. 2008). As of March 5th 2012, 6,370 American soldiers have lost their lives in Iraq and Afghanistan, and an additional 31,922 Iraq and 15,438 Afghanistan soldiers have been wounded (Department of Defense, 2012). As these soldiers face multiple, long deployments, they are regularly exposed to traumatic material in these high combat areas. Improvised explosive devices, roadside bombs and suicide car bombs have caused over 70 percent of American casualties in Iraq and 50 percent in Afghanistan (Department of Defense). This reference raises questions about the number of soldiers who may have been exposed to and/or witnessed such acts. As of 2003, over 93 percent of Army and 97 percent of Marine Operation Iraqi Freedom veterans reported being shot at during their tour, while 87 percent of both groups reported knowing someone who was killed (Department of Veteran Affairs, 2009). In addition, 95 percent of Army and 94 percent of Marine veterans reported seeing dead bodies and 89 percent of Army and 95 percent of Marine veterans reported being attacked and ambushed. It is likely that the total number of veterans who have experienced these events increased as the war in Iraq continued and the war in Afghanistan intensified.

Exposure to traumatic events as noted above can have deleterious effects on mental health. Service men and women are susceptible to posttraumatic stress disorder, other anxiety disorders, depression, substance abuse, and suicide ideation. According to the Department of

Veterans Affairs, of the 1 million veterans who left active duty from Iraq and Afghanistan between 2002 to 2009, 46 percent received V.A. services and 48 percent of those were diagnosed with a mental health problem. Suicide rates for this population have reached concerning levels as those who have served our country are now more than twice as likely to commit suicide as civilians (Kaplan, Huguet, McFarland & Newsom, 2007). As the mental health needs for this population continue to grow, professionals working in military healthcare settings are faced with the challenge of providing adequate, comprehensive care to a population with many physical and psychological needs. Contributing to the challenge, healthcare professionals providing clinical and supportive services to military men and women are vulnerable to the development of secondary traumatic stress (STS).

Secondary traumatic stress refers to the development of symptoms of posttraumatic stress disorder after indirect exposure to trauma (Figley, 1999). For professionals working with traumatized populations, this results from exposure to client or patient trauma. Examples of traumatized populations include but are not limited to survivors of domestic violence, sexual abuse, child abuse, sexual assault, terrorist attacks, and natural disasters. Although the military population could arguably be one of the most highly exposed groups of traumatized populations, very little research has explored the potential impacts of working within the military primary and mental healthcare systems.

Statement of Problem

Although secondary traumatic stress has been examined in a variety of professionals providing supportive and clinical services to traumatized populations (i.e., Bell, 2003; Bride, 2007; Bride, Hatcher & Humble, 2009; Bride, Jones, & MacMaster, 2007; Cunningham, 2003;

Gates & Gillespie, 2008; Ghahramanlou & Brodbeck, 2000; Meadors et al., 2009), the extent to which military healthcare providers experience STS is unknown. Symptoms of STS can negatively impact professionals and the care they deliver. For example, professionals with STS are believed to be at higher risk for making poor professional judgments such as misdiagnosis, poor treatment planning or abuse of clients (Bride et al., 2004). Given this, it is essential that the incidence of secondary traumatic stress be examined in those providing supportive services to an extremely vulnerable population in need of adequate care.

In addition, existing research on secondary traumatic stress has provided insight into the risk and protective factors associated with symptom development. However, when examined as a whole, the body of literature includes a complex array of factors, measures, findings, and interpretations regarding what is significant to the underlying construct of STS. At this point, the transfer of knowledge regarding STS to practitioners has involved a number of important risk and protective factors examined in both individuals and groups. Empathy has been widely proposed as the causal mechanism through which trauma is transferred (Figley, 1999; Pearlman & Saakvitne, 1995). However, there have been few attempts to empirically test this hypothesis. Furthermore, research has not investigated how the ability to emotionally separate professional and personal experience may impact susceptibility to secondary traumatic stress during empathetic engagement. To bridge this gap and build on the extant literature, this research will utilize moderation regression analysis to test basic models of secondary traumatic stress that include the variables of secondary traumatic stress, exposure, emotional separation and empathy.

Conceptual Framework

The conceptual framework of this study is built on empathy and emotional separation as potential mechanisms for the transfer of trauma after indirect exposure to traumatic events. This is examined through moderation effects in regression analysis. The conceptual framework begins with an introduction to moderator effects followed by a description of each variable within the conceptual framework.

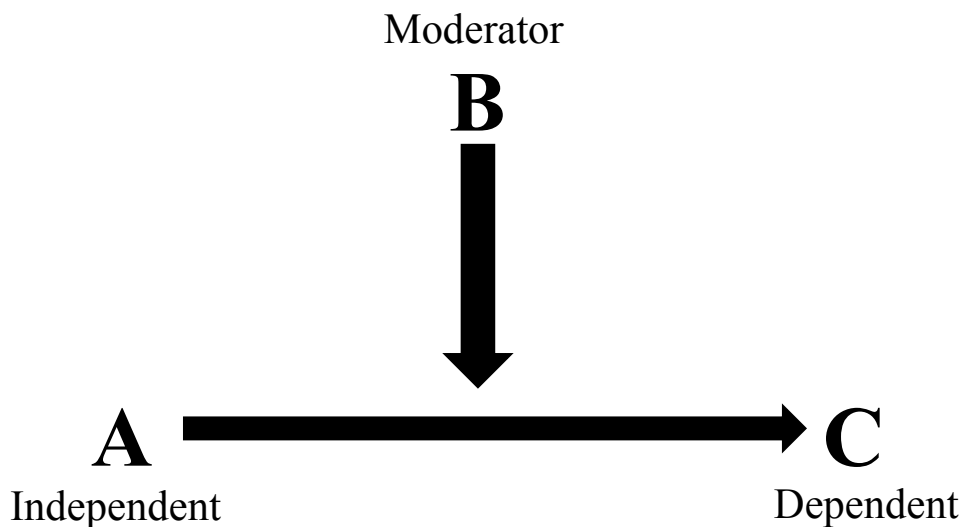
Moderation

A moderator, as defined by Baron and Kenny (1986), is a variable that affects the direction and/or strength of the relation between an independent and dependent variable. Within the framework of correlation analysis, a moderator is a third variable that influences the zero-order correlation between two other variables. In other words, “a moderator variable is one that affects the relationship between two variables, so that the nature of the impact of the predictor on the criterion varies according to the level or value of the moderator” (Holmbeck, 1997, p. 599).

Figure 1 demonstrates this described relationship.

Figure 1

Moderator Relationship in Regression



Secondary Traumatic Stress

Secondary traumatization refers to the transmission of trauma symptoms, most notably those resembling posttraumatic stress disorder, from a trauma survivor to an individual learning about the traumatic event (Figley, 1995). The negative effects of secondary exposure to a traumatic event are nearly identical to those of primary exposure, with the difference being that exposure to a traumatizing event experienced by one person becomes a traumatizing event for a second person (Figley, 1999). Additionally, symptoms of secondary traumatic stress are based on the same three symptom clusters identified in the DSM-IV-TR for posttraumatic stress disorder (American Psychological Association, 2000). In some cases, the symptoms of secondary traumatic stress may be severe enough to warrant a diagnosis of posttraumatic stress disorder (PTSD).

Professionals providing services to traumatized populations are particularly vulnerable to the development of secondary traumatic stress as symptoms have been documented in professionals working in a variety of fields (Bride, Hatcher & Humble, 2009; Cunningham, 2003; Gates & Gillespie, 2008; Bell, 2003; Meadors et al., 2009; Bride, Jones, & MacMaster, 2007; Ghahramanlou & Brodbeck, 2000; Bride, 2007). Figley (1995) attributes this vulnerability to the fact that trauma workers are constantly surrounded by the “extreme intensity of trauma-inducing factors (p.15)” and that despite best efforts, being drawn into the intensity of this work is a natural byproduct of the therapeutic relationship. Additionally, these professionals face risk due to their constant empathetic engagement with clients. Theoretically, literature has identified

exposure and empathy to be key factors in the induction of secondary traumatic stress (Figley, 1999).

Exposure

Exposure to traumatic material is key in the development of symptoms of secondary traumatic stress. If not exposed to trauma there is little concern for the occurrence of traumatic stress. Exposure to traumatic material is unique to every trauma worker (Dutton & Rubinstein, 1995), as workers are exposed to different types of trauma and at different levels. Measurement of exposure within the literature lacks conceptual clarity as a consistent reliable exposure measure has not been developed. This is discussed further in Chapter 2.

Empathy

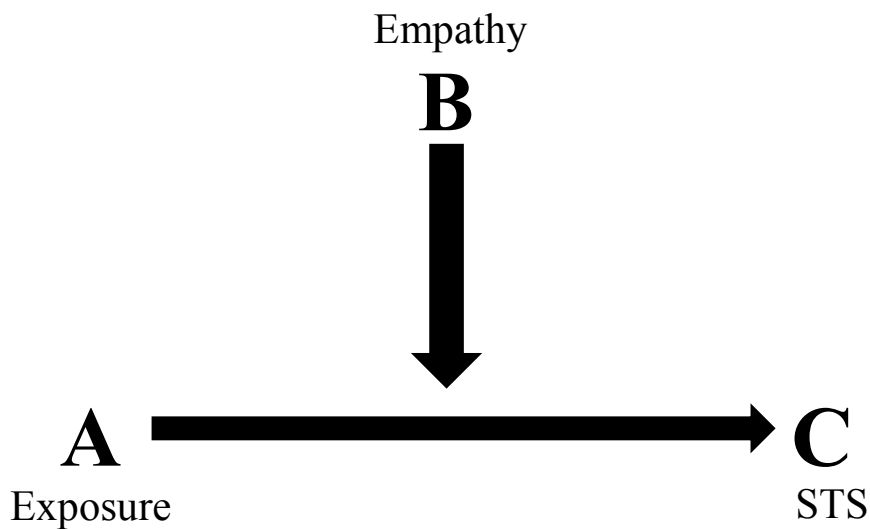
Empathy describes an individual's ability to adequately understand the experience of others while developing an emotional connection and emotional response to suffering (Regehr, Goldberg & Hughes, 2002). Figley (1995), a leading author and researcher in the study of secondary traumatic stress, states that empathy is the mechanism by which the transfer of trauma occurs. Empathy is essential in the development of the therapeutic relationship and a major resource for effectively engaging with clients. As clinicians engage empathetically, they subsequently absorb the trauma experiences of the client. Although empathy assists in the understanding of client trauma, it is also the process through which professionals may become traumatized as well.

Although empathy is generally accepted as the key factor in the transmission of trauma, a very limited number of empirical studies exist to support this claim. As a result the current research explores empathy as a moderator of the relationship between exposure and secondary

traumatic stress. More specifically, empathy impacts the relationship between exposure and secondary traumatic stress as levels of empathy create susceptibility to secondary traumatic stress minimizing the impact of exposure. Figure 2 illustrates the hypothesized relationship.

Figure 2

Exposure and STS moderated by Empathy



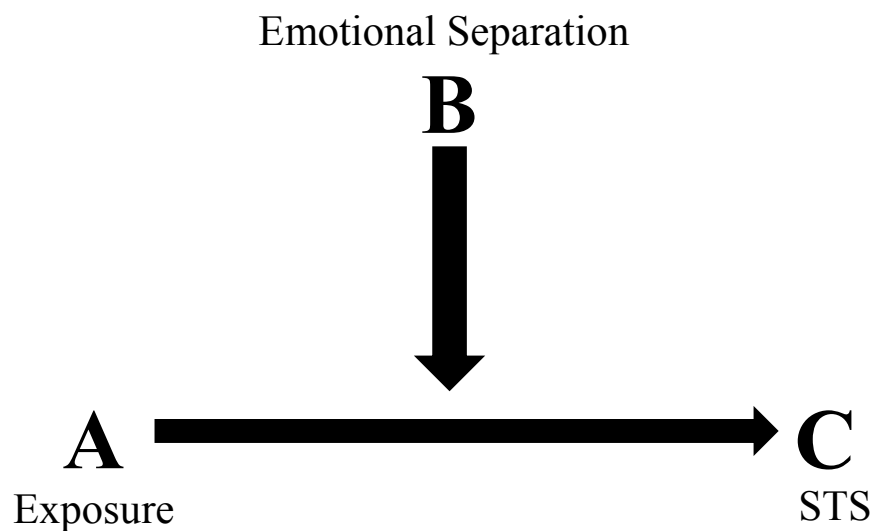
Emotional Separation

Due to the lack of empirical support for the relationship between empathy and secondary traumatic stress, an alternative explanation, emotional separation, is also tested in this study. Emotional separation is defined as an individual's ability to emotionally differentiate from another while being empathic (Corcoran, 1982). Some researchers suggest that it is not the engagement of empathy that causes vulnerability to secondary traumatic stress, but rather the inability to create a balance between empathetic engagement and emotional separation (Badger, Royse, & Craig, 2008).

In this study emotional separation is proposed to moderate the relationship between exposure and secondary traumatic stress. Emotional separation minimizes the relationship between exposure and secondary traumatic stress as the inability to emotionally separate traumatic material results in increased susceptibility to secondary traumatic stress, lessening the impact of exposure. Figure 3 demonstrates the hypothesized relationship.

Figure 3

Exposure and STS moderated by Emotional Separation



Purpose of the Study

The purpose of this study is two-fold. First, this study will document the prevalence of secondary traumatic stress in military primary and mental healthcare providers as well as examine basic risk and protective factors associated with the development of symptoms. Second, this study will examine the direct effect of secondary exposure to trauma and the moderating

influence of empathy and emotional separation on secondary traumatic stress symptoms in a sample of military primary and mental health care providers.

Research Questions

As the purpose of this study is to examine rates of secondary traumatic stress in military providers while testing moderators of secondary traumatic stress, the following research questions were developed to guide the study.

1. To what extent are military primary and mental healthcare providers experiencing symptoms of secondary traumatic stress?
2. Do symptoms of secondary traumatic stress vary by demographics (i.e., age, gender), professional factors (i.e., clinical responsibility, years in field) and/or current impact of past traumatic experience?
3. What are the relationships between indirect exposure, empathy, emotional separation and secondary traumatic stress?
 - a. Does empathy moderate the relationship between exposure and secondary traumatic stress?
 - b. Does emotional separation moderate the relationship between exposure and secondary traumatic stress?

Importance of the Study

Professional military care providers are a population of trauma professionals that to date, have been overlooked in research on secondary traumatic stress. Little is known about how these professionals are impacted by exposure to client/patient trauma. As the physical and psychological needs of returning service men and women proliferate, so do the caseloads

military professionals carry, the levels of exposure to traumatic material, the amount of time spent in empathetic engagement, and the need to emotionally separate professional work demands from one's personal life.

There are several important implications resulting from this study. First, results of the study revealed military healthcare providers are experiencing symptoms of secondary traumatic stress albeit at low levels. This finding indicates a need for changes in these military systems such as improved organizational support, training in secondary traumatic stress and training and opportunities in self-care. There are also important implications for military operations. Often facilities are assigned returning soldiers with specific needs. For example, all amputees may be sent to a certain unit. As participants in this study overall appear to be coping well in regards to exposure to traumatic material, it may indicate a strong capacity in these facilities to adequately care for traumatized soldiers in higher volumes. Findings of how demographic variables impact rates of secondary traumatic stress also provided insight into the protective and risk factors for this population. Results did not find common factors such as age, gender, and experience to be related to the development of secondary traumatic stress. As military operations provide a much different work experience than professionals in other trauma fields, these difference may impact how we continue to study this population.

This study has important implications for future research on and understanding of secondary traumatic stress. The present research examined the mechanisms by which the transfer of trauma has been hypothesized to occur. It is one of the first to analyze empathy and emotional separation as moderators of secondary traumatic stress. It has been hypothesized that empathy is the vehicle for which trauma is transferred from the primary to the secondary individual;

however, results of this study indicate that the inability to emotionally separate may play a more dominant role in the development of symptoms. This finding could change how we conceptualize secondary traumatic stress.

Overview of Methodology

Data were collected from two military medical centers located in the Washington D.C. metropolitan area. At each site, surveys were administered to primary care and mental health providers during weekly staff meetings. Included in data collection were background demographic information such as gender, age, education, exposure and experience. Additionally, participants completed scales measuring empathy, emotional separation and secondary traumatic stress.

The methods for data analysis included basic descriptive statistics and regression analyses. The regression analysis also tested variables as moderators of secondary traumatic stress. Data were analyzed using the Statistical Package for the Social Sciences (SPSS) version 20 for univariate, bivariate and multivariate analysis of demographic and scale data.

Definition of Key Terms

Secondary Traumatic Stress. The development of symptoms intrusion, avoidance/numbing, and/or arousal resulting from indirect exposure to traumatic material.

Empathy. A “counselor’s function to assume, in so far as he/she is able, the internal frame of reference of the client, to perceive the world as the client sees it, to perceive the client himself as he/she is seen by himself, to lay aside all the perceptions from the external frame of reference while doing so, and to communicate something of this empathetic understanding of the client” (Rogers, 1951, p.348).

Primary Exposure. The act or instance of being directly subjected to traumatic material.

Secondary Exposure. The act or instance of being indirectly subjected to traumatic material.

Emotional Separation. The ability for a professional to emotionally differentiate from an individual while being empathetic (Corcoran, 1983).

Moderator. A variable that affects the direction and/or strength of the relation between an independent and dependent variable.

Soldier. An individual serving in the military.

Veteran. An individual who is currently serving or who has served in the military.

Combat. In the military, fighting with an enemy or oppositional force.

Primary Care Provider. A professional providing health care to veterans within the U.S. military hospitals. In this study a physician or nurse.

Mental Health Provider. A professional providing mental health care to veterans within the U.S. military hospitals. In this study a social worker, psychologist, or psychiatrist.

Traumatic event. An event that involves actual or threatened death or serious injury, or other threat to one's physical integrity; or witnessing an event that involves death, injury, or a threat to the physical integrity of another person; or learning about unexpected or violent death, serious harm, or threat of death or injury experienced by a family member or other close associate (DSM-IV-TR, American Psychological Association, 2000).

Summary

The purpose of this study is to explore rates of secondary traumatic stress in military primary care and mental health providers. Research has yet to examine the potential traumatic effects of providing supportive services to such a traumatized population as those who have

served our country in high combat wars. This study presents emotional separation as a possible factor in incidence of secondary traumatic stress. The present research also evaluates the roles that empathy and exposure play in the development of symptoms. Differences in STS based on demographic variables will also be investigated. Finally, this study will test empathy and emotional separation as moderators of the relationship between exposure and secondary traumatic stress.

CHAPTER 2

LITERATURE REVIEW

Introduction

The literature review chapter explores the background and conceptual framework of secondary traumatic stress (STS). STS is defined and its symptoms and diagnostic criteria outlined. How the transfer of trauma occurs from client to professional is also addressed. Also included in this chapter is empirical literature describing the prevalence of STS and the factors that may impact the development of symptoms. The factors of empathy and emotional separation are described in more depth followed by a review of literature on military experiences and the development of STS.

Secondary Traumatic Stress (STS)

The third edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-III; American Psychological Association, 1980) was the first to conceptualize a set of symptoms experienced by individuals exposed to traumatic events. It was there that Posttraumatic Stress Disorder (PTSD) was first recognized as a psychiatric disorder allowing for its accurate diagnosis and treatment in traumatized individuals (Figley, 1995). As conceptual clarity for PTSD grew in research and practice, so did an understanding of how people experience trauma. Soon after, the inclusion of a reaction to trauma in the context of secondary exposure was added to the DSM-IV (American Psychological Association, 1994).

Secondary Traumatic Stress (STS) is an anxiety disorder in which individuals experience a syndrome of symptoms identical to those of PTSD with the exception that exposure to the traumatic event comes from knowledge of the event experienced through a significant other (i.e.,

client, family, or friend). More simply stated, STS results from learning about a traumatizing event experienced by another individual (Figley, 1995). The diagnostic criterion for STS begins with a stressor where an individual learns of an event outside the range of usual human experiences that would be markedly distressing to almost anyone (criterion A). The event must involve serious threat to the traumatized person and include a response marked by intense fear, helplessness, or horror (DSM-IV-TR; American Psychological Association, 2000). The characterizing symptoms of STS are classified into three clusters, intrusion (criterion B), avoidance/numbing (criterion C), and arousal (criterion D).

Intrusion symptoms resulting from traumatic exposure include persistent re-experiencing of the traumatic event. This can occur through recurrent and intrusive recollections of the event (images, thoughts or perceptions), distressing dreams or nightmares, acting or feeling as if the event was reoccurring, and intense psychological distress and/or physiological reactivity on exposure to external or internal cues that symbolize or resemble an aspect of the event. Persistent avoidance of stimuli associated with the trauma and general numbing responsiveness is indicated by efforts to avoid thoughts, feelings, activities or people associated with the event, inability to recall important aspects of the trauma and feelings of detachment or estrangement from others. Increased arousal is identified by hypervigilance, difficulty staying or falling asleep, and irritability. To meet the diagnostic criteria for PTSD, an individual must report experiencing at least one re-experiencing symptom, three avoidance/numbing symptoms and two hyperarousal symptoms. Table 1 demonstrates the full diagnostic criteria for PTSD as described in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR; American Psychological Association, 2000).

Table 1
DSM-IV-TR Criteria for PTSD

Criterion A: Stressor

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

1. The person has experienced, witnessed, or been confronted with an event or events that involve actual or threatened death or serious injury, or a threat to the physical integrity of oneself or others
2. The person's response involved intense fear, helplessness, or horror.

Criterion B: Intrusive Recollection

The traumatic event is persistently re-experienced in at least one of the following ways:

1. Recurrent and intrusive distressing recollections of the event, including images, thoughts, or perceptions.
2. Recurrent distressing dreams of the event.
3. Acting or feeling as if the traumatic event were recurring (includes a sense of reliving the experience, illusions, hallucinations, and dissociative flashback episodes, including those that occur upon awakening or when intoxicated).
4. Intense psychological distress at exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event.
5. Physiologic reactivity upon exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event

Criterion C: Avoidant/Numbing

Persistent avoidance of stimuli associated with the trauma and numbing of general responsiveness (not present before the trauma), as indicated by at least three of the following:

1. Efforts to avoid thoughts, feelings, or conversations associated with the trauma
2. Efforts to avoid activities, places, or people that arouse recollections of the trauma
3. Inability to recall an important aspect of the trauma
4. Markedly diminished interest or participation in significant activities
5. Feeling of detachment or estrangement from others
6. Restricted range of affect (e.g., unable to have loving feelings)
7. Sense of foreshortened future (e.g., does not expect to have a career, marriage, children, or a normal life span)

Criterion D: Hyper-arousal

Persistent symptoms of increasing arousal (not present before the trauma), indicated by at least two of the following:

1. Difficulty falling or staying asleep
2. Irritability or outbursts of anger
3. Difficulty concentration
4. Hyper-vigilance
5. Exaggerated startle response

Criterion E: Duration

Duration of the disturbance (symptoms in B, C, and D) is more than one month.

Criterion F: Functional significance

The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.

The Transfer of Trauma

The concept of STS is built on the theory of empathy as the means through which trauma is transferred (Figley, 1999). As clinicians engage empathetically with clients, they absorb the trauma experiences of the client. Sincere empathy is constructed through the professional's ability to connect with individuals. Empathizing with clients opens the professional to imagining and feeling the traumatic responses of victims (Figley, 1995). This creates a severe vulnerability as the initial familiarization and understanding of the victim's experiences may lapse into the clinician experience, causing him/her to be subjected to similar victimization. The clinician may begin to lose professional distance as they begin to "feel" with the client. This is often exacerbated by instances in which a clinician over identifies with a client or shares a similar history of personal trauma (Figley, 1995).

The terms transference and countertransference refer to the "reciprocal impact" clients and professionals have on each other during the course of psychotherapy (Wilson & Lindy, 1994). In their book, *Countertransference in the Treatment of PTSD*, Wilson & Lindy (1994) describe trauma-specific transference (TST) as "reactions in which the patient unconsciously relates to the therapist in ways that concern unresolved, unassimilated, and ego-alien aspects of the traumatic event" (p. 9). Through the process of STS, the client casts the professional into one or more specific roles related to the trauma experience. These roles range from positive, such as a fellow survivor or comforter, to negative, hostile judge or perpetrator.

Countertransference, as first described by Freud (1959) refers to the development of distortions related to the professionals own personal life experience and associated with his or her unconscious reaction to the client's transference. The concept has also been defined as "the

process of seeing oneself in the client, of overidentifying with the client, or of meeting needs through the client” (Corey 1991 as in Figley 1995, p.10). This emotional reaction toward the patient may cause the trauma experienced by the client to become absorbed by the professional therefore causing susceptibility to the symptoms of STS.

Clarification of Terminology

STS is often coupled with the terms vicarious traumatization and compassion fatigue. Vicarious traumatization, a term coined by McCann & Perlman (1990), refers to the “cumulative transformative effect upon the trauma therapist of working with survivors of traumatic life events” (Pearlman & Saakvitne, 1995, p. 31). These authors suggest an accumulation of clients’ traumatic memories impacts the professional’s perspective of the world. Vicarious trauma appears to be linked to changes in schema over time. Charles Figley, a pioneer in the study of STS, developed the term compassion fatigue as a more user-friendly term for STS (Figley, 1995). He defines compassion fatigue as “the natural, consequent behaviors and emotions resulting from knowledge about a traumatizing event experienced by a significant other. It is the stress resulting from helping or wanting to help a traumatized or suffering person” (Figley, 1999, p.10). The terms compassion fatigue and secondary traumatic stress describe the same phenomenon and can be used interchangeably.

Inclusion Criteria for Literature Review

The current state of STS literature can be described as somewhat convoluted due to the lack of conceptual clarity around the terms of vicarious trauma, compassion fatigue and vicarious traumatization. This has led to confusion and the emergence of differing opinions about the similarities and differences between these terms. As this research attempts to move STS past this

discussion in hopes the term can emerge as the primary construct for measuring secondary exposure to trauma, only literature describing and measuring STS as it is defined above will be included in the review. Simply stated, STS describes the development of posttraumatic stress symptoms from secondary exposure to a traumatic event. Literature in which the terms vicarious trauma, compassion fatigue or STS measure the intrusion, avoidance, and/or arousal symptoms of PTSD are included within the literature review. Therefore, these concepts will be used interchangeably as in this document they all measure the same underlying construct.

Review of Relevant Literature

Prevalence of Secondary Traumatic Stress (STS)

Symptoms of STS has been documented in professionals working in a variety of fields, including substance abuse (Bride, Hatcher & Humble, 2009; Bride & Kintzle, 2010), ambulance personnel (Jonsson, Segesten & Mattsson, 2003), mental health (Cunningham, 2003), nursing (Gates & Gillespie, 2008), domestic violence (Bell, 2003), health care (Meadors et al., 2009), child protective services (Bride, Jones, & MacMaster, 2007), sexual assault services (Ghahramanlou & Brodbeck, 2000), and social work (Bride, 2007). Dominguez-Gomez and Rutledge (2009) used the Secondary Traumatic Stress Scale (STSS) to examine symptoms of STS in a sample of 63 emergency room nurses. The authors found that 33 percent of the sample met the criteria for STS. Additionally, over half the participants (60%) reported experiencing at least one symptom of intrusion, and 56 percent reported at least two symptoms of arousal. In a similar study of domestic violence advocates, Slattery and Goodman (2009) found 47 percent of participants met the criteria for clinical levels of PTSD using the PTSD Checklist-Stressor Specific Version.

Bride (2007) explored the prevalence of STS in 282 respondents by conducting a random sample of master's level social workers licensed in the southern United States. The author examined individual symptoms of PTSD as well as the number of respondents who met the criteria for PTSD through exposure to traumatic events through their clients. Forty percent of respondents indicated they thought about work with traumatized clients without intending to, making intrusive thoughts the most frequently reported symptom. The second most frequent endorsed symptom was avoidance of clients, with 32 percent of respondents reporting this symptom. Sleeping disturbances were reported by 25 percent of the sample while other symptoms of the arousal cluster, such as hypervigilance and exaggerated startle response, were reported less frequently. Overall, 55 percent met at least one diagnostic criteria for PTSD, while 20 percent and 15 percent met the criteria for two and three, respectively. Results indicated social workers in the sample were indirectly exposed to client trauma and therefore at risk for experiencing STS.

In a qualitative study conducted by Chamberlain and Miller (2009), symptoms of STS were examined in a sample of district court judges. Semi-structured interviews used standardized questions to assess symptoms of STS, safety concerns and stress in nine judges. Authors found 13 messages described as potential indicators of STS in the judges. Results indicated judges were affected by the traumatic experience of others in their courtrooms, became emotionally involved in trials, and often take responsibility as the caretaker for jurors.

Factors Impacting Secondary Traumatic Stress (STS)

Research on STS has often included the testing of factors that may provide risk or protection to the development of symptoms. The most commonly cited factors include:

organizational factors, personal trauma history, personal factors, exposure and empathy.

Organizational factors, personal trauma history and personal factors are described below.

Exposure, empathy, and the less commonly cited factor of emotional separation, are described in more detail in the following sections, as these are the primary factors examined in this research.

Organizational Factors. Organizational factors include occupational stress, clinical supervision and supportive organizational culture. Occupational stress is defined as the strain that occurs in response to exposure and interaction with occupational stressors and is often examined in relation to burnout and attrition (Revicki & Gershon, 1996). Occupational stress has been found to be a significant predictor of STS in samples of child protection workers (Regeher et al., 2004) and social workers (Dane & Chachkes, 2001). Clinical supervision has also been demonstrated to be a protective factor in the development of STS (Rosenbloom, Pratt, & Pearlman, 1999). Adequate clinical supervision for trauma professionals provides an opportunity for debriefing, normalizing feelings, providing support, identifying developing symptoms of STS, and understanding feelings associated with client trauma (Slattery & Goodman, 2009).

Supportive organizational culture has been conceptualized as a combination of organizational support, supervisor support, co-worker support and organizational resources promoting the self-care of employees (Bride, 2009). It has been hypothesized that organizations able to normalize the effect of working with trauma survivors, provide a supportive environment, and demonstrate sincere concern for the well-being of the employees, play a significant role in the prevention of STS (Catherall, 1999; Bride, 2009). Professional peer groups have been found to provide emotional support, information, social companionship and instrumental support

(Flannery, 1990). Kassam-Adams (1999) and Chrestman (1999) found workplace support to be associated with lower levels of stress.

Personal Trauma History. Figley (1995) first identified personal trauma history as a risk factor for the development of STS. More important than having experienced a traumatic event is how an individual has coped with that trauma history. Further exposure to an individual's traumatic event when the professional has not effectively coped with his/her personal trauma experience creates susceptibility to retraumatization, leading to the development of STS. Many research findings have found a history of personal trauma to be a significant predictor of STS (Pearlman & MacIan, 1995; Kassam-Adams, 1999; Cunningham, 2003; Slattery & Goodman, 2009). However, it must be noted that the significance of a history of personal trauma has had empirically mixed results. Some research findings have indicated a history of personal trauma to be unrelated to STS (Benatar, 2000; Creamer & Liddle, 2005). This is often attributed to the difference in definitions of trauma history used across studies (Slattery & Goodman, 2009). Others question the subjectivity of research measuring personal trauma history through asking participants, "Do you have a trauma history?" (Creamer & Liddle, 2005). Benatar (2000) suggests that personal trauma history is only important if it is similar to the trauma experienced by clients.

Personal factors. Personal factors include factors such as gender, age, education, experience and training related to STS. The body of literature on such factors appears to have very mixed results. It is also often unclear as to why or how authors choose the demographic variables used in their analyses. Several studies have indicated symptoms of STS to be more prevalent in females (Ben-Ezra, Essar, & Saar, 2006, McCarroll et al., 1993). Contrary to these

results, others have found gender to be insignificant in predicting STS (Brady, 2008). A considerable amount of research has suggested that lower levels of education and experience are related to higher susceptibility for STS (Johnson, Segesten, & Mattsson, 2003). Jonsson, Segesten and Mattsson (2003) found higher levels of job experience, age and workload to be associated with higher levels of trauma symptoms.

In a report describing research on secondary exposure to trauma in trauma therapists, Chrestman (1999) describes professional experience to have a medial relationship between secondary exposure and therapist distress. Increased professional experience was associated with decreased avoidance, dissociation, anxiety and sexual abuse trauma symptoms. She also describes additional training, as assessed by number of continuing education units (CEUs) obtained, was associated with decreased avoidance. Figley (1999) argues understanding and recognizing the development and symptoms of STS is crucial in prevention.

Exposure

A primary assumption of STS is that exposure to client traumatic material can result in the development of trauma symptoms in clinicians (Figley, 1999). According to the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition – Text Revision*, (American Psychiatric Association, 2000), exposure to traumatic events includes but is not limited to military combat, violent personal assault (sexual assault, physical attack, robbery, mugging), being kidnapped, being taken hostage, terrorist attack, torture, incarceration as a prisoner of war or in a concentration camp, natural or manmade disasters, severe automobile accidents, or being diagnosed with a life-threatening illness. Witnessed events include, but are not limited to, observing the serious injury or unnatural death of another person due to violent assault, accident,

war, or disaster, or unexpectedly witnessing a dead body or body parts. Events experienced by others that are learned about include, but are not limited to, violent personal assault, serious accident, or serious injury experienced by a family member or a close friend, learning about the sudden, unexpected death of a family member or a close friend, or learning that one's child has a life-threatening disease (American Psychological Association, 2000). Worth noting in particular reference to this study are the high number of traumatic events described above in which professionals providing support to military would most likely have exposure to.

Schauben and Frazier (1995) first looked at the impact of exposure on STS in a sample of 148 female mental health workers. The authors found higher exposure, measured as number of hours spent with clients and percentage of trauma survivors on a caseload, resulted in higher levels of trauma symptoms. Similarly, Chrestman (1999) found professionals with high caseloads of trauma survivors and higher percentage of time spent in clinical activities to be related to increased trauma symptomatology. More recently, Adams, Figley and Boscarino (2008) examined symptoms of STS in 236 social workers living in New York City 20 months after the 9/11 terrorist attacks. Results demonstrated exposure to clients traumatized by the World Trade Center attacks was associated with increased levels of STS and other psychological problems.

Although it is apparent in the literature that exposure is key to the development of STS, there is inconsistency across studies in how exposure is operationalized. In research published over the last five years, exposure was measured using caseload, average hours worked in a week, number of hours direct service, level of trauma of client population, extent to which work addresses client trauma, average time spent with patient, average number of patients per week,

proportion of caseload trauma clients, average number of clients per week, length and time of assignment, time spent discussing morbid content with clients, frequency of conveying news of tragedy, and duration of career doing trauma work (Creamer & Liddle, 2005; Abedroth & Flannery, 2006; Bride, 2007; Adams & Riggs, 2008; Dominguez-Gomez & Rutledge, 2009; Carmel & Friedlander, 2009; Devilly et al., 2009; Slattery & Goodman, 2009). This variability in how exposure is operationalized has resulted in mixed findings regarding impact of exposure on STS symptoms.

Empathy

The importance of sympathetic understanding in the therapeutic relationship has been long documented within the literature (Freedberg, 2007). Empathy is the vehicle for understanding individual experience and promoting growth and health (Kunyk & Olson, 2001). Empathy, however, has also been described as the key factor in the induction of traumatic experience from the primary to the secondary victim (Figley, 1995). Professionals with a great capacity for empathy possess strength in their ability to reach and connect with their clients. However, they also possess a strong risk for the development of STS.

Empathy has been described as the:

Counselor's function to assume, in so far as he/she is able, the internal frame of reference of the client, to perceive the world as the client sees it, to perceive the client himself as he/she is seen by himself, to lay aside all the perceptions from the external frame of reference while doing so, and to communicate something of this empathetic understanding of the client (Rogers, 1951, p. 348).

The theory of empathy is multifaceted and often dependent on the type of helping relationship. Empathy consists of two dimensions containing affective and cognitive components (Davis, 1983). The affective component is defined by the professional's ability to connect with, have concern for and show compassion for clients. The cognitive component is described as a clinician's ability to conceptualize a client's experience and evaluate client behavior. Definitions of empathy have continued to develop and expand within the literature as its complexity as a phenomenon has grown. Social work, in particular, has consistently identified empathy as a critical element in the development of the helping relationship (Freedberg, 2007).

Empathy has a central role in the treatment of trauma survivors (Wilson & Thomas, 2004). It is a complex role comprised of the interaction and intersection of many psychological processes, including affect, cognition, perception, communication processes, interpersonal styles, modalities of empathic attunement and strain, personality characteristics, dyadic interactions, transference and countertransference processes, operation and security of defensive mechanisms, and knowledge of the dynamics of post-traumatic states (Wilson & Thomas, 2004). This dynamic process can cause strain and/or satisfaction in mental health professionals providing support to traumatized clients.

The structure of STS is built on the theory of empathy as the means through which trauma is transferred (Figley, 1999). As clinicians engage empathetically with clients, they absorb the trauma experiences of the client. Sincere empathy is constructed through the professional's ability to connect with individuals. Empathizing with clients opens the professional to imagining and feeling the traumatic responses of victims (Figley, 1995). This creates a severe vulnerability as the initial familiarization and understanding of the victim's

experiences may lapse into the clinician experience, causing him/her to be subjected to similar victimization. The clinician may begin to lose professional distance as they begin to “feel” with the client. This is often exacerbated by instances in which a clinician over identifies with a client or self-discloses a similar history of personal trauma (Figley, 1995).

Recent research on empathy as it relates to brain function has provided insight into the physical and psychological nature of how secondary traumatization occurs. An investigation of a number of brain scan techniques have shown empathy to be an intrinsic neurological component of the brain composed of neurons dissolving between the barriers of the self and other individuals (Izzo & Miller, 2010). As individuals engage in feelings and acts of empathy, a specific set of neurons, called mirror neurons, travel throughout different regions of the brain. This causes the listener to experience a full body sensation as if they were actually experiencing the event. These specific neurons are what assist individuals in understanding another’s point of view (Wilson & Thomas, 2004). As a traumatic experience is described, the listener begins to visualize the event in his/her mind causing the brain to feel tension as discomfort builds around the visual encounter of the incident. When an individual is engaging in empathy in their personal life, they are able to minimize the impact on the brain by letting the tension out through individual reactions, taking breaks, and forms of debriefing – which allows the neurons to fire back and forth from the left and right side of the brain – therefore relieving tension (Izzo & Miller, 2010). When a clinician engages in empathy in work, the same reaction is ignited as neurons attempt to relieve tension by surging to the opposite side of the brain. In this case, however, the clinician must hold them back due to his/her professional standards of the therapeutic relationship, he/she must remain professional and calm. The building and lack of

release of this tension, coupled with the strain experienced by the clinician as he/she is described the details a traumatic event, causes the protective shields of psychological well-being to become weakened and vulnerability for the development of STS occurs.

Although empathy is widely recognized for the mechanism in what the transfer of trauma occurs, a body of empirical support for this connection does not exist. Abendroth and Flannery (2008) tested predictive factors in the risk for compassion fatigue in a study of 216 hospice nurses across the state of Florida. Authors found high levels of empathy, as well as stress, trauma, anxiety, and life demands to be key determinants in the risk for compassion fatigue.

MacRitchie and Leibowitz (2010) studied variables that may play a role in the transmission of STS in a sample of 64 South African trauma workers. Results indicated levels of empathy, as well as levels of perceived social support were significantly correlated with STS. In this study, empathy was also found to moderate the relationship between trauma workers previous exposure to traumatic material and STS. Authors concluded higher levels of empathy create susceptibility to the development of STS. It is important to note that authors intended to use caseload as the measure for exposure. However, a significant relationship was not found between caseload and STS, causing the authors to use previous direct exposure to non-work related trauma as the measure of exposure. Although authors concluded empathy moderated the relationship between exposure and STS, it should be stated that the moderation was between exposure to non-work related trauma, not client-related trauma.

Contrary to these results, and discussed in more detail below, Badger, Royse and Craig (2008), found empathy to have little predictive ability of STS in a sample of 121 trauma center

social workers. These authors found emotional separation to be the strongest predictor of STS (Badger, Royse & Craig, 2008).

Emotional Separation

Emotional separation is defined as an individual's ability to emotionally differentiate from another while being empathic (Corcoran, 1982). Despite the introduction of the concept of emotional separation by Corcoran, little has been done since to examine the separation of the experience of the client and the therapist in relation to STS.

Examining the relationship between empathy and emotionality among clients and therapists, Corcoran (1983) measured graduate level social work practice students response to three standardized, audio-taped simulated clients. The three clients each presented one affect, either feelings of sadness, anger or fear. Subsequent to each participant's client interaction, immediate levels of sadness, anger and fear were measured and divided into target emotional responses and non-target emotional responses. The author hypothesized respondents would report feeling more of the affect presented by the client than other emotions. Additionally, during their exposure to clients, participants had five opportunities to respond verbally and were told to be as empathetic as possible. Verbal responses were then recorded and rated on expressed empathy using Carkhuff's (1969) Empathic Understanding scale.

Corcoran (1983) found the graduate level social workers reported personally feeling more of the target emotional responses that were presented by clients than non-target emotions. Corcoran also found support for an inverse relationship between emotional separation and empathy. Higher levels of empathy were associated with less emotional separation. The author concluded the results of the study demonstrated support for the "convergence between the

client's and clinician's emotional experiences as part of the empathetic process, p. 670" (Corcoran, 1983). Although these results do support this hypothesis, it is important to note the small sample utilized in the study (n=18).

Badger, Royse and Craig (2008) explored the predictive ability of empathy, emotional separation and occupational stress in a cross sectional study of 121 master's level social workers employed in trauma centers. Emotional separation was found to have the most powerful predictive ability for symptoms of STS, while empathy was not found to be significant. These results call for examining emotional separation as the mechanism for understanding STS as opposed to or in conjunction with empathy. In this study, emotional separation is proposed to mediate the relationship between exposure and STS.

Brady (2008) tested variables associated with STS and PTSD in a sample of funeral directors and police officers. Scores on 228 participants Maintenance of Emotional Separation Scale (Corcoran, 1982), along with gender, years of experience, personal trauma history and level of vocational satisfaction were examined as predictors of trauma symptomatology. Results indicated 11% of the sample met the diagnostic criteria for STS, while 29 percent reported significant levels of symptoms. While the set of predictors accounted for 20 percent of the variance in STS scores and 23 percent of the variance in trauma symptom scores, only emotional separation and occupation significantly predicted both STS and trauma symptoms.

Thomas and Otis (2010) explored the relationship between empathy, emotional separation and compassion fatigue in a sample of 171 licensed clinical social workers. Authors tested a predictive model regressing adult trauma history, child trauma history, age, gender, experience, empathy, mindfulness and emotional separation on compassion fatigue, as measured

by the ProQOL scale (Stamm, 2005). Although results of model analysis found strength in the overall model, only emotional separation was significantly associated with variation in levels of compassion fatigue. Specifically, participant with higher levels of emotional separation were at lower risk of compassion fatigue.

Secondary Traumatic Stress (STS) in Military

Although research has yet to explore the potential impact of secondary exposure to trauma in military health care providers, some research has looked at STS as it relates military spouses and children. Figley (1998) noted that spouses seem to be at particular risk for the development of a secondary trauma reaction due to the close and often emotionally intense nature of the spousal relationship. He describes the development as stemming from the need to make sense of their partner's traumatic experience and is complicated efforts to maintain a stable relationship. Bjornestad (2009) investigated the presence and severity of PTSD symptoms of 227 Army National Guard veterans and STS symptoms in their spouses. A mediation analysis provided preliminary support that PTSD symptoms in veterans mediate the relationship between their combat exposure and their spouse's traumatic symptoms. In a comparison study by Riggs et al., (1998) authors compared Vietnam veterans and their partners with PTSD to a sample of veterans without PTSD. Results indicated that more than 70% of the PTSD veterans and their partners reported clinically significant levels of relationship distress, as compared with only 30% of the non-PTSD group.

Some studies have explored STS described as intergenerational trauma. Herzog (2008) examined the relationship between trauma symptoms in war veterans and STS symptoms in spouses and children. Results suggested the immediate family members of combat veterans with

high levels of PTSD are at risk for developing STS and that STS in spouses are a risk increasing mediating variable between trauma symptoms in combat veterans and STS symptoms in children. Lastly, in a study of children of Vietnam veterans, Rosenheck and Nathan (1985) found that children exposed to reliving experiences in their parents tend to identify with those parents and experience similar events in fantasy, internalizing a fearful reality. They have also been found to act out family pathology through emotional distancing, depression, and behavioral and school-related problems (Williams & Williams, 1987). Additionally, children of veterans who were emotionally close to their fathers appeared to absorb and carry out paternal pain into their adult lives, impacting choice of partner, career and lifestyle (Rosenheck and Nathan). Although this research does not describe STS in professionals, it does demonstrate how the transfer of trauma can occur in individuals with contact with military personnel. This is critical information and indicates a similar reaction may be possible in military providers.

Summary of Literature Review

This chapter presented a review of literature around STS. The background of STS and its development as a construct was described, as was the mechanisms for how trauma is transferred. The literature review demonstrated STS to be a frequently reported outcome of working with trauma survivors. Findings of the review also showed a mixture of results related to factors associated with the development of symptoms, such as age, gender, professional experience, occupational support, exposure and personal trauma history. The factors of empathy and emotional separation were described and their potential connections to STS identified. Lastly, a description of how the transfer of trauma symptoms in the families of military personnel further demonstrated the potential impacts of working with this population.

CHAPTER 3

METHODOLOGY

Introduction

The purpose of this chapter is to delineate the methods used to collect and analyze data for the study. The chapter begins with the outline of the purpose of the study and research questions. Also described within this chapter are the sampling and data collection procedures, as well as information about study variables and measures. The statistical methods for analyzing data and the methods for data screening are illustrated as well.

Purpose of the Study and Research Questions

The purpose of this study is twofold. First, this research will examine the prevalence of secondary traumatic stress (STS) in military primary care and mental health providers, as well as risk and protective factors associated with the development of symptoms. Second, this study will propose and test models of STS constructed of exposure moderated by empathy and emotional separation. The following research questions were developed to guide the study.

1. To what extent are military primary and mental healthcare providers experiencing symptoms of secondary traumatic stress?
2. Do symptoms of secondary traumatic stress vary by demographics (i.e. age, gender), professional factors (i.e., clinical responsibility, years in field) and/or current impact of past traumatic experience?
3. What are the relationships between indirect exposure, empathy, emotional separation and secondary traumatic stress?

- a. Does empathy moderate the relationship between exposure and secondary traumatic stress?
- b. Does emotional separation moderate the relationship between exposure and secondary traumatic stress?

Sampling Procedures

Participants were identified and drawn from two military hospitals through a connection made with a hospital administrator. A nonrandom convenience sample was identified from the population of primary care and mental health military providers at the two sites. In general, primary care providers included physicians, physician assistants, medical students and nurses. Mental health providers included social workers, psychologists and psychiatrists. This sampling frame was chosen as it was thought to provide maximum variability in examining differences between groups based on education, type of exposure, and profession. Approximately 250 primary care and mental health providers were available for participation in the study within the two sites.

Collection Sites

The military healthcare system is a government run system responsible for providing healthcare to active duty and retired U.S. military personnel and their families. The mission of this system, often described as medical readiness, is to maintain the health of military personnel to ensure their ability and preparedness to carry out military operations. Two military hospitals within this system were utilized for data collection procedures in this study. To ensure participant anonymity, only a general description of each hospital is provided.

National Naval Medical Center (Bethesda Naval Hospital). The National Naval Medical Center, located in Bethesda, Maryland, is considered the flagship medical center of the United States Navy. The hospital is best known for providing healthcare to the nation's leaders including U.S. presidents. The National Naval Medical Center provides an array of comprehensive healthcare including physical and dental care, mental health support, wounded warrior programs, educational opportunities and research institutes.

Fort Belvoir Community Hospital. Fort Belvoir is located in Fairfax County, Virginia and recently replaced DeWitt Army Community Hospital. The new 120 bed facility uses evidence based design principles to increase patient outcomes, decrease recovery times and to maximize provider and patient safety. Fort Belvoir Community Hospital offers comprehensive physical and mental healthcare including behavioral health services, medical services, family health, and warrior transition services.

Data Collection Procedures

The primary researcher traveled to the study sites to conduct data collection. Data collection procedures were arranged through the Deputy Commander of Fort Belvoir Community Hospital. Department heads were contacted via e-mail and asked to provide assistance in coordinating opportunities for the researcher to introduce the study to their employees and invite participation. Staff meetings were used as the mechanism for data collection. Ten department heads agreed to an invitation to present the study to their staff. These meetings were scheduled approximately two weeks before data collection and time was set aside during the meeting for the introduction of the study. Due to time constraints in staff meetings, willing participants were asked to take the survey, complete within the next week, and return to

the researcher. Department heads were able to reach out to staff not present at the meetings for participation in the study. Approximately 200 surveys were handed out to potential participants, of which 70 were returned representing a 35% response rate.

During each staff meeting, the researcher introduced the purpose of the study and what participation entailed. All potential participants were handed a cover sheet and survey. The cover sheet included the title and purpose of the study, the potential benefits and risks to participating in the study, protections for participant anonymity, and the time it will take to complete the survey. The cover letter also assured participants that study participation was completely voluntary and had no bearing on their current employment status. This was also emphasized by the researcher during the study introduction process. All survey information remained anonymous. Researchers were not able to connect surveys with a particular participant. Informed consent was indicated through survey completion. Collected data was kept in a locked file cabinet in a locked office. Data collection procedures were approved by the University of Georgia Institutional Review Board and the Walter Reed Institutional Review Board.

Study Variables and Measures

Demographic Variables. A demographic questionnaire was developed for the purpose of this study to collect background information such as gender, age, race/ethnicity, education, experience (length of time in field), marital status, income, clinical responsibility (primary care or mental health) and personal trauma history. Personal trauma history was measured by asking participants who reported experiencing a traumatic event, “On a scale of 1 (not at all) and 5 (very), how negatively does that event currently affect you?” Those participants who had not experienced a traumatic event were coded as 1 (not at all) for this question.

Secondary Traumatic Stress. Secondary traumatic stress (STS) was measured with the Secondary Traumatic Stress Scale (STSS; Bride, Robinson, Yegidis & Figley, 2004). The STSS is a 17-item self-report instrument that instructs respondents to indicate how frequently they experienced each of 17 symptoms during the previous week using a five-choice, Likert-type response format ranging from *never* (1) to *very often* (5). The 17 items of the STSS are designed to be congruent with the 17 symptom criteria of PTSD as delineated in the DSM-IV-TR (American Psychiatric Association, 2000). Higher scores on the STSS indicate higher levels of STS symptomatology. The scale addresses the three factors of intrusion, avoidance and arousal by measuring practitioner reactions that have experienced traumatic stress through their work with clients (Ting et al., 2005). The STSS has demonstrated evidence of convergent, discriminant, and factorial validity as well as internal consistency ranging from $\alpha = .92$ to $\alpha = .94$ (Bride et al., 2004; Guerra & Saiz, 2007; Ting, Jacobson, Sanders, Bride, & Harrington, 2005). Reliability for the STSS in this sample was also conducted, resulting in a Cronbach alpha of .95.

Exposure. Exposure was measured using a number of items developed by the researcher. As demonstrated throughout the first two chapters, the measurement of this variable lacks consistency within the literature. To ensure a valid and reliable measure of this concept, several items were tested. A regression line with empirical items demonstrated within the literature, as well as theoretical items thought to be of particular interest in this study, was tested to find which item most adequately represented exposure. These items include percent of caseload with diagnosis of PTSD, percent of work time devoted to direct client/patient care, percent of caseload attempted suicide, and percent of caseload committed suicide. Through this analysis, it was found that percentage of clients who meet the criteria for a diagnosis of PTSD was the only

exposure variable significantly related to STS and was therefore identified as the study measure for exposure.

Empathy. Empathy was measured with the Interpersonal Reactivity Index (IRI). The IRI measures empathy based on a multidimensional approach treating empathy as a set of four constructs as opposed to a single construct (Davis, 1983). The IRI is a 28-item self-report scale that includes four seven-item subscales. The first subscale, Perspective Taking (PT; items 3, 8, 11, 15, 21, 25), assesses an individual's tendency to adopt the psychological point of view of others. The Fantasy Subscale (FS; items 1, 5, 7, 12, 16, 23, 26) measures an individual's tendency to transpose themselves imaginatively in the stories, feelings, and/or actions of fictional characters in film, television and books. The Empathetic Concern (EC; items 2, 4, 9, 14, 18, 20, 22) subscale assesses an individual's ability to have sympathy and concern for others. The final subscale, Personal Distress (PD; 6, 10, 13, 17, 19, 24), measures self-oriented feelings of personal anxiety and unease in high tension situations and settings. The IRI is arguably the most commonly utilized scale in measuring empathy. Higher scores on the IRI indicate higher levels of empathy. (Note items 3, 4, 7, 12, 14, 15, 18 and 19 are reverse scored.) Davis (1983) found the measure to be valid with Cronbach alphas for the subscales ranging from .71 to .77. Conducted reliability analysis for the IRI total in this study revealed an adequate Cronbach alpha score of .80.

Emotional Separation. Emotional separation was measured by the Maintenance of Emotional Separation Scale (MES) (Corcoran, 1982). The MES is a seven item self-report scale that assesses the occurrence of emotional separation between an individual and others in interpersonal situations (Corcoran, 1983). Respondents answer the series of questions based on a

scale ranging from one (completely false for me) to six (completely true for me). Higher scores on the MES indicate higher levels of emotional separation ability. (Note items 1, 2, 3, 5 and 6 are reverse scored.) Examples of scale items include, “I often get so emotionally involved in my friends problems that I lose sight of my own feelings” and, “I usually take the problems of others home with me”. Corcoran (1982) demonstrated the reliability of the MES with a Cronbach alpha of .71 as well as construct and discriminant validity. Reliability was also established in this study with a Cronbach alpha of .78.

Data Analysis

Data were analyzed using the Statistical Package for the Social Sciences (SPSS) version 20. Diagnostic analysis was first conducted to assure the assumptions for statistical testing using regression. Following assumption testing, analyses were performed to explore the demographic characteristics of the sample. Lastly, three regression models based on the three research questions were tested and analyzed using demographics, exposure, empathy, emotional separation and STS. Data analysis strategies are described in detail below.

Assumptions for Statistical Testing

Data Normality. Histogram charts and Normal Q-Q Plots were constructed and examined for the variables of exposure, empathy, emotional separation and STS. Analysis of the charts and plots revealed data for all variables to be normally distributed. Tests for skewness and kurtosis for each variable were also conducted (Decarlo, 1997). Skewness describes unevenly distributed data (i.e., a majority of scores piled on one side of the distribution with a few scores in one tail), while kurtosis describes how flat or peaked a distribution is (i.e., too many scores piled up around the mean or vice versa). Scores larger than |2| and |7| demonstrate problems with

skewness and kurtosis, respectfully. Skewness and kurtosis scores were calculated for each variable. Analysis of scores demonstrated no issues with either measure for all variables.

Linearity. Regression analysis has an assumption of linearity, meaning there is a straight line relationship between the independent and dependent variables. Four bivariate scatter plots were analyzed between each independent variable and STS to examine the projected relationship. Each scatter plot displayed a linear relationship therefore meeting the assumption for regression analysis.

Multicollinearity. Multicollinearity occurs when independent variables are highly correlated (Pedhazur, 1997). This should be avoided as multicollinearity causes redundancy between variables. More specifically, one variable will not have any predictive value over another, weakening the analysis. To test for multicollinearity, correlation analyses were conducted between the independent variables of exposure, empathy and emotional separation. Significant correlations were not found between the variables.

Missing Data. All participants with missing data were excluded from regression data analysis. Listwise deletion was used to exclude cases.

Outliers. DeCarlo's (1997) macro was used to examine potential outliers that may influence data or represent data entry errors. DeCarlo's macro provides critical values for interpreting the severity of data outside the normal distribution. Analysis did not display any outliers significant at the .05 level.

Univariate Analysis

Sample characteristics (i.e., age, gender, experience) were analyzed using frequencies and descriptive statistics. These statistics were also used in reporting means, standard deviations

and ranges of participant's scores on the measures for exposure, empathy, emotional separation and secondary traumatic stress.

Research Question 1. To explore the prevalence of STS in military health care providers, descriptive statistics of participant's scores on the Secondary Traumatic Stress Scale were analyzed, including frequencies, means, standard deviations and percentages.

Bivariate Analysis

Research Question Two. T-tests and regression were used to analyze whether significant differences occurred in symptoms of secondary traumatic stress based on the factors of age, gender, clinical responsibility and current impact of past traumatic experience. T-test were used for the dichotomous variables of gender (male or female) and clinical responsibility (primary care or mental health). Three simple regression analyses were used for age, years in field and impact of past traumatic experience.

Multivariate Analysis

Research Question Three. The third research question examines the relationship between exposure and STS, as moderated by either emotional separation or empathy. Two series of regression models were tested to explore these relationships. Before the testing of these models, exposure was first regressed on STS to establish a relationship between the independent and dependent variable. Next, the first model of exposure regressed on STS moderated by empathy was tested, followed by the second, a model of exposure regressed on secondary traumatic stress moderated by emotional separation. The procedures for testing moderators are described below.

Analysis of moderators in regression begins with the "centering" of the independent and moderator variable to eliminate problems of multicollinearity effects, as recommended by Aiken

and West (1991). Centering a variable involves putting scores into deviation score form by subtracting the sample mean from all individuals' scores on the variable, thus producing a revised sample mean of zero (Holmbeck, 1997). Next, an interaction variable for each model is computed by multiplying the independent variable scores, exposure, by the moderator variable scores, either empathy or emotional separation. This creates two interaction variables, exposure x empathy, and exposure x emotional separation. Finally, the regression models are tested by regressing the independent variable (exposure) and the moderator variable (empathy or emotional separation) followed by a second regression with the analysis of the moderator (interaction).

Summary

This chapter described the data collection and data analysis methods used in this research. Data was collected from military hospitals within the capitol area. Collected data included demographic information, empathy, emotional separation, exposure and secondary traumatic stress. Data was analyzed using SPSS and included tests for univariate and multivariate analysis. A series of regression models were used to test the relationship between exposure and secondary traumatic stress, moderated by empathy and emotional separation.

CHAPTER 4

RESULTS

Introduction

The purpose of this chapter is to report the results of the statistical analyses outlined in chapter three. This chapter will outline the results of the univariate, bivariate and multivariate analyses associated with the proposed research questions. The purpose of the study is to examine the prevalence of secondary traumatic stress (STS) in military primary care and mental health care providers. Risk and protective factors associated with the development of symptoms were also explored. This research also tests models of STS constructed of exposure moderated by empathy and emotional separation.

Univariate Analysis

Sample Characteristics

Analysis of demographic information revealed study participants had a mean age of 43 years ($SD = 12.21$) and were 70 percent female and 30 percent male. The majority of participants (79 percent) identified their primary clinical responsibility as mental health while 17 percent were identified as primary care. Thirty percent of participants were licensed in social work while 27 percent were licensed in the field of medicine. Psychology and nursing were each identified by 13 percent of participants. Respondents averaged 14 years ($SD = 10.38$) of experience in their respective fields. Forty-seven percent of participants had a medical doctorate (MD/DO) or PhD and 37 percent had a master's degree. Fifty-three percent of respondents indicated earning an income of more than \$85,000. Tables 2 and 3 display the sample characteristics.

Table 2*Descriptive Statistics for Demographic Variables (n = 70)*

| | % | Mean (sd) | Range |
|--------------------------|------|--------------|-------|
| Gender | | | |
| Male | 70 | | |
| Female | 30 | | |
| Ethnicity | | | |
| Black | 24.3 | | |
| White | 57.4 | | |
| Asian | 12.9 | | |
| Other | 4.9 | | |
| Highest Education | | | |
| High School | 5.7 | | |
| Associates | 4.3 | | |
| Bachelors | 5.7 | | |
| Masters | 37.1 | | |
| Medical Doctorate | 28.6 | | |
| Ph.D. | 18.6 | | |
| Income | | | |
| Under 45,000 | 4.4 | | |
| 45,000 to 65,000 | 16.2 | | |
| 65,001 to 85,000 | 26.5 | | |
| More than 85,000 | 52.9 | | |
| Age (yrs) | | 42.93(12.21) | 19-70 |
| Experience (yrs) | | 14.36(10.38) | 0-41 |

Table 3*Descriptive Statistics for Demographic Variables (n = 70)*

| | % |
|--|------|
| Field | |
| Medicine | 26.5 |
| Nursing | 13.2 |
| Psychology | 13.2 |
| Social Work | 30.9 |
| Other | 15.7 |
| Clinical Responsibility | |
| Primary Care | 17.1 |
| Mental Health | 78.6 |
| Not Reported | 4.3 |
| Experienced a Traumatic Event | |
| Yes | 60 |
| No | 38.6 |
| Current Negative Impact of Trauma (n=42) | |
| 1 (Not at all) | 22.9 |
| 2 | 24.3 |
| 3 | 8.6 |
| 4 | 4.3 |
| 5 (Very) | 1.4 |

Study Variables

Participant scores on the Secondary Traumatic Stress Scale (STSS) ranged from 17-68 and had a sample mean score of 30.76 ($SD = 12.33$). In regards to exposure to client trauma, percent of participant clients who meet the criteria for posttraumatic stress disorder (PTSD) ranged from 0-100, with a mean of 35 ($SD = 26.3$). Thirty-three percent of the sample indicated at least 50 percent or more of their clients met the criteria for PTSD. Respondents had a mean score of 28.77 ($SD=5.77$) on the Maintenance of Emotional Separation Scale and a mean score of 59.95 ($SD=12.1$) on the Interpersonal Reactivity Index. Study variable scores are listed on Table 4.

Table 4

Descriptive Statistics for Study Variables (n = 70)

| | Mean (SD) | Range |
|--|---------------|-------|
| Maintenance of Emotional Separation | 28.77 (5.77) | 12-37 |
| Interpersonal Reactivity Index | 59.98 (12.1) | 16-86 |
| Secondary Traumatic Stress Scale | 30.76 (12.33) | 17-68 |
| Percent Clients Meet Criteria for PTSD | 35.14 (26.3) | 0-100 |

Research Question One: Prevalence of STS

Participant scores on the STSS ranged from 17 (no symptoms) to 68 (per item mean of 4 out of 5) and had a sample mean score of 30.76 ($SD = 12.33$), per item mean of 1.81 out of 5. An STS symptom was considered to be endorsed if the respondent indicated that the symptom was experienced “occasionally”, “often”, or “very often” (Bride, 2004). The most frequently reported

symptoms were the avoidance symptom of feeling emotionally numb and the arousal symptom of trouble sleeping, with 34 percent of the sample reporting each, followed by the intrusive symptom of thoughts about clients with 30 percent reporting. The least frequently reported symptom was feeling jumpy, an arousal symptom. Table 5 displays the frequency of STS symptoms. Fifty-nine percent of the sample endorsed at least one symptom of STS while 33 percent endorsed five or more. Approximately eight percent of the sample had total STSS scores of 50 or above, indicating moderate to severe symptomatology. Fifty-four percent of the sample reported no or little symptoms of STS.

Table 5

Frequency of STS Symptoms Reported by Military Professionals (n=70)

| Criterion (Item No.) | Never <i>n</i> (%) | Rarely <i>n</i> (%) | Occasionally <i>n</i> (%) | Often <i>n</i> (%) | Very Often <i>n</i> (%) | <i>M</i> | <i>SD</i> |
|---|-----------------------|------------------------|------------------------------|-----------------------|----------------------------|----------|-----------|
| Criterion B – Intrusion | | | | | | | |
| Intrusive thoughts (10) | 27(38.6) | 19(27.1) | 10(14.3) | 10(14.3) | 4(5.7) | 2.21 | 1.26 |
| Disturbing dreams (13) | 50(71.4) | 12(17.1) | 5(7.1) | 3(4.3) | 0(0) | 2 | 1.05 |
| Sense of reliving clients' trauma (3) | 39(55.7) | 22(31.4) | 7(10) | 2(2.9) | 0(0) | 1.6 | .79 |
| Cued psychological distress (6) | 34(48.6) | 19(27.1) | 12(17.1) | 5(7.1) | 0(0) | 1.82 | .96 |
| Cued psychological reaction (2) | 36(51.4) | 19(27.1) | 8(11.4) | 7(10) | 0(0) | 1.8 | 1 |
| Criterion C – Avoidance | | | | | | | |
| Avoidance of clients (14) | 27(38.6) | 25(35.7) | 11(15.7) | 5(7.1) | 2(2.9) | 2 | 1.05 |
| Avoidance of people, places, things (12) | 49(70) | 11(15.7) | 4(5.7) | 5(7.1) | 1(1.4) | 1.54 | .99 |
| Inability to recall client information (17) | 42(60) | 19(27.1) | 7(10) | 2(2.9) | 0(0) | 1.56 | .79 |

Table 5***Frequency of STS Symptoms Reported by Military Professionals (n=70) (Continued)***

| Criterion (Item No.) | Never <i>n</i> (%) | Rarely <i>n</i> (%) | Occasionally <i>n</i> (%) | Often <i>n</i> (%) | Very Often <i>n</i> (%) | <i>M</i> | <i>SD</i> |
|----------------------------------|-----------------------|------------------------|------------------------------|-----------------------|----------------------------|----------|-----------|
| Diminished activity (9) | 35(50) | 18(25.7) | 12(17.1) | 5(7.1) | 0(0) | 1.81 | .97 |
| Emotional numbing (1) | 29(41.4) | 20(28.6) | 13(18.6) | 7(10) | 1(1.4) | 2.01 | 1.07 |
| Foreshortened future (5) | 33(47.1) | 20(28.6) | 11(15.7) | 6(8.6) | 0(0) | 1.86 | .98 |
| Criterion D – Arousal | | | | | | | |
| Difficulty sleeping (4) | 26(37.1) | 21(30) | 9(12.9) | 10(14.3) | 4(5.7) | 2.21 | 1.25 |
| Irritability (15) | 25(35.7) | 26(37.1) | 12(17.1) | 5(7.1) | 2(2.9) | 2.04 | 1.04 |
| Difficulty concentrating (11) | 28(40) | 25(35.7) | 10(14.3) | 7(10) | 0(0) | 1.92 | .98 |
| Hypervigilance (16) | 43(61.4) | 14(20) | 9(12.9) | 2(2.9) | 2(2.9) | 1.66 | 1.01 |
| Easily startled (8) | 45(64.3) | 16(22.9) | 5(7.1) | 3(4.3) | 1(1.4) | 1.56 | .91 |

Bivariate Analysis**Research Question Two: Demographics and STS**

Independent samples t-tests were conducted to examine differences in secondary traumatic stress scores based on gender and clinical responsibility (See Table 6). Analysis revealed no significant differences between males and females. Significant differences were also not found between participants whose clinical responsibility was primary care and mental health.

Three simple regression analyses were used to explore a potential relationship between the factors of age, years in field, and current impact of past trauma. Results revealed neither age nor years in field predicted STS scores. However, current impact of past trauma significantly

predicted STS scores, explaining 12 percent of the variance in STS scores. Table 7 displays these results.

Table 6
Bivariate Demographic Analysis

| | <i>M</i> | <i>SD</i> | <i>df</i> | <i>t</i> |
|-------------------------|----------|-----------|-----------|----------|
| Gender | | | | |
| Male | 30.81 | 12.17 | | |
| Female | 30.73 | 12.52 | | |
| | | | 68 | .023 |
| Clinical Responsibility | | | | |
| Primary Care | 30 | 9.71 | | |
| Mental Health | 31.29 | 12.99 | | |
| | | | 65 | -.32 |

Table 7
Simple Regression Analysis of Demographic Variables

| | b (se) | β | <i>p</i> | <i>R</i> ² |
|-----------------------|-------------|---------|-------------|-----------------------|
| Age | -.053(.125) | -.052 | .675 | .003 |
| Years in field | -.071(.146) | -.06 | .628 | .004 |
| Current trauma impact | 3.4 (1.12) | .347 | .003 | .120 |

Multivariate Analysis

Research Question Three: Moderation between Exposure and STS

A regression analysis between exposure and STS was first conducted to establish the relationship between the independent and dependent variable. Exposure significantly predicted STS scores, $\beta = 2.97$, $t(68) = 2.05$, $p = .045$, explaining 6 percent of the variance in STS scores.

Empathy. Table 8 displays the regression analysis for exposure predicting STS moderated by empathy. Results of step one of the regression analyses revealed exposure to be significantly related to STS scores. Empathy was not significant in step one. When the interaction term (exposure x empathy) was added into the analysis in step two, exposure remained significant while neither empathy nor the interaction term were significant.

Emotional Separation. Table 9 displays the regression analysis for exposure predicting STS moderated by emotional separation. Step one of the regression analyses found exposure to no longer be significant while the main effect of emotional separation was significant. Results were not changed by the addition of the interaction term (exposure x emotional separation) in step two. Emotional separation remained significant. Neither exposure nor the interaction was significant.

Table 8***Regression analysis Exposure predicting STS moderated by Empathy***

| | Step 1 | | | | Step 2 | | | |
|-------------|-------------|---------|-------------|-------------|-------------|---------|-------------|-------------|
| | b (se) | β | <i>p</i> | R^2 | b (se) | β | <i>p</i> | R^2 |
| Exposure | .123 (.055) | .263 | .030 | | .141 (.058) | .304 | .017 | |
| Empathy | .160 (.122) | .156 | .194 | | .120 (.127) | .118 | .347 | |
| Interaction | | | | | .005 (.005) | .142 | .267 | |
| | | | | <i>.094</i> | | | | <i>.111</i> |

Table 9***Regression analysis Exposure predicting STS moderated by Emotional Separation***

| | Step 1 | | | | Step 2 | | | |
|-------------|--------------|---------|-----------------|-------------|--------------|---------|-----------------|-------------|
| | b (se) | β | <i>p</i> | R^2 | b (se) | β | <i>p</i> | R^2 |
| Exposure | .038 (.047) | .082 | .416 | | .035 (.047) | .075 | .458 | |
| ES | -1.66 (.213) | -.592 | <.001 | | -1.20 (.234) | -.561 | <.001 | |
| Interaction | | | | | -.005 (.007) | -.076 | .483 | |
| | | | | <i>.383</i> | | | | <i>.388</i> |

Post Hoc Analysis

As the above data analysis revealed emotional separation to be a significant main effect in predicting scores of STS, a post hoc regression analysis was conducted to examine which emotional separation items were significantly related to scores of secondary traumatic stress. A model was analyzed with all seven items of the Maintenance of Emotional Separation scale regressed on secondary traumatic stress. Three items were found to significantly predict STS scores. These items include: *I often get so emotionally involved with my patients problems that I*

lose sight of my own feelings (1)(reverse coded); After listening to a patient tell of a scary experience, I have a difficult time studying or working (6)(reverse coded); and, When the worries experienced by my patients concern me, I temporarily feel these worries but don't really get upset (7). Table 10 displays this analysis.

Table 10

Regression analysis Emotional Separation Items predicting STS

| | b (se) | β | p | R ² |
|---|--------------|---------|-----------------|----------------|
| Emotionally involved/lose sight of feelings (1) | -6.03 (5.63) | -.495 | .005 | |
| Feel sad after talk with depressed patient (2) | -2.17 (1.25) | -.191 | .087 | |
| Get involved patient's feelings/lose sight of self (3) | 2.63 (2.17) | .196 | .230 | |
| Patient describes problem do not get emotionally involved (4) | 1.02 (.80) | .126 | .211 | |
| Take patient's problems home (5) | 1.86 (1.29) | .180 | .155 | |
| Trouble working after listening to scary patient story (6) | -5.82 (1.40) | -.498 | <.001 | |
| Feel patient worries but don't get really upset (7) | -1.55 (.63) | -.221 | .017 | |
| | | | | .557 |

Summary

The purpose of this chapter was to delineate the results of the analyses for the described research questions. Results showed low levels of STS in the sample, although a small percentage did displays symptoms at a moderate to severe level. Current impact of personal trauma history was the only demographic factor to significantly predict STS scores. Neither empathy nor emotional separation were shown to moderate the relationship between exposure and STS.

However, emotional separation did present as a significant main effect in the prediction STS scores.

Chapter 5

DISCUSSION

This research examined aspects involved in the development of secondary traumatic stress (STS) in a sample of military primary and mental healthcare providers. The purpose of the study was to explore rates of STS in a sample of military providers as well as analyze demographic factors that may be related to the development of symptoms. This study also tested the mechanisms through which trauma is transferred. The relationship between exposure and STS was analyzed using both empathy and emotional separation as moderators of symptom development. The purpose of this chapter is to summarize and interpret the findings outlined in chapter four. This is followed by a description of the implications of results for practice and research. Recommendations for future research are also outlined, as well as the limitations of the study.

Research Question One: Prevalence of STS

Overall the participants in the sample were highly educated and experienced. The majority of participants reported having obtained at least a graduate degree. The sample was comprised of participants from a variety of educational backgrounds including medicine, social work, psychology and nursing. The overall sample scores indicated the sample to be empathetic and displayed high levels of emotional separation ability.

The first research question explored the prevalence of STS within the sample of military primary and mental health care professionals. Clearly the participants are indirectly exposed to trauma as a result of their work and may be at risk of experiencing STS symptoms. Although the overall scores reveal relatively low levels of STS in the sample, over half of the sample reported

endorsing at least one symptom of STS occurring within the last week. This indicates that although most participants would not meet the diagnostic criteria for STS, they are experiencing symptoms. Eight percent of the sample scores indicated moderate to severe symptomatology. The most frequently reported symptoms were numbing responses, trouble sleeping and intrusive thoughts. This is similar to findings by Bride (2007) in which the most frequently reported symptoms in a sample of social workers were intrusive thoughts, avoidance of reminders of clients and numbing responses. It is important to note that 41 percent of the sample reported experiencing no symptoms of STS.

STS scores in this sample do appear to be lower than what has been recorded in other samples, such as emergency room nurses (Dominguez-Gomez & Rutledge, 2009) and domestic violence workers (Slattery & Goodman, 2009), where 33 percent and 47 percent of samples met the criteria for STS and PTSD, respectively. However, these results are comparable to that of Alenkin, et al. (2011), where 40 percent of a sample of United States Department of Veterans Affairs (VA) social workers reported no or little symptoms of STS, and only a small percentage indicated severe symptomatology. Mean scores on the Secondary Traumatic Stress Scale (STSS) in this sample were almost exactly aligned with Bride (2007) (around 30); however, the higher levels of symptom severity demonstrated in Bride's sample of social workers was not visible in this sample.

Many factors may be contributing to the lower levels of STS reported in this sample. The first may be related to exposure to traumatic material. Many respondents reported having little or no clients with a diagnosis of PTSD. Only a third of the sample reported that at least half of their clients meet the criteria for PTSD. It is possible that participants in the sample are not working

with clients with trauma symptomatology. As only a small percentage active duty service men and women have combat experience, it is also possible that this particular hospital does not have a large traumatized clientele. Education and experience may also be related to the low levels of STS. This sample was both highly educated and experienced, both of which have been demonstrated to protective factors in the development of STS. Additionally, as many participants had knowledge of STS and its potential impact, professionals in the sample may have underreported symptoms in fear of the stigma which may come with high levels of STS.

The culture of working within the military system may also contribute to the low STS scores demonstrated within this sample. Although the staff of military hospitals includes individuals who currently, previously and never served in the military, the presence of that culture still remains apparent. There is a strong sense of pride, work ethic, strength, teamwork and duty within these institutions. This culture in itself may provide not only protections against occurrences such as STS, but also resilience in the face of what is often a difficult but rewarding work.

Although these findings are encouraging, they do suggest intervention may be needed within this population. Even low levels of STS may create difficulties in the development of the therapeutic relationship and negatively impact the health of the professional. Symptoms of STS may also be related to issues such as burnout, job satisfaction and turnover intention (Bride & Kintzle, 2010; Figley, 2005). Education and intervention at this point may help alleviate current symptoms and keep STS levels from rising. An increase in STS symptoms is a risk in this population as soldiers continue to return home and develop needs related to trauma exposure.

Research Question Two: Demographics and STS

The second research question assessed the impact demographics play in the development of STS symptoms. The demographics of age, gender and years in field were not related to STS scores. These results add to the already mixed findings apparent within the current literature on each factor (Brady, 2008; Chrestman, 1995; Ezra & Saar, 2006; Jonsson, Segesten & Mattsson, 2003). Significant differences were not found in those participants whose clinical responsibility were primary care and those participants who focused on mental health. Although counterintuitive, this finding suggests that type of exposure to client trauma may not be significantly related to the development of symptoms. Otherwise stated, whether or not the professional client relationship is therapeutic in nature may not be a factor in levels of exposure. This is similar to findings of Alenkin et al. (2011) who found exposure setting, when comparing inpatient and outpatient VA social workers, to be not significant in relation to STSS scores. These authors offer high rates of job satisfaction and field experience as possible explanations for such findings. It should be noted that in this study, the majority of participants were mental health professionals and therefore the comparison between primary care providers may be limited by the sample. Although these findings parallel that of Alekin, both on military professionals, they warrant further inquiry. Given that research in other populations have found professional setting to be a factor related to STS (Badger, Royse & Craig 2008; Dane & Chachkes, 2001), these finding should be replicated in larger samples and in both military professional populations and differing populations before defining the relationship between type of exposure and STS.

This study is the first to redefine how personal trauma history is examined in relation to STS. Instead of exploring personal trauma history as a dichotomous yes or no variable, or looking at type of trauma, this research operationalized the variable as current impact of past trauma. More simply stated, the variable was measured not by if a participant had a personal trauma history or what that history was, but how much that trauma currently impacted the participant. In this sample, current impact of past trauma significantly predicted STS scores and also explained a significant proportion of the variance. The significance of personal trauma history and STS has had mixed results within the literature (Benatar, 2000; Creamer & Liddle, 2005; Cunningham, 2003; Kassam-Adams, 1995; Pearlman & MacIan, 1995; Slattery & Goodman, 2009). However, these mixed results may be attributed to the lack of operationalization of the variable and the lack of valid universal measure. This research looks to contribute to the development of exploring personal trauma history by providing a new way of defining the variable. As these results suggest, the influence of personal trauma history may not be related to whether a participant has experienced a trauma, but whether s/he has adequately coped with that trauma. This is an important finding as individuals who experience a personal trauma are often drawn to helping professions (Stephen & Linley, 2008).

Research Question Three: Moderation between Exposure and STS

The final research question in the study explored the mechanisms through which trauma is transferred by examining the relationship between exposure and STS, moderated by empathy and emotional separation. Although empathy is often depicted as the mechanism through which trauma is transferred, findings of this study found no relationship between empathy and STS scores. Not only was empathy not found to moderate the relationship between exposure and STS,

the two variables failed to demonstrate an even correlational relationship. In this sample, empathetic engagement had no bearing on the development of STS symptoms. These results appear to contradict those of MacRitchie and Leibowitz (2010) who found empathy to moderate the relationship between exposure and STS. As noted earlier, MacRitchie and Leibowitz (2010) used previous direct exposure to non-work related trauma (i.e., personal trauma) as the measure of exposure. Although the authors concluded empathy moderated the relationship between exposure and STS, it should be stated that the moderation was between exposure to nonwork-related trauma, not client-related trauma. Results of the current study are similar to findings prevalent in the literature in which a relationship between empathy and STS was not found (Badger, Royse & Craig, 2008; Brady, 2008; Thomas & Otis, 2010).

Findings of this study point to the need to re-examine the relationship between empathy and STS. Although these results question the transfer of trauma as we now define it, they are also encouraging as empathy is crucial in the development of therapeutic relationships. A significant relationship between empathy and STS may discourage the development and/or use of highly empathetic skills in practitioners. Figley (1995) has suggested that empathy opens professionals to imagining and feeling client trauma and therefore creates a severe vulnerability to STS. It is important to note that while research for the most part has appeared to refute the claim that trauma is transferred through empathetic engagement, empathy may still play a part in how we become vulnerable to secondary exposure. As practitioners open up with and empathize with clients, an atmosphere is created where professionals are exposed to client trauma. However, it appears as though what is done with that exposure, and the feelings associated with it after the empathetic engagement occurs, that creates the real susceptibility to the development of STS.

Results of the second moderation regression analysis, examining the relationship between exposure and STS moderated by emotional separation, revealed unexpected results. Although emotional separation did not moderate the relationship between exposure and STS, emotional separation did have a strong relationship with STS scores. Contrary to the research question proposed in this study, emotional separation was found to have a strong main effect on STS. Emotional separation was found to significantly predict STS score. This means high levels of emotional separation were related to lower STS scores. In fact, emotional separation was so strongly related to STS that when entered into a regression analysis with exposure, levels of exposure were no longer significant. Findings of this research provide significant support to previous research done by Badger, Royse and Craig (2008) and Thomas and Otis (2010), who also concluded emotional separation to be associated with a reduction in STS and found little relationship between empathy and STS. This study will add to the limited but growing body of empirical work demonstrating the significance of emotional separation as key in the protection against the development of STS.

These results provide considerable insight into how the transfer of trauma from primary to secondary exposure may occur. Emotional separation is defined as an individual's ability to emotionally differentiate from another while being empathic (Corcoran, 1982). Findings of this study suggest the development of STS is most dependent on a professional's ability to emotionally separate a client's experience from his or her own during the process of empathetic engagement. Although it was unexpected that exposure to client trauma became no longer significant with the addition of emotional separation, this is an encouraging finding. Levels of exposure are often related to factors in which practitioners have very little control, such as

caseload and high levels of client trauma. Results of this study suggest that with the ability to emotionally separate client trauma high levels of exposure will not factor into the development of STS symptoms.

As the importance of emotional separation in the development of STS has been demonstrated in this study, it may also provide insight into the low levels of STS seen in this military health care sample. Overall, participants reported high levels of ability in emotionally separating client and personal experience. Considering these high levels and the subsequent findings on emotional separation, it would be expected for the sample to display low levels of STS. The post hoc analysis of emotional separation and STS revealed factors of emotional separation significantly related to STS scores. Three items were found to be most related to the ability to separate client emotions and the development of STS symptoms. The first involved losing sight of personal feelings due to high emotional involvement with patient problems. The second item was difficulty concentrating after listening to a patient describe a scary experience. The last significant item involved feeling the worries of clients to the point of personal upset. These results suggest that participants who get highly involved with client emotions, lose the ability to concentrate due to client trauma experience, and get upset by feeling client worries are most susceptible to the development of STS.

Implications for Practice

This research provides new insight into the phenomenon of STS and the transfer of trauma. The analysis of the empathy and emotional separation models and the demonstrated strong relationship between STS and emotional separation allow for a more comprehensive understanding of not only the development of STS, but the defense against it. STS has been

hypothesized to have deleterious effects on the competency of client care, burnout, physical health, turnover intention, and job satisfaction. These are impacts seen at the personal, professional and organizational levels. With an enhanced understanding of STS comes improved education for professionals exposed to client trauma.

Findings of this study do suggest the need for intervention for military professionals. Although overall STS symptoms were low in the sample, participants were experiencing symptoms. Furthermore, a small percentage of the sample was experiencing moderate to high levels of STS. Education and intervention can be used to reduce these symptoms. Educating military professionals on the development of STS symptoms and the consequences of those symptoms can provide the ability to recognize symptoms in the self and others. Also essential is the development of available resources for professionals for assistance in the management of symptoms. These same resources may be utilized as a source of protection. Organizational factors, such as the promotion of supervision, peer support and the processing of difficult cases, will not only reduce STS, but may also impact other job-related outcomes such as stress, burnout, and job satisfaction. Implications of study findings include the need for the implementation of such education and resources within the military health care system.

Throughout the study of STS, high levels of empathy have been conceptually associated with the development of symptoms. This relationship has often been difficult to define without attaching a negative consequence to empathetic engagement – a fundamental process within the therapeutic relationship. The lack of empirical support in this study for this hypothesized relationship is encouraging as practitioners may no longer feel the need to disengage empathetically in order to protect their own physical and mental health.

The most important outcome in this study and implication for practitioners is the significance of emotional separation. Although many factors have been shown to be related to STS, none have had the consistency of influence as that of emotional separation. Educating practitioners on how to develop such abilities and the importance of maintaining emotional distance from client experience may prove to be the most important factor in providing defense against STS.

Implications for Research

This study was the first to use the Secondary Traumatic Stress Scale (STSS; Bride, 2004) on a sample of military healthcare professionals. The scale demonstrated strong reliability and is therefore suitable for further use on this population. The STSS was utilized in this research as a single score measure of the overall construct of STS. It should be noted that the three subscales measuring intrusion, avoidance and arousal were not used in the study. This three-symptom cluster conceptualization of posttraumatic stress disorder (PTSD) has come under scrutiny in the literature (Cox, Mota, Clara & Asmundson, 2008; Lancaster, Melka, & Rodriguez, 2009) as factor analytic studies have failed to provide support for the three-factor structure (Asmundson, Stapleton, & Taylor, 2004; Elklit, Amrour, & Shelvin, 2010). Without analytical support for a three-cluster model of STS, it was decided STS would be best measured as a single construct until an empirically supported conceptualization has been developed.

The Maintenance of Emotional Separation Scale (MES; Corcoran, 1982), a measure which has yet to be widely utilized, adequately measured the ability to emotionally separate from client experience as evidenced by strong reliability in this sample. The MES has wide application to a variety of research questions. It should also be noted that the Interpersonal Reactivity Index

(IRI; Davis, 1983) also demonstrated reliability in measuring empathy within this sample population.

Two new measures commonly associated with research on STS were developed for this research. The first measured exposure by asking participants to report the number of clientele who meet the criteria for PTSD. This was an effort to assess exposure through a trauma specific measure. The second measured personal trauma history by quantifying current emotional impact of a past personal trauma history. This allowed for exploring the relationship between a personal trauma history and STS beyond having a personal trauma or what that personal trauma was. Both of these measures are new to the STS literature.

The moderation analysis described in this study, although non-significant, does provide an example of a more powerful and extensive way of investigating the relationships involved in the transfer of trauma. Multiple regression analyses are most often used in STS research. Demonstrating a moderator or mediator relationship may offer specific insights into the actual mechanisms at play during the development of STS.

Implications for Social Work Education, Practice and Research

Although this research focused on military professionals, the findings do have applications to the field of social work. Military and VA hospitals are the largest employer of social workers and train the largest number of social work students (Manske, 2006). Therefore, the practice implications outlined above impact a large number of social workers. Beyond that of military social work, practitioners in a variety of social work fields, such as domestic violence, substance abuse, child protective services, sexual assault services and hospital social workers are often exposed to client trauma. Social work education has much progress to make in preparing

students for the impact of working with traumatized populations. Results of this study point to the need to further develop social work curriculum on the importance of maintaining professional, emotional boundaries between personal and client experience.

The findings of the significance of the current impact of past trauma history may have important implications for social work education. Social work educators are often faced with students in the classroom who are still coping with a past personal trauma, often to the detriment of their education and their future as a social worker. The field of social work is faced with questions about admitting such students to programs. Is it ethical to create gatekeeping mechanisms which may identify such students before they are admitted to social work programs? Questions surrounding such issues will continue to be asked. Through a continued and better understanding of the impact of personal trauma history we may be better equipped to answer such questions.

The concept of emotional separation has yet to gain momentum within the literature in any field. Social work research, practice and education have the opportunity to adopt this notion and to build a theoretical framework for it within our profession. The importance of educating current and future practitioners on emotional separation may be more relevant for social workers than any other profession. Before such curriculum can be developed, however, an empirical body of work must be established within the literature. Not only should social work research concentrate on continuing to demonstrate the relationship between emotional separation and positive outcomes, research must examine the complexities of how such abilities are developed, maintained and taught.

Limitations

As with any research, this study has certain limitations that must be considered. Self-report surveys are subject to participant's ability to recall information and willingness to provide accurate information on sensitive topics. The latter may be of particular importance in this study as most participants were highly educated and aware of the implications of high symptomatology of STS. Although the sample was inclusive as it included participants from different genders, ethnicities, ages and professional backgrounds, it was from two military hospitals which may limit the generalizability of the results to the larger population of military professionals. Also limiting the generalizability of results is the small sample size. The small sample size also limited the statistical power of the research methods used to analyze the results. This means non-significant variables found in this study may have resulted from a lack of statistical power rather than a lack of a statistical relationship.

The site used for data collection also created certain limitations. One military hospital utilized for data collection was a relatively new facility. Some participants had transferred from the old facility, while others were new to the hospital. As new departments were also created, some caseloads and clientele were still in the process of being developed which may have created limitations in measurement of study variables. Data collection procedures took place soon after the transfer, which was described as challenging and overwhelming. This likely attributed to the lower than expected response rate as some department heads were unwilling to participate or did not respond to study invitation.

A few measurement limitations must also be noted. The measure of both exposure and personal trauma history were created to more accurately operationalize the variables, neither has

been used in previous research nor have the reliability of such measures been established. Lastly, this research was able to demonstrate significant relationships between several variables. As the design of this study was not experimental, it is important to note that these findings are not able to make inferences to causal relationships between related variables.

Recommendations for Future Research

As the military healthcare demands continue to grow and expand, so should research in understanding the potential impacts of providing professional support to military service men and women. Future research should continue to explore prevalence of STS in larger and differing military samples, especially those hospitals that specialize in combat-related trauma and professionals are highly exposed to client trauma. If continued research in this population demonstrates low levels of STS, studies should explore what protective factors might be contributing to these low levels in military professionals that could be applied to other helping populations. Factors, such as job satisfaction, turnover intention and burnout, should also be explored within this population. In addition to these, future research should also look toward examining not only the challenges of this work, but also the rewards that come with serving our country's military service men and women. Little has been done to explore this potential positive impact.

Future research should also continue in the study of STS and the related concepts discussed throughout this work. Research should continue to operationalize and develop valid measures of exposure. Completion of confirmatory factor analyses using common measures of exposure items could assist in the development of a reliable measure. Although variables such as caseload and work hours are often used to measure exposure, it is suggested that researchers

move toward trauma-related exposure items. Examples of such items include: percent of clients experiencing symptoms of PTSD, percent of client with a diagnosis of PTSD, hours spent in direct practice with traumatized clients, percent of clients experiencing suicide ideation, percent of clients attempted suicide and percent of clients completed suicide. Until such measure is developed, STS research including exposure will continue to be limited.

This study introduced a new way of operationalizing personal trauma history by exploring the current impact of personal trauma on current functioning as opposed to a dichotomous definition of having or not having a personal trauma. Additionally, when measured in these terms, personal trauma history was significantly related to STS scores. Future research should consider this application of measuring personal trauma and this finding should be replicated in additional populations. Research on the current impact of personal trauma history and STS may also explore this relationship in terms of coping mechanisms. Although the use of coping mechanisms is prevalent within the trauma literature, it may be relevant to examine differences in practitioners based on current impact of past trauma, STS scores and the mechanisms used to move past the trauma experience. More simply stated, how are practitioners still coping with a personal trauma history different than those who report low levels of current impact?

STS, job satisfaction, and burnout are concepts often discussed in relation to self-care. Self-care is described as essential for well-being and important in social work and trauma practice. Despite this, very little has been done empirically to not only demonstrate the importance of self-care, but also to operationalize what it means to participate in self-care. Future

research must begin to explore such issues so as to provide an understanding of how to educate and implement self-care initiatives.

Research described here should also be replicated in a larger sample. Not only would this address many of the issues described within the limitations, but similar findings in a repeated study would validate many of the conclusions expressed here. The relationship between empathy, emotional separation and STS should continue to be explored. Although research has begun to refute the role that empathy plays in the transfer of trauma, this finding should continue to be replicated before empathy is removed from the conversation. Additionally, research may begin to re-conceptualize the role that empathy plays in the development of STS. Emotional separation must enter the empirical dialogue surrounding the transfer of trauma and the development of STS. Research should continue to demonstrate a relationship between emotional separation and STS and explore the meaning of that relationship. Future studies should closely examine the intricacies of emotional separation so that educators can have a better understanding of how to teach professionals to develop such abilities.

In a sense, this research pushes for the additional advanced testing of secondary traumatic stress. It is time for empirical work on STS to move past that of the common variables often associated with research in this area towards a more intricate understanding of the processes at play during the transfer of trauma. It is only through an understanding of STS mechanisms that we may really protect, treat and educate trauma professionals.

Summary

The purpose of this dissertation was to explore the prevalence of STS in military professionals as well as provide insight into how the transfer of trauma occurs. The findings

suggest participants in this sample are experiencing STS but at low levels. Common demographics such as gender, experience and professional role were not related to STS scores. The current impact of a personal trauma history however was significantly related to STS. It was also demonstrated that emotional separation, not empathy, appeared to be most directly related to the development of STS. Participant's ability to emotionally separate themselves from the trauma of client experienced was most significantly related to STS symptoms. Participants who displayed difficulty in this task had higher STS scores than their counterparts. Findings of the study suggest the need for education and access to intervention services for all military professionals who may experience such outcomes. It is also suggested that emotional separation be furthered examined in not only its relationship to STS, but into how the ability to emotionally separate can be taught and developed in hopes to advance current knowledge for practitioners, researchers and educators.

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APPENDICIES

APPENDIX A
COVER LETTER

Dear Military Healthcare Provider:

You are invited you to participate in a research study entitled Secondary Traumatic Stress Among Military Healthcare Providers. The purpose of the study is to estimate the prevalence of and risk and protective factors related to secondary traumatic stress in military healthcare providers.

Your participation will involve completing the attached survey and should only take about 20-30 minutes. Your involvement in the study is voluntary, and you may choose not to participate or to stop at any time without penalty or loss of benefits to which you are otherwise entitled. Participant names will not be collected and all survey information will remain anonymous. The results of the research study may be published, but your name will not be used. In fact, the published results will be presented in summary form only. Your identity will not be associated with your responses in any published format.

The findings from this project may provide information on the prevalence, risk and protective factors for secondary traumatic stress in military health care providers. By participating in this study, you may benefit from a sense of satisfaction for having contributed to the advancement of knowledge regarding a topic that impacts your professional activities. There are less than minimal risks or mild discomforts associated with this research which include experiencing discomfort around answering study questions. If you should feel such discomfort, please discontinue completion of the survey and contact a mental health professional or one of the investigators listed below.

If you have any questions about this research project, please feel free to contact Dr. Brian Bride at (706) 542-5425; bbride@uga.edu, or Dr. Jeffery Yarvis, at 202-782-8037, jyarvis@usuhs.mil. Questions or concerns about your rights as a research participant should be directed to The Chairperson, University of Georgia Institutional Review Board, 612 Boyd GSRC, Athens, Georgia 30602-7411; telephone (706) 542-3199; email address irb@uga.edu.

By completing and returning this questionnaire in the envelope provided, you are agreeing to participate in the above described research project.

Thank you for your consideration! Please keep this letter for your records.

Sincerely,

Brian Bride, PhD
Associate Professor
School of Social Work
The University of Georgia

Jeffrey S. Yarvis, Ph.D., LCSW, BCD
LTC, MS Chief, Behavioral Health Service
Walter Reed Army Medical Center

APPENDIX B
STUDY SURVEY

SECTION 1

These first questions will be used to provide background information for the purpose of analysis. This information cannot be linked to you. The remaining items will provide information about you and your work activities.

1. What is your gender?
 - a. Male
 - b. Female

2. What race/ethnicity do you consider yourself?
 - a. Black/African American
 - b. Asian
 - c. American Indian
 - d. White/Caucasian
 - e. Native Hawaiian/Other Pacific Islander
 - f. Other: _____

3. Are you Hispanic or Latino/a?
 - a. Yes
 - b. No

4. What is your marital status?
 - a. Married
 - b. Divorced/Separated
 - c. Widowed
 - d. Single (never married)

5. What is your current age?
 - a. _____

6. Please mark the category that includes your annual salary?
 - a. Under \$25,000
 - b. \$25,001 to \$45,000
 - c. \$45,001 to \$65,000
 - d. \$65,001 to \$85,000
 - e. More than \$85,000

7. What is the highest level of education you have completed?
- Less than high school
 - High school diploma
 - Associates degree
 - Bachelors degree
 - Master's degree
 - Medical Doctorate (*please circle* – M.D. or D.O.)
 - Other professional doctorate (i.e. Psy.D./DSW/DNP – *please list*): _____
8. In what discipline was your highest degree?
- _____
9. In what field are you licensed? (If you are licensed in more than one field, please indicate the one that is most relevant to your current position.)
- Medicine
 - Nursing
 - Psychology
 - Social Work
 - Not licensed
 - Other: _____
10. Which of the following is your primary clinical responsibility?
- Primary Care
 - Mental Health
11. What is your military history?
- Currently in the military
 - Number of Years: _____
 - Branch: _____
 - Not currently in military but previously served
 - Number of Years: _____
 - Branch: _____
 - Never in the military
12. Are you a contracted health professional?
- Yes
 - No
13. If yes, how long have you been under contract?

- a. _____
14. If yes, what type of contract professional?
- Permanent
 - Temporary
15. Are you a government employee (e.i., DA, GS, NSP)?
- Yes
 - No
16. If you have combined service in the military, as a contract professional or as a government employee, please indicate the number of years of combined experience?
- a. _____
17. How long have you been in your current position?
- a. _____
18. Altogether, how long have you been working in your particular field (i.e. medicine, nursing, social work)?
- a. _____
19. What is the likelihood that you will be in your current position **1 year** from now?
- | | | | | | |
|--------------------------|---|---|---|---|--------------------|
| Not at all likely | | | | | Very likely |
| 1 | 2 | 3 | 4 | 5 | |
20. What is the likelihood that you will be in your current position **5 years** from now?
- | | | | | | |
|--------------------------|---|---|---|---|--------------------|
| Not at all likely | | | | | Very likely |
| 1 | 2 | 3 | 4 | 5 | |
21. How many **hours** do you work in a typical week?
- a. _____
22. In a typical week, what percentage of your work time is spent in each of the following activities?
- Direct client/patient care _____%
 - Administration _____%
 - Research _____%
 - Outreach _____%
 - Other: _____%

23. What is the size of your current caseload?

a. _____

24. How many hours of supervision do you receive each week?

a. _____

25. On a scale of **1 (poor)** to **5 (excellent)**, how would you rate the quality of the supervision you receive?

| | | | | | |
|-------------|---|---|---|---|------------------|
| Poor | | | | | Excellent |
| 1 | 2 | 3 | 4 | 5 | |

26. On a scale of **1 (never)** to **5 (very often)**, how often do you discuss the difficulties of your job with your *supervisor*?

| | | | | |
|--------------|---|---|---|-------------------|
| Never | | | | Very often |
| 1 | 2 | 3 | 4 | 5 |

27. On a scale of **1 (never)** to **5 (very often)**, how often do you discuss the difficulties of your job with your *peers*?

| | | | | |
|--------------|---|---|---|-------------------|
| Never | | | | Very often |
| 1 | 2 | 3 | 4 | 5 |

28. On a scale of **1 (never)** to **5 (very often)**, how often do you debrief difficult cases with your *supervisor*?

| | | | | |
|--------------|---|---|---|-------------------|
| Never | | | | Very often |
| 1 | 2 | 3 | 4 | 5 |

29. On a scale of **1 (never)** to **5 (very often)**, how often do you debrief difficult cases with your *peers*?

| | | | | |
|--------------|---|---|---|-------------------|
| Never | | | | Very often |
| 1 | 2 | 3 | 4 | 5 |

30. On a scale of **1 (never)** to **5 (very often)**, how often do you discuss the positive aspects of your job with your *supervisor*?

| | | | | |
|--------------|---|---|---|-------------------|
| Never | | | | Very often |
| 1 | 2 | 3 | 4 | 5 |

- a. How many times? _____
 b. How long ago was the most recent deployment? _____
 c. What was your total length of OEF deployment (in months)? _____
40. Have you been deployed for OIF?
- a. Yes
 b. No
41. If yes,
- a. How many times? _____
 b. How long ago was the most recent deployment? _____
 c. What was your total length of OIF deployment (in months)? _____
42. Have you been deployed for other operations to include operations other than war such as Haiti, Bosnia, Kosovo, the Sinai, etc?
- a. Yes
 b. No
43. If yes, please list name and length of other deployments: _____
44. Have you experienced combat situations?
- a. Yes
 b. No
45. Have you experienced a traumatic event?
- a. Yes
 b. No
46. On a scale of **1 (not at all)** and **5 (very)**, how negatively did that traumatic event affect you in the *weeks that followed*?
- | | | | | | |
|-------------------|---|---|---|---|-------------|
| Not at all | | | | | Very |
| 1 | 2 | 3 | 4 | 5 | |
47. On a scale of **1 (not at all)** and **5 (very)**, how negatively does that traumatic event *currently* affect you?
- | | | | | | |
|-------------------|---|---|---|---|-------------|
| Not at all | | | | | Very |
| 1 | 2 | 3 | 4 | 5 | |
48. Have you ever been the victim of sexual assault?

- _____ %
- e. Experience symptoms of a Mood Disorder, but do not meet the diagnostic criteria (i.e. subclinical)? _____ %
- f. Have expressed thoughts and feelings associated with suicide ideation...
- i. In the past year? _____ %
 - ii. In the past month? _____ %
 - iii. In the past week? _____ %
- g. Have unsuccessfully attempted suicide in the past year? _____ %
- h. Have completed a suicide in the past year? _____ %
- i. Are women? _____ %
- j. Are under the age of 25? _____ %
54. To the best of your knowledge, approximately what percentage of your caseload currently are receiving or need assistance in the following areas?
- a. Physical health/general medical care?
- Receiving _____ %
Need _____ %
- b. Dental care
- Receiving _____ %
Need _____ %
- c. V. A. Benefits
- Receiving _____ %
Need _____ %
- d. Employment/vocational issues
- Receiving _____ %
Need _____ %

- e. Housing/shelter needs
Receiving ____%
Need ____%
- f. Financial problems
Receiving ____%
Need ____%
- g. Legal problems
Receiving ____%
Need ____%
- h. Education
Receiving ____%
Need ____%
- i. Family/social problems
Receiving ____%
Need ____%
- j. Marital problems
Receiving ____%
Need ____%
- k. Domestic violence
Receiving ____%
Need ____%
- l. Anger management problems
Receiving ____%
Need ____%
- m. Aging Services
Receiving ____%
Need ____%
- n. Co-occurring psychiatric conditions
Receiving ____%
Need ____%
- o. Psychological/emotional problems
Receiving ____%
Need ____%

55. Looking specifically at mental health, to the best of your knowledge, about what percentage of your current caseload are receiving or need assistance with the following issues?

- | | |
|--------------------------------|-----------------|
| a. PTSD | Receiving ____% |
| | Need ____% |
| b. Anxiety | Receiving ____% |
| | Need ____% |
| c. Depression | Receiving ____% |
| | Need ____% |
| d. Alcohol Abuse or Dependence | Receiving ____% |
| | Need ____% |
| e. Drug Abuse or Dependence | Receiving ____% |
| | Need ____% |
| f. Suicidal Ideation | Receiving ____% |
| | Need ____% |

56. To your knowledge, what percentage of your current caseload is prescribed medication for mental health issues?

- a. _____

SECTION 2

The following is a list of statements made by persons who have been impacted by their work with traumatized clients. Read each statement then indicate how frequently the statement was true for you in the past **seven (7) days** by circling the corresponding number next to the statement.

NOTE: “Client” is used to indicate persons with whom you have been engaged in a helping relationship. You may substitute another noun that better represents your work such as consumer, patient, recipient, etc.

| | Never | Rarely | Occasionally | Often | Very Often |
|---|-------|--------|--------------|-------|------------|
| 1. I felt emotionally numb | 1 | 2 | 3 | 4 | 5 |
| 2. My heart started pounding when I thought about my work with clients. | 1 | 2 | 3 | 4 | 5 |
| 3. It seemed as if I was reliving the trauma(s) experienced by my client(s). | 1 | 2 | 3 | 4 | 5 |
| 4. I had trouble sleeping. | 1 | 2 | 3 | 4 | 5 |
| 5. I felt discouraged about the future. | 1 | 2 | 3 | 4 | 5 |
| 6. Reminders of my work with clients upset me. | 1 | 2 | 3 | 4 | 5 |
| 7. I had little interest in being around others. | 1 | 2 | 3 | 4 | 5 |
| 8. I felt jumpy. | 1 | 2 | 3 | 4 | 5 |
| 9. I was less active than usual. | 1 | 2 | 3 | 4 | 5 |
| 10. I thought about my work with clients when I didn't intend to. | 1 | 2 | 3 | 4 | 5 |
| 11. I had trouble concentrating. | 1 | 2 | 3 | 4 | 5 |
| 12. I avoided people, places, or things that reminded me of my work with clients. | 1 | 2 | 3 | 4 | 5 |
| 13. I had disturbing dreams about my work with some clients. | 1 | 2 | 3 | 4 | 5 |
| 14. I wanted to avoid working with some clients. | 1 | 2 | 3 | 4 | 5 |
| 15. I was easily annoyed. | 1 | 2 | 3 | 4 | 5 |
| 16. I expected something bad to happen. | 1 | 2 | 3 | 4 | 5 |

25. _____ When I'm upset at someone, I usually try to "put myself in his shoes" for a while.
26. _____ When I am reading an interesting story or novel, I imagine how I would feel if the events in the story were happening to me.
27. _____ When I see someone who badly needs help in an emergency, I go to pieces.
28. _____ Before criticizing somebody, I try to imagine how I would feel if I were in their place.

SECTION 4

For each item, please circle how true the statement is for you on a scale of 1 (completely false) to 5 (completely true).

1. I often get so emotionally involved with my patients problems that I lose sight of my own feelings.

| | | | | | | |
|----------------------------|---|---|---|---|--|---------------------------|
| Completely false for me | | | | | | Completely true for me |
| 1 | 2 | 3 | 4 | 5 | | 6 |

2. When I talk with a depressed patient, I feel sad myself for quite some time after the conversation.

| | | | | | | |
|----------------------------|---|---|---|---|--|---------------------------|
| Completely false for me | | | | | | Completely true for me |
| 1 | 2 | 3 | 4 | 5 | | 6 |

3. Sometimes I get so involved in my patient's feelings, I seem to lose sight of myself for a while.

| | | | | | | |
|----------------------------|---|---|---|---|--|---------------------------|
| Completely false for me | | | | | | Completely true for me |
| 1 | 2 | 3 | 4 | 5 | | 6 |

4. When patient describe an emotional problem, I am in touch with their feelings without becoming too emotionally involved.

| | | | | | | |
|----------------------------|---|---|---|---|--|---------------------------|
| Completely false for me | | | | | | Completely true for me |
| 1 | 2 | 3 | 4 | 5 | | 6 |

5. I usually take the problems of my patients home with me.

| | | | | | | |
|----------------------------|---|---|---|---|--|---------------------------|
| Completely false for me | | | | | | Completely true for me |
| 1 | 2 | 3 | 4 | 5 | | 6 |

6. After listening to a patient tell of a scary experience, I have a difficult time studying or working.

| | | | | | | |
|----------------------------|---|---|---|---|--|---------------------------|
| Completely false for me | | | | | | Completely true for me |
| 1 | 2 | 3 | 4 | 5 | | 6 |

7. When the worries experienced by my patients concern me, I temporarily feel these worries but don't really get upset myself.

| | | | | | | |
|----------------------------|---|---|---|---|--|---------------------------|
| Completely false for me | | | | | | Completely true for me |
| 1 | 2 | 3 | 4 | 5 | | 6 |

SECTION 5

The following are 9 statements of job-related feelings. Please read each statement carefully and decide if you ever feel this way *about your job*. If you have never had this feeling, write a “0” (zero) before the statement. If you have had this feeling, indicate how often you feel it by writing the number (from 1 to 6) that best describes how frequently you feel that way.

HOW OFTEN:

| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
|-------|-------------------------------|-------------------------|------------------------|-------------|-----------------------|----------|
| Never | A few times a year or less | Once a month or less | A few times a month | Once a week | A few times a week | Everyday |

1. _____ I feel emotionally drained from my work
2. _____ I feel fatigued when I get up in the morning and have to face another day on the job.
3. _____ Working with people all day is really a strain for me.
4. _____ I feel burned out from my work.
5. _____ Working directly with people puts too much stress on me.
6. _____ I feel frustrated by my job.
7. _____ I feel used up at the end of the workday.
8. _____ I feel I’m working too hard on my job.
9. _____ I feel like I’m at the end of my rope.

SECTION 6

Over the last two weeks, how often have you been bothered by any of the following problems. If you have not experienced the problem, write a “0” (zero) before the statement. If you have experienced the problem, indicate how often by writing the number (from 1 to 3).

| Not at all | Several days | More than half the days | Nearly every day |
|------------|--------------|-------------------------|------------------|
| 0 | 1 | 2 | 3 |

1. _____ Little interest or pleasure in doing things.
2. _____ Feeling down, depressed or hopeless.
3. _____ Trouble falling or staying asleep, or sleeping too much.
4. _____ Feeling tired or having little energy.
5. _____ Poor appetite or overeating.
6. _____ Feeling bad about yourself – or that you are a failure or have let yourself or your family down.
7. _____ Trouble concentrating on things, such as reading the newspaper or watching television.

8. _____ Moving or speaking so slowly that other people could have noticed. Or the opposite – being so fidgety or restless that you have been moving around a lot more than usual.
9. _____ Thoughts that you would be better off dead, or of hurting yourself in some way.

SECTION 7

Please answer the following questions using the following scale.

| | | | |
|-----------------|-----------|-------|--------|
| Rarely or never | Sometimes | Often | Always |
| 1 | 2 | 3 | 4 |

1. _____ Do you feel keyed up, on edge?
2. _____ Do you feel that something terrible is going to happen?
3. _____ Are you worrying about your present state?
4. _____ Do you feel you have control of your life?
5. _____ Can you relax?
6. _____ Do you suffer from back pain, neck pain and/or headache?
7. _____ Do you sweat a lot or suffer from palpitations?
8. _____ Have you been irritable?
9. _____ Do you suffer from dizziness or faintness?

SECTION 8

Please answer every question. Some questions may look like others, but each one is different. Please take the time to read and answer each question carefully by circling the item that best represents your response.

1. In general, would you say your health is:
 - a. Excellent
 - b. Very good
 - c. Good
 - d. Fair
 - e. Poor
2. Compared to one year ago, how would you rate your health in general now?
 - a. Much better now than a year ago
 - b. Somewhat better now than a year ago
 - c. About the same as one year ago
 - d. Somewhat worse now than one year ago

- e. Much worse now than one year ago
- 3. The following items are about activities you might do during a typical day. Does your health now limit you these activities? If so, how much?
 - a. Vigorous activities, such as running, lifting heavy objects, participating in strenuous sports.
 - i. Yes, limited a lot
 - ii. Yes, limited a little
 - iii. No, not limited at all
 - b. Moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf?
 - i. Yes, limited a lot
 - ii. Yes, limited a little
 - iii. No, not limited at all
 - c. Lifting or carrying groceries.
 - i. Yes, limited a lot
 - ii. Yes, limited a little
 - iii. No, not limited at all
 - d. Climbing several flights of stairs.
 - i. Yes, limited a lot
 - ii. Yes, limited a little
 - iii. No, not limited at all
 - e. Climbing one flight of stairs.
 - i. Yes, limited a lot
 - ii. Yes, limited a little
 - iii. No, not limited at all
 - f. Bending, kneeling or stooping.
 - i. Yes, limited a lot
 - ii. Yes, limited a little
 - iii. No, not limited at all
 - g. Walking more than one mile.
 - i. Yes, limited a lot
 - ii. Yes, limited a little
 - iii. No, not limited at all
 - h. Walking several blocks.
 - i. Yes, limited a lot
 - ii. Yes, limited a little
 - iii. No, not limited at all
 - i. Walking one block.
 - i. Yes, limited a lot
 - ii. Yes, limited a little
 - iii. No, not limited at all
 - j. Bathing or dressing yourself.
 - i. Yes, limited a lot
 - ii. Yes, limited a little
 - iii. No, not limited at all
- 4. During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of your physical health?

- a. Cut down the amount of time you spent on work or other activities?
 - i. Yes ii. No
- b. Accomplished less than you would like?
 - i. Yes ii. No
- c. Were limited in the kind of work or other activities?
 - i. Yes ii. No
- d. Had difficulty performing the work or other activities (for example, it took extra time)?
 - i. Yes ii. No
5. During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of any emotional problems (such as feeling depressed or anxious)?
 - a. Cut down the amount of time you spent on work or other activities?
 - i. Yes ii. No
 - b. Accomplished less than you would like?
 - i. Yes ii. No
 - c. Didn't do work or other activities as carefully as usual?
 - i. Yes ii. No
6. During the past 4 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbors, or groups?
 - a. Not at all
 - b. Slightly
 - c. Moderately
 - d. Quite a bit
 - e. Extremely
7. How much bodily pain have you had during the past 4 weeks?
 - a. Not at all
 - b. Slightly
 - c. Moderately
 - d. Quite a bit
 - e. Extremely
8. During the past 4 weeks, how much did pain interfere with your normal work (including both work outside the home and housework)?
 - a. Not at all
 - b. Slightly
 - c. Moderately
 - d. Quite a bit
 - e. Extremely
9. These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the past 4 weeks...
 - a. Did you feel full of pep?
 - i. All of the time
 - ii. Most of the time
 - iii. A good bit of the time
 - iv. Some of the time
 - v. A little of the time
 - vi. None of the time

- b. Have you been a very nervous person?
 - i. All of the time
 - ii. Most of the time
 - iii. A good bit of the time
 - iv. Some of the time
 - v. A little of the time
 - vi. None of the time
- c. Have you felt so down in the dumps nothing could cheer you up?
 - i. All of the time
 - ii. Most of the time
 - iii. A good bit of the time
 - iv. Some of the time
 - v. A little of the time
 - vi. None of the time
- d. Have you felt calm and peaceful?
 - i. All of the time
 - ii. Most of the time
 - iii. A good bit of the time
 - iv. Some of the time
 - v. A little of the time
 - vi. None of the time
- e. Did you have a lot of energy?
 - i. All of the time
 - ii. Most of the time
 - iii. A good bit of the time
 - iv. Some of the time
 - v. A little of the time
 - vi. None of the time
- f. Have you felt downhearted and blue?
 - i. All of the time
 - ii. Most of the time
 - iii. A good bit of the time
 - iv. Some of the time
 - v. A little of the time
 - vi. None of the time
- g. Did you feel worn out?
 - i. All of the time
 - ii. Most of the time
 - iii. A good bit of the time
 - iv. Some of the time
 - v. A little of the time
 - vi. None of the time
- h. Have you been a happy person?
 - i. All of the time
 - ii. Most of the time
 - iii. A good bit of the time

- iv. Some of the time
 - v. A little of the time
 - vi. None of the time
 - i. Did you feel tired?
 - i. All of the time
 - ii. Most of the time
 - iii. A good bit of the time
 - iv. Some of the time
 - v. A little of the time
 - vi. None of the time
10. During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting friends, relatives, etc.)?
- a. All of the time
 - b. Most of the time
 - c. A good bit of the time
 - d. Some of the time
 - e. A little of the time
 - f. None of the time
11. How TRUE or FALSE is each of the following statements for you?
- a. I seem to get sick a little easier than other people.
 - i. Definitely true
 - ii. Mostly true
 - iii. Don't know
 - iv. Mostly false
 - v. Definitely false
 - b. I am as healthy as anybody I know.
 - i. Definitely true
 - ii. Mostly true
 - iii. Don't know
 - iv. Mostly false
 - v. Definitely false
 - c. I expect my health to get worse.
 - i. Definitely true
 - ii. Mostly true
 - iii. Don't know
 - iv. Mostly false
 - v. Definitely false
 - d. My health is excellent
 - i. Definitely true
 - ii. Mostly true
 - iii. Don't know
 - iv. Mostly false
 - v. Definitely false
12. During the last 4 weeks:
- a. What is the average number of alcoholic drinks per day you have consumed?
 - b. What is the number of days on which you had at least one alcoholic drink?

- c. What is the number of days on which you had at 5 alcoholic drinks (if you are male) or 4 alcoholic drinks (if you are female) within a 2 hour period? ____
- d. How many days did you drink to the point of intoxication?