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CPSP as a Mediator of Resiliency and Coping Among Military Healthcare Personnel

Christopher P. Weidlich

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UNIVERSITY OF MIAMI

CPSP AS A MEDIATOR OF RESILIENCY AND COPING AMONG MILITARY HEALTHCARE PERSONNEL

By

Christopher P. Weidlich

A DISSERTATION

Submitted to the Faculty of the University of Miami in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Nursing

Coral Gables, Florida

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A dissertation submitted in partial fulfillment of
the requirements for the degree of
Doctor of Philosophy

CPSP AS A MEDIATOR OF RESILIENCY AND COPING AMONG
MILITARY HEALTHCARE PERSONNEL

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Military healthcare providers who were exposed to direct combat activity are shown to have an increased prevalence of depression and PTSD compared to healthcare providers reporting less frequent exposure. To address these issues, the Army leadership recognized the Care Provider Support Program (CPSP) as a way to improve the resiliency of healthcare providers. The purpose of this pilot longitudinal cohort study was to update what is currently known about the resiliency, coping, and compassion fatigue of Army and Civilian Nurses, LPNs, and Medics who treat wounded Soldiers and whether these factors can be improved over a sustained period of time. **Methodology:** A prospective cohort pilot study was implemented to investigate the long-term effects of resiliency training (CPSP) on Army and Civilian Nurses, LPNs, and Medics \((n = 93)\) an Army Medical Center. **Measures:** Prior to receiving and 30-days after receiving CPSP training, participants were administered the Connor-Davidson Resilience Scale (CD-RISC), the Ways of Coping Questionnaire (WCQ) by Lazarus and Folkman, and Professional Quality of Life (ProQOL) Questionnaire. Demographic information was also collected. Twenty-eight Army Nurses, LPNs, and Medics returned follow up questionnaires. **Results:** CPSP training did not affect resiliency scores on the CD-RISC or coping scores as measured by the WCQ. CPSP was significant in reducing burnout as measured by the ProQOL questionnaire, leading to decreased compassion fatigue. **Conclusions:** Based on the results of this study, CPSP training was effective in reducing burnout, which leads to
decreased compassion fatigue in a group of Army Nurses and Civilian, LPNs, and Medics.
Dedication

This dissertation is dedicated to:

1. To the Dean and Faculty of the University of Miami School of Nursing and Health Studies for supporting my pursuit of my doctorate.

2. To the mentors and leaders that I have encountered throughout my service in the United States Army over the past two decades.

3. My children, Morgan, Joshua, Ashleigh, and Lindsay (Lulu) for all of your love and support throughout the years.

4. And finally, to my best friend and the love of my life, Robin, who has traveled with me on our long and winding journey that has taken us to many states, several countries, and two deployments. You are my world. I love you.

Love,

Chris
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Disclaimer

The view(s) expressed herein are those of the author(s) and do not reflect the official policy or position of Brooke Army Medical Center, Womack Army Medical Center, the U.S. Army Medical Department, the U.S. Army Office of the Surgeon General, the Department of the Army, Department of Defense or the U.S. Government.
CHAPTER I

Introduction

Statement of the problem

The mental health problems of Soldiers in the Army have been reported widely in the media over the past several years (Carey, 2009; Hennessy-Fiske, 2009; Jaffee, 2011; Pittman, 2011; Zoroya, 2012). According to the Office of the Surgeon General (OTSG), the number of newly diagnosed cases of Posttraumatic Stress Disorder (PTSD) for Soldiers with a deployment history has increased from 2,931 in 2004 to 10,137 in 2008, highlighting a growing problem within the military (United States Army, 2010). Additionally, the Department of Defense (DoD) reports that between 2003 and 2008, those Soldiers who committed suicide had a comorbid mental health diagnosis, including anxiety disorders, major depression, mood disorders, substance abuse or other mental health conditions including PTSD (United States Army, 2010). The problem continues to worsen with suicides outpacing combat deaths in Afghanistan. In the first six months of 2012, the Pentagon reported that 154 Servicemembers were suspected of or confirmed to have committed suicide, compared to 127 Servicemembers killed in action in Afghanistan (Zoroya, 2012).

Military healthcare providers are not immune to these mental health conditions. With the United States being in a continuous state of war for over a decade, many healthcare providers in the military have deployed several times to care for severely
wounded Soldiers in both Iraq and Afghanistan. Given the duration of the wars coupled with weapons like improvised explosive devices (IEDs) and mortars, military healthcare providers have been exposed to gruesome injuries over time. According to Boone, Camarillo, Landry and DeLucia (2008) “Being in close proximity to the trauma of our patients, both geographically and emotionally, it should come as no surprise that Army healthcare providers can themselves experience some aspects of traumatization” (p. 57). Grieger and colleagues (2007) report in a recent study ($n=102$) that 9% of healthcare providers described symptoms of PTSD with an additional 5% citing symptoms of depression. Hickling, Gibbons, Barnett, and Watts (2011) examined the psychological effects of deployment on military healthcare providers who deployed to Iraq or Afghanistan by examining the secondary data source of the 2005 Department of Defense Survey of Health Related Behaviors among Active Duty Personnel. The results of the study demonstrated that military healthcare providers ($n=6,116$) had significant psychological symptoms to include anxiety, depression, PTSD and alcohol abuse. These studies are the few that exist that were designed to examine the prevalence of mental disorders of healthcare providers in modern-day warfare. To find additional research into the effect of combat stress and trauma on healthcare providers, one needs to review studies on personnel involved in the Vietnam War. To this end, Carson and colleagues (2010) examined whether witnessing death and injury could produce psychophysiological responsive PTSD in a sample of nurses ($n=38$) who served in the Vietnam War. The results indicated that witnessing death and serious injury to others is sufficiently stressful to cause PTSD in healthcare providers.
**Significance of the problem**

Modern warfare, however, is not comparable in one aspect to the Vietnam War. On a modern battlefield like Iraq or Afghanistan, frontlines are not well defined and there is a constant risk of injury or death from indirect fire from a mortar or rocket propelled grenade, direct fire from passing vehicles, or the risk of improvised explosive devices (IEDs) placed in roads (Carlsten & Hunt, 2007). It is plausible that the hypervigilance related to fear of injury or death affects the mental health of all Soldiers, including Army Nurses and Medics. Palgi, Ben-Ezra, Lange, & Essar (2009) examined the effects of prolonged exposure to combat on healthcare providers. Healthcare providers exposed to rocket attacks and exposure to casualties \( n = 109 \) one month after the 2006 war between Israel and Lebanon exhibited higher levels of depression and risk of developing PTSD than the general population. The researchers concluded that 24.3% of healthcare providers had symptoms of posttraumatic stress rising to the level of clinical concern and that 53.8% of hospital personnel were at risk for clinical depression. The results of this study indicate that under prolonged and extreme wartime environments, healthcare providers may not have the coping skills and resilience to address exposure to wartime injuries. Similar to the findings of Grieger and colleagues (2007), Palgi and colleagues (2009) noted that nurses appeared to develop depression and PTSD symptoms more frequently than do physicians.

Despite the paucity of current research, the military recognizes the stress-related needs of healthcare providers. In 2008, the Army Medical Department (AMEDD), in response to concerns by healthcare providers returning from Iraq and Afghanistan, issued an All Army Activities (ALARACT) message ordering the limitation of deployment time
of all physicians and nurses to the Central Command area of operations (Iraq and Afghanistan) to 6 months instead of the 12-month deployment cycle (Department of the Army, Office of the Surgeon General, 2008). The ALARACT message included the reason for this reduced deployment time as providers experiencing, “skill degradation, compassion fatigue, and retention issues” (p.1). The ALARACT message definition of compassion fatigue is a result of, “intense levels of care practiced in theater that rivals the busiest noncombat trauma centers in the world” (Department of the Army, Office of the Surgeon General, 2008, p.1). In August 2011, the Headquarters of the Department of the Army issued a new ALARACT ordering all Soldiers in the U.S. Army to begin a 9-month deployment cycle effective 1 January 2012 implementing shorter deployments Army-wide (Department of the Army, 2011).

Since its inception, several thousand healthcare providers at military medical facilities worldwide have received the Army’s Care Provider Support Program (CPSP) training. CPSP training is directed at improving the resiliency of Army healthcare providers by teaching coping skills aimed at reducing compassion fatigue and stress. However, there has been little research into the longer-term impact of the program. Adams, Camarillo, Lewis and McNish (2010) undertook a program evaluation using a convenience sample of 172 military healthcare professionals worldwide to complete surveys immediately after receiving CPSP training. The results of the study, which included completion of a 5-item Likert scale and open-ended questions regarding the quality of the training, showed that 97% of the participants found value in the training. The study, however, had some limitations in that the surveys reviewed were collected
only immediately after the training. As such, there is no information as to the long-term effects on resiliency that may occur in individuals who received CPSP training.

**Purpose of the study**

The purpose of this pilot longitudinal cohort study was to update what is currently known about the resiliency, coping, and compassion fatigue of Army and Civilian Nurses, LPNs, and Medics who treat wounded Soldiers and whether these factors can be improved over a sustained period of time. The study included three well-known measurements of resiliency, coping, and compassion fatigue, the Connor-Davidson Resilience Scale (Connor & Davidson, 2003), the Ways of Coping Questionnaire (Folkman & Lazarus, 2010), and the Professional Quality of Life Scale (Hudnall-Stamm, Blampied, Higson-Smith, Hudnall, Piland, & Stamm, 2010) respectively, to collect objective data and accurately examine the presence of emotional symptoms. The results of this study provide an essential first step in developing targeted treatments or implementing training or policy changes that result in better-adapted providers who can ultimately provide better care to the wounded. Improved interventions will enhance the resiliency levels and coping skills of these Army and Civilian Nurses, LPNs and Medics, decreasing compassion fatigue and improving the overall mental wellbeing of these healthcare providers. Results of this study might be used to further advance scientific knowledge on this topic by updating the understanding of the effects of war on Army Nurses and Civilian, LPNs and Medics. These advancements might have a further, more widespread impact, on healthcare providers who work not only in the military, but also in civilian hospitals and trauma centers, such as ambulance workers and firefighters,
potentially helping them cope with the trauma that occurs in United States cities every day. Additionally, any improvement in resiliency of healthcare providers will have an economic impact of fewer sick days, fewer hospitalizations, and improved patient care.

The project was implemented as a response to the TriService Nursing Research Program mission with respect to the research priority of Force Health Protection: Fit and Ready Force and addresses the Army Nurse Corps research priority of long-term health of military nurses (physiologic burden of caring). Examination of resilience scores pre-training as well as one month after mandatory training provide insight to the effectiveness of CPSP. The stressors of deployment may affect military nurses and resiliency training may be a tool to decrease the incidence of PTSD and other mental health conditions in this population. Additionally, the results of this project may be used to address the TSNRP mission of leadership, ethics, and mentoring, specifically the evaluation of interventions designed to enhance recruitment and increase retention of military nursing personnel. Improved resiliency in military nurses may lead to happier and healthier providers who can have an impact on patient care and retention.

Definitions of terms

**Adversity**

**Conceptual definition:** Adversity is defined in Merriam-Webster’s (2012) as, “a state, condition, or instance of serious or continued difficulty or adverse fortune” (p. 19).

**Operational definition:** Experiences that Army Nurses, LPNs, and Medics report that cause difficulty in their lives and may be related to deployment, work environment or personal life.
Compassion Fatigue

Conceptual definition: Fatigue is defined in Merriam-Webster’s (2012) as, “Manual or menial work performed by military personnel” and as “weariness or exhaustion from labor, exertion or stress (p.456). Compassion fatigue is further defined by Hudnall-Stamm and colleagues (2010) as the negative aspect of helping those who experience traumatic stress and suffering and is demonstrated by feelings such as exhaustion, frustration, anger and depression.

Operational definition: An individual’s score as measured by the Professional Quality of Life Scale (ProQOL) (Hudnall-Stamm, Blampied, Higson-Smith, Hudnall, Piland, & Stamm, 2010).

Coping

Conceptual definition: Coping is defined by Lazarus (1990) as, “constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person” (p. 99).

Operational definition: An individual’s score as measured by the Ways of Coping Questionnaire (WCQ) (Folkman & Lazarus, Mindgarden.com, 2010).

Perseverance

Conceptual definition: Perseverance is defined in Merriam-Webster’s (2012) as, “the action or condition of persevering; Steadfastness” (p. 924). Persevere is defined as, “to
persist in a state, enterprise, or undertaking in spite of counterinfluences, opposition, or discouragement” (Merriam-Webster, 2012, p. 924)

Operational definition: That which motivates individual Army Nurses, LPNs, and Medics to achieve their goals, overcome adversity, and become more resilient (Gillespie et al, 2007).

Resilience

Conceptual definition: The Merriam-Webster’s Dictionary (2012) definition of “resilience” is the “ability to recover from or adjust easily to misfortune or change” (p. 1060). The current definition of resilience as it relates to mental wellbeing is the process of coping with or overcoming exposure to adversity (Merideth et al., 2011).

Operational definition: An individual’s score as measured by the Connor Davidson Resilience Scale (CD-RISC) (Connor & Davidson, 2003).

Specific Aims and Hypotheses

The Specific Aims and Hypotheses for this study were:

Specific Aim 1: Examine the impact of the CPSP training on resiliency, coping, and compassion fatigue in a sample of Army and Civilian Nurses, LPNs, and Medics.

Hypothesis 1a: Resiliency will significantly increase as measured by the Connor-Davidson Resilience Scale (CD-RISC) from just prior to receiving CPSP training to 30-days post-CPSP training.
**Hypothesis 1b:** Coping levels will significantly increase as measured by the Ways of Coping Questionnaire (WCQ) from just prior to receiving CPSP training to 30-days post-CPSP training.

**Hypothesis 1c:** Compassion fatigue as measured by Professional Quality of Life (ProQOL) scale will decrease from just prior to receiving CPSP training to 30-Days post CPSP training.

**Specific Aim 2:** Explore the relationship among resiliency, coping, and compassion fatigue in a sample of Army and Civilian Nurses, LPNs, and Medics.
CHAPTER II

Literature Review

Resilience

The word resilient first appeared in literature in 1674 and comes from the Latin word, *resiliens*, the present participle of the word “*resilire*”, which means, “to jump back or recoil” (Merriam-Webster, 2012). Sociologists later defined the term in the late 20th century as “the ability of groups or communities to cope with external stresses and disturbances as a result of social, political, and environmental change” (Gallopín, 2006, p. 297). Funder and Block (1989) used the term, “ego-resilient” to describe what is now thought of as resilient individuals as, “competent, effectively intelligent, resourceful and adaptive under stress, varying their perceptual cognitive and behavioral strategies as a function of demands on a particular context” (p.1042). The mental health community began using the word “invulnerable” to describe children who were able to overcome severe circumstances and prevail (Rutter, 1993). Numerous professionals, including scientists in the field of ecology who adopted the term as a “measure of the persistence of systems and of their ability to absorb change and disturbance and still maintain the same relationships between populations or state variables” now use the term (Brand & Jax, 2007, p. 2),

Rutter (2006) has been at the forefront of developing the term resiliency to replace the term “invulnerable” to describe children overcoming adversity. Rutter (2007)
defined resiliency as, “the finding that some individuals have a relatively good psychological outcome despite suffering risk experiences that would be expected to bring about serious sequelae” (p. 1). Psychologists attempted to quantify resilience by defining it as, “one or no PTSD symptoms and recovery from trauma as two or more PTSD symptoms in the absence of the PTSD diagnosis” (Bonanno, Galea, Bucciarelli, & Vlahov, 2006 p. 182). However, Rutter (2007) cautioned that the concept could not be a specific observed trait as people may be resilient in relation to some environmental conditions but not others. To confront the broadness in definitions of resilience and pointing out that there appears to be a lack of a unifying theoretical framework due to the descriptive nature of the concept, Lightsey (2006) proposed a focal definition of “psychological resilience”. He defined this concept as a “measurable, modifiable psychological mechanism that enables successfully coping with everyday adversity” through an awareness of a person’s strengths or capacities that helps her or him cope with current and future stressors (p. 101).

Nurses began exploring the term resilience in 1996 when Dyer and McGuinness (1996) analyzed the concept of resilience, defining the antecedents, consequences, attributes and clinical relevance for nursing. Dyer and McGuinness identified adversity as the antecedent to resilience, that is, a person must be exposed to an adverse situation in order to become resilient. A second antecedent is the availability of one caring person accessible to a person developing resilience. Consequences include “a toughening effect, a sense of having overcome one situation so that active mastery of other situations is possible. Effective coping is the primary consequence” (Dyer & McGuinness, 1996, p. 277). Critical attributes identified were rebounding and carrying on, a sense of self,
determination, and a pro-social attitude. Dyer and McGuinness (1996) explained the clinical relevance for nursing lies in the protective factors of resilience as it can impact primary, secondary and tertiary prevention of mental health conditions. Enhancing protective factors in patients and health promotion is relevant in the profession of nursing.

Tusaie and Dyer (2004) explained how resilience is a vital attribute for today’s nurses, particularly with the current nursing shortage. They further explained that resilience can be viewed as, “a qualitative categorical construct or as a continuum of adaptation or success experiences,” stating that resilience can be discovered in two bodies of literature: psychological aspects of coping and physiological aspects of stress (Tusaie & Dyer, 2004, p.4). Additionally, as research regarding resiliency progresses, individual factors within persons are correlating with outcomes in resiliency measurements, allowing the opportunity to develop scales to measure resilience within people (Tusaie & Dyer, 2004).

The concept was further analyzed several years later by Earvolino-Ramirez (2007) who explored the protective factors of resilience. Defining attributes of resilience included: (a) rebounding/reintegration, (b) high expectancy/self-determination, (c) positive relationships and social support, (d) flexibility and (e) a sense of humor. Similar to Dyer and McGuinness (1996), the author identified the main antecedent to resilience as adversity. The consequences of resilience are: (a) effective coping, (b) mastery of a situation, and (c) positive adaptation (Earvolino-Ramirez, 2007, p. 78). The impact that research on the topic of resilience could have on nursing practice is the development of
resilience-based interventions, identifying individuals at risk and promote positive adaptation, leading to improvements in the mental health of nurses.

Similarly, Gillespie, Chaboyer, and Wallis (2007) constructed a theoretically driven model of resilience. The researchers defined the attributes of resilience as: (a) self-efficacy, (b) hope, and (c) coping. Gillespie and colleagues (2007) postulated that resilience is a process that can be developed throughout someone’s life and not a specific personality characteristic that one possesses. The researchers suggest that resilience is not a fixed trait but something that can be developed over time. Individuals may need to experience adversity and develop ways to improve their circumstances to become more resilient (Gillespie, Chaboyer, & Wallis, 2007).

There is little literature on resiliency and how it applies directly to nurses; however, this inattention to the concept appears to be changing. Edward (2005) discussed how improved resiliency in individuals can provide protection against depression and argued that psychiatric nurses are skilled to improve resiliency in individuals. Cameron and Brownie (2010) implemented a phenomenological study examining factors that affect the resilience of registered nurses (n = 9) who cared for geriatric patients in Queensland, Australia. The results of the study were that there are eight common clusters that make up a resilient nurse. These are: (a) experience, (b) job satisfaction, (c) positive attitude, (d) the sense of making a difference, (e) support from colleagues and mentors, (f) self-reflection, (g) effective coping skills such as humor, and (h) ensuring exercise, rest, and social relations (Cameron & Brownie, 2010). Dean (2012) echoed the importance of sufficient rest, exercise and social discussions with other
nurses to bolster resilience in nurses who are challenged with increasing stressors at work.

Recently, several researchers have suggested ways to bolster resiliency in a population of nurses. Kornhaber and Wilson (2011) implemented a phenomenological study \((n = 7)\) to examine the concept of resiliency as a way to confront adversity in a population of nurses working in burn units. The researchers identified several themes, including “mental toughness” and “regrouping and recharging” and developing an “emotional detachment” from work that were present in more resilient nurses. The results of the study demonstrated that it is essential for nurses working in burn units to develop resiliency to cope with the stress of working with severely wounded patients and can work towards retaining nurses in the profession.

McDonald, Jackson, Wilkes, and Vickers (2012) constructed a work-based intervention with the intent of improving the resilience of nurses and midwives. Participants in the study \((n = 14)\) attended six monthly workshops where they worked in groups to learn skills that were thought to increase their resilience. Skill building included: (a) critical reflection, (b) experiential learning and (c) creativity exercises while learning what makes an individual more resilient. The results of the study were favorable as demonstrated in exit interviews with individual nurses who generally reported that the working groups did help bolster their resilience and made them more capable of overcoming workplace adversity.

With the concept of resiliency being redefined as a measurable construct by Lightsey, Tusaie and Dyer (2004), the possibility of developing measurement scales to
assist nurses with assessing and developing interventions for patients exists. Because
“burnout” has been so detrimental to the profession of nursing, an opportunity for nurses
is now arising to apply the concept of resilience towards themselves in order to decrease
stress within themselves and advance patient outcomes. What is clear in all of the studies
on resilience is that there is not one universal definition of resilience applicable to
science, or in particular, to nursing. See Table 1.

Table 1: Definitions of Resilience

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<th>Background</th>
<th>Year</th>
<th>Definition of Resilience</th>
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<tbody>
<tr>
<td>Holling</td>
<td>Ecology</td>
<td>1973</td>
<td>A measure of the persistence of systems and of their ability to absorb change and</td>
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<td>disturbance and still maintain the same relationships between populations or state</td>
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<td>variables.</td>
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<td>Rutter</td>
<td>Psychology</td>
<td>1985</td>
<td>The ability to bounce back or cope successfully despite substantial adversity.</td>
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<tr>
<td>Rutter (from Gillespie and</td>
<td>Psychology</td>
<td>1990</td>
<td>The dynamic process involving interaction between risk and protective processes-</td>
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<td>colleagues)</td>
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<td>internal and external to the individual-that act to modify the effects of adverse life</td>
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<td>Werner (from Gillespie and</td>
<td>Psychology</td>
<td>1993</td>
<td>Personal competencies and strengths, which emphasize capabilities and positive</td>
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<td>colleagues)</td>
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<td>attributes rather than human weaknesses or pathologies.</td>
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<td>Wagnild and Young (from</td>
<td>Nursing</td>
<td>1993</td>
<td>A personality characteristic that moderates the negative effects of stress and</td>
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<td>Gillespie and colleagues)</td>
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<td>promotes adaptation.</td>
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<td>Rutter (from Tusaie and</td>
<td>Nursing</td>
<td>1993</td>
<td>A combination of abilities and characteristics that interact dynamically to allow an</td>
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<td>Dyer)</td>
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<td>individual to bounce back, cope successfully, and function above the norm in spite of</td>
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<td>significant stress or adversity.</td>
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<td>Gunderson and Holling</td>
<td>Ecology</td>
<td>2001</td>
<td>The magnitude of disturbance that can be absorbed before the system changes its</td>
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<td>structure by changing the variables and processes that control behavior.</td>
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<td>Cumming and colleagues</td>
<td>Ecology</td>
<td>2005</td>
<td>The ability of the system to maintain its identity in the face of internal change and</td>
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<td>external shocks and disturbances.</td>
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<td>2005</td>
<td>The capacity of a child to deal effectively with stress and pressure, to cope with</td>
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<td>everyday challenges, to rebound from disappointments, mistakes, trauma, and</td>
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<td>adversity, to develop clear and realistic goals, to solve problems, to interact</td>
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<td>comfortably with others, and to treat oneself and others with respect and dignity.</td>
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<td>Masten, Best, and Garmezy (from</td>
<td>Psychology</td>
<td>2005</td>
<td>The process of, capacity for, or outcome of successful adaptation despite</td>
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<td>challenging or threatening circumstances.</td>
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**Resilience in the Military**

Stress reactions experienced by Servicemembers in combat are not new concepts. Throughout history, there has been mention of Soldiers experiencing the stressors of war (Bhattacharjee, 2008; Dekever, 2002; Magnuson, 2008). Terms such as “shell shock” or “battle fatigue” (Magnuson, 2008) were used to describe the phenomenon throughout the 20th century. Despite having identifying names, treatment options were limited. Most physicians and military commanders viewed “shell shock” as a transient condition that was a sign of mental weakness (Bhattacharjee, 2008). The concept of shell shock was highlighted in the media in 1943 when General George S. Patton famously slapped a Soldier, Private Charles Kuhl, for “cowardess” and ordered the physicians not to admit him to the field hospital. Private Kuhl admitted to suffering from battle fatigue as well as malaria. After being reprimanded, General Patton apologized to the Soldier who enthusiastically accepted (Dekever, 2002).
After World War II, the military focused on the prevention of combat stress injuries (Headquarters, Department of the Army, 1994). After the Gulf War, Combat Stress Control (CSC) Companies and Detachments were created to treat combat stress control casualties in a forward battle area and to prevent stress related injuries from occurring (Headquarters, Department of the Army, 1994). These units were successful in preventing, but not eliminating, many combat stress injuries. Most recently, Combat Stress Control units deployed to support Servicemembers in the Iraq and Afghanistan wars. While effective, CSC units cater to all military personnel in battle space. However, these units do not address the specific needs of healthcare providers regarding the prevention and treatment of the psychological effects of war, such as burnout or compassion fatigue, from treating severely wounded patients.

Exploring the concept of resilience in the Army began in earnest after the terrorist attacks of September 11, 2001 in the United States. As the country entered two wars, the government leadership learned that the emotional toll of combat was affecting both military and civilian workers deployed to the Middle East. In June 2002, Speckhard published a paper detailing how an American Psychologist over six stress-debriefing sessions and informal interviews examined 250 Americans in Brussels working for NATO immediately after the attacks on September 11, 2001. Of the 250 Americans, 50 were asked to complete a Disaster Stress Self-Assessment questionnaire (Speckhard, 2002) in the second phase of the study. The qualitative results of the debriefing session \( (n = 250) \) demonstrated that dissociative symptoms, derealization, increased anxiety and emotional numbing were reported most often when discussing the attacks on 9/11. Several other participants reported traumatic amnesia and reported symptoms of
posttraumatic arousal. The quantitative results of the study utilizing the Disaster Stress Self-Assessment questionnaire (Speckhard, 2002) demonstrated that a 14% of the 50 diplomats, military Servicemembers and civilians surveyed \( (n = 7) \) experienced Acute Stress Reaction symptoms of dissociation, hyperarousal, re-experiencing, and ineffective coping strategies. Eight percent of survey respondents \( (n = 4) \) reported use of alcohol or substances to cope with their experiences. The article ends with the call for leadership to “inoculate resistance” to a terrorist threat so that the troops can be ready (Speckhard, 2002, p. 128).

In July 2003, the Surgeon General of the Army commissioned a Mental Health Advisory Team (MHAT) to deploy to Operation Iraqi Freedom (OIF) in order to examine the mental health issues in Army Servicemembers and report the results to Medical Command and Line Commanders (Department of the Army, 2003). The mission of MHAT was the first time in U.S. history when mental health teams deployed to an active combat zone to examine the mental health of the force. Over several months, the MHAT interviewed 756 Soldiers in small groups or by administering surveys. The surveys utilized in the 2008 MHAT V report were identical to the surveys used in the 2007 MHAT IV, and were used to examine: (a) demographics, (b) standards of practice, (c) coordination of service, (d) behavioral health services provided, (e) behavioral health skills and training, (f) stigma perceived, (g) barriers to care, (h) methods to address Soldier behavioral health needs, and (i) personal well-being (Department of the Army, 2008, p. 67). Additionally, MHAT examined Aeromedical Evacuation (Medevac) procedures and behavioral health services and access to these services in theater.
The MHAT validated that while the access to and effectiveness of behavioral health services was effective, 23% \((n = 173)\) of Soldiers interviewed reported moderate to severe stress (Department of the Army, 2003). Of the Soldiers interviewed, 15.2% \((n = 115)\) reported having traumatic stress and 7% \((n = 53)\) were experiencing anxiety as demonstrated by the MHAT questionnaires. Over half \((n = 378)\) of the Soldiers surveyed by MHAT reported low individual morale and over 70% \((n = 530)\) reported low unit morale (Department of the Army, 2003). In 2008 during the height of the Iraq war, MHAT-V results were released to the public. Lieutenant Colonel Paul Bliese, team leader for MHAT-V, reported that for the first time the MHAT was able to examine the frequency of a Soldier’s deployment as it relates to his or her mental health. The MHAT-V team reported that of the 129 Noncommissioned Officers (NCOs) interviewed who were on their third and fourth deployments to Iraq or Afghanistan, 27.2% \((n = 35)\) demonstrated mental health problems, a significant increase \((p = 0.05)\) compared to other interviewed NCOs on their second deployment who reported at 18.5% \((n = 24)\) (Department of the Army, 2008). The MHAT continues to deploy annually since its introduction in 2003 and the reports continue to yield valuable information to commanders regarding the mental health of the force.

Despite the success of the MHAT teams in Iraq and Afghanistan identifying mental health trends among Soldiers, the suicide rate in the Army reached record high levels in 2008 with over 128 Active Duty Soldiers committing suicide, exceeding the national average of 19.5 per 100,000 people (Kuehn, 2009). In order to help rectify this problem, the Army worked closely with the University of Pennsylvania to establish resiliency training for all Soldiers as part of a program called Comprehensive Soldier
Fitness. Modified from the Positive Psychology Program at the University of Pennsylvania, Comprehensive Soldier Fitness has a focus on five areas including: (a) emotion, (b) social, (c) spiritual, (d) family and (e) physical well-being (Department of Defense, 2009). Master Resiliency Training (MRT), stemming from Comprehensive Soldier Fitness, was later developed in 2009 to teach all Soldiers, family members, and DoD civilians how to increase their resiliency to better cope with stress and ultimately grow psychologically and succeed. The program includes a 170-item questionnaire Soldiers complete and creates an overall score for a specific unit (Blank & London, 2009).

Despite the reported success of MRT, there are some critics of the program. Blank and London (2009) report that, “MRT could be helpful if it promotes positive thinking about getting early treatment for PTSD, and if it promotes the capacities in the Soldier—the consumer—for evaluating the helpfulness of treatment sessions, whether from the military, Veterans Affairs Department, or private sector” (p. 10). Blank and London (2009) further state that in order for MRT to be a successful program, Commanders and leaders throughout the military need to comprehend that mental illness, such as PTSD, have a biological origin. Additionally, any PTSD prevention program should examine why some individuals are more vulnerable to acquiring PTSD and other mental health symptoms. Only then can the military culture transform.

In 2010, Brigadier General Loree Sutton, Director of the Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury, spoke to the audience at the Defense and Veteran’s Affairs Suicide Prevention Conference. Her message was that suicide prevention is a public health challenge that needs to be managed not only with
just healthcare providers, but also with techniques, such as resiliency programs, which should be taught in all levels of the community (Military Medicine, 2010).

In 2012, the Secretary of the Army, John M. McHugh, directed the Army to develop an “Army Ready and Resilient Campaign Plan” to be implemented by 15 February 2013. The program is, “based upon building physical, emotional and psychological resilience in our Soldiers, Families and Civilians so they improve performance which ultimately prepares them to deal with the rigors and challenges of a demanding profession” (Secretary of the Army, 2012, pg. 1). The program being developed with the intent that resiliency training be integrated into the regular training of all Soldiers within the Army. Additionally, current resiliency programs will be reviewed for effectiveness with the successfulness of the programs, “need to be measured by defined outcomes” (Secretary of the Army, 2012, pg. 2).

**Military Healthcare Provider Resilience**

While much of the resiliency training offered to the military has had a focus on the Soldier in general, it should come as no surprise that healthcare providers also experience psychological symptoms stemming from deployment and heavy workload. Until recently, not many researchers examined the impact of combat stressors on the population of healthcare providers. Gibbons, Hickling, and Watts (2011) carried out an integrative literature review using Cooper’s integrative review method (Cooper, 1982) on military healthcare providers. The researchers carried out an extensive literature review, selecting 25 articles or research studies to be analyzed. A majority of these articles or studies were about the examination of nurses from the Vietnam War. The results of the
qualitative study showed that the two most prominent themes of the healthcare providers’ war experiences were the threat of danger to themselves or others and exhaustion from long hours of work (Gibbons, Hickling, & Watts, 2011). The results of the study also were used to identify protective factors including: (a) social support from friends and family, (b) maintaining a sense of purpose and (c) a positive mental state. Many of the subjects reported “resilience” gained from friends and coworkers to help them manage stress.

McNally, Hatch, Cedillos, Luethcke, and Baker (2011) carried out a study testing a continuous measure of repressor coping, or the coping of people who report low levels of anxiety but high levels of defensiveness about emotional distress, and whether PTSD could be predicted in military healthcare professionals. The researchers examined healthcare providers ($n = 122$) who served in Operation Iraqi Freedom using the pre-deployment scores of the CD-RISC (Connor & Davidson, 2003). The results of the study were that the CD-RISC was not a good predictor of whether an individual may develop PTSD, $r(s) = -0.133, p=0.14$; however, the evidence suggests that an individual’s pre-deployment level of anxiety may be a predictor of a person developing PTSD ($r(s) = 0.38, p < 0.001$) (McNally, Hatch, Cedillos, Luethcke, & Baker, 2011).

Hickling, Gibbons, Barnett, and Watts (2011) implemented a secondary analysis of data about active duty military healthcare providers using the 2005 Department of Defense Survey of Health Related Behaviors Among Active Duty Military Personnel (HRB) database. The researchers examined and compared the results of the HRB survey ($n = 6,116$) completed by military healthcare providers with Soldiers who were not healthcare providers. The HRB is a tool that consists of the PTSD Checklist-Civilian
Version (PCL-C) (Blanchard, Jones-Alexander, Buckley, & Forneris, 1996), the Alcohol Use Disorders Identification Test (AUDIT) (Babor, Higgins-Biddle, Saunders, & Monteiro, 2001), an index of “need for further evaluation” tool (DEPFlag) (Burnam, Wells, Leake, & Landsverk, 1988), the K-6 scale of serious psychological distress (Kessler, et al., 2003), and the Patient Health Questionnaire (PHQ) (Spitzer, Kroenke, & Williams, 1999) to assess generalized anxiety disorder symptoms (Hickling E. J., Gibbons, Barnett, & Watts, 2011). The results of the study demonstrated that enlisted personnel, regardless of job (healthcare provider vs. non-healthcare provider) reported higher levels of PTSD symptoms according to the PCL-C ($M = 26.3, SD = 0.9; M = 26.8, SD = 0.5$) compared to officers ($M = 22.9, SD = 1.1; M = 22.1, SD = 0.4$). The range of consideration of a PTSD diagnosed varied widely depending on PCL-C cutoff scores from 3.5-17.1% in healthcare providers who were officers compared to 7.0% - 31.9% of enlisted healthcare providers (Hickling E. J., Gibbons, Barnett, & Watts, 2011). The results of alcohol use as measured by the AUDIT were that healthcare providers (officers) and enlisted healthcare providers scored 69.1% and 46.3% respectively in the “hazardous drinking” range. The DEPFlag results showed that 20.9% of healthcare provider officers and 24.8% of enlisted healthcare providers were coded “positive” by the scale, compared to 10.9% of non-healthcare provider officers and 23.9% of non-healthcare enlisted servicemembers, showing an increase in healthcare providers being unable to perform their duties because of poor mental health. The researchers concluded that military healthcare providers, regardless of rank, experienced significant psychological and psychosocial difficulties upon returning from deployments to Iraq and
Afghanistan and that the operational stress experienced by these providers is not limited just to what occurred in theater (Gibbons, Hickling, & Watts, 2011).

Gibbons, Barnett, Hickling, Herbig-Wall, and Watts (2012) carried out a secondary analysis of data from the 2005 HRB database to examine gender differences. The purpose of the analysis was to examine whether there are significant difference between male and female healthcare providers regarding stress levels, healthcare seeking behaviors and coping abilities within a population of healthcare providers who previously served in Iraq and Afghanistan. The data utilized in the secondary analysis consisted of healthcare providers responses on the HRB (unweighted n= 455), both officers and enlisted, who deployed to Iraq or Afghanistan within the previous 3 years. Chi square and Student’s t-tests were used to compare male and female healthcare providers, officer and enlisted (Gibbons, Barnett, Hinkling, Herbig-Wall, & Watts, 2012). The researchers determined that deployment was the most common stressor, particularly for female enlisted (n = 4,652) where 28% (n = 1,303) reported “a lot of stress” (p < 0.001) and male officers (n = 4,043) where 19% (n = 768) report they experience “a lot of stress” (p < 0.001). According to the results of the study, female enlisted healthcare providers were most concerned about their children, divorce, and finding adequate childcare while female officers were most concerned about finding childcare, their evaluation reports from their superiors, and moving within the military (Gibbons, Barnett, Hinkling, Herbig-Wall, & Watts, 2012).

Bingham, Inman, Walter, Zhang, and Peacock (2012) explored improving resilience and stress levels in military healthcare providers using Integrative Restoration (iRest®) (Miller, 2012) devices at a military medical center. During the pilot study, the
researchers guided participants ($n = 14$) using meditation and relaxation techniques from the iRest® program 6 days per week for 1 hour each day (Bingham, Inman, Walter, Zhang, & Peacock, 2012). Although the sample size for this mixed methods pilot study was small, the results demonstrated that healthcare providers’ perceived stress decreased from pre to post intervention as measured by examining self-report measurements of stress, sleep disturbance, burnout along with diaries and written/oral feedback. According to the researchers, the results showed a significant change pre/post intervention ($p = 0.005$) and there was a significant reduction in secondary traumatic stress ($p < 0.01$), highlighting the effectiveness of relaxation techniques to reduce stress and promote resiliency.

**Coping**

The word, “cope” is defined as, “to deal with and attempt to overcome problems or difficulties” (Merriam-Webster, 2012, p. 275). Lazarus and Folkman (1984) defined coping as, “realistic and flexible thoughts and acts that solve problems and thereby reduce stress” (p. 118). Coping, as a concept, can be difficult to define as it refers to an abstract idea ranging between the affective and behavioral aspects of human beings (Keil, 2004). Regardless of how the concept is defined, coping refers to how people manage stress in their lives.

Nurses have explored the concept of coping for many years. Roy’s Adaptation Model may be applied by nurses to examine how coping occurs on multiple levels, often unconsciously (Roy & Andrews, 1999). Keil (2004) devised a conceptual analysis of the concept of coping and stress. The author noted that while not central to the concept,
coping seems to have a sense of success or failure for human beings. That is, a person can successfully cope with a situation while another cannot. Rather, the effectiveness of how an individual copes is what is important to understand. Coping is how a person confronts events, internal or external, with varying degrees of success (Keil, 2004).

Vulpe and Dafinoiu (2012) furthered the research on coping by examining coping strategies along with positive emotions and ego-resiliency. The researchers utilized the Positive and Negative Affect Schedule (PANAS) (Watson, Clark, & Tellegen, 1988) to measure affect, the Revised COPE scale (Zuckerman & Gagny, 2003) to measure coping strategies and the Ego Resilience 89 Scale (ER 89) (Block & Kremen, 1996) to measure ego-resiliency in a population of Romanian workers \( n = 113 \). The results of the study showed that positive emotions, such as dealing with the stressor directly, maintaining an individual’s sense of wellbeing under stress, and reframing a stressor in a positive manner, correlated positively with approach coping skills \( (r = 0.23, p < 0.05) \), with self-help coping skills \( (r = 0.23, p < 0.05) \) and with ego-resiliency \( (r = 0.27, p < 0.01) \) (Vulpe & Dafinoiu, 2012). In essence, the results of the study indicate that approach and self-help coping techniques can predict positive emotions within people, which in turn can build ego-resiliency.

More recently, researchers have been examining how nurses cope with stress in the workplace. Parikh, Taukari, and Bhattacharya (2004) examined the subject of stress in nurses by carrying out a literature review on the subject. The authors found that problem solving, avoidance, and social support were the most common coping techniques utilized by nurses across studies (Parikh, Taukari, & Bhattacharya, 2004). Parikh and
colleagues also found that job satisfaction plays an important role in the effective coping of nurses.

Bennett, Lowe, Matthews, Dourali, and Tattersall (2001) implemented a study examining stress and coping in nurses \((n = 106)\) who worked on hospital wards. The researchers administered questionnaires to volunteers asking about stress, coping, and job satisfaction. The questionnaires consisted of the brief COPE scale (Carver, 1997) to measure coping techniques, the Hospital Stress Inventory (HSI) (Volicer, 1978) to measure work associated stress and the Hospital Anxiety and Depression Scale (HADS) (Zigmond & Snaith, 1983). By using the brief COPE scale, Bennett and colleagues discovered that most nurses endorsed problem-focused coping skills, or excepting there was a problem or adversity then trying to take action to manage problems directly as they occur. (COPE: Acceptance, \(M = 9.01, SD = 2.40, Scale = 3-12\); Action, \(M = 7.90, SD = 2.66, Scale = 3-12\)). Less frequently seen were negative coping techniques, such as drug or alcohol or the use of denial to cope with problems. (COPE: Alcohol and Drugs, \(M = 3.75, SD = 1.89, Scale = 3-12\); Denial, \(M = 3.79, SD = 1.39, Scale = 3-12\)). The authors did not find many associations between a nurse’s mood and coping techniques, however by examining the results of the HADS, they did conclude that job satisfaction did play a significant role in effective coping. Support from management = \((R^2 = 0.485, \beta = -0.0614, p < 0.001)\); Work conflict = \((R^2 = 0.537, \beta = -0.256, p < 0.05)\) (Bennett, Lowe, Matthews, Dourali, & Tattersall, 2001).

Theodoratou, Tafiadis, Mpeekos and Skiloyanni (2006) carried out a similar study examining coping strategies used by Greek nurses \((n = 160)\) in several hospitals in Athens and Patras. By modifying the Toulouse Coping Scale (Tap, 1992), the
researchers were able to discern that 87% \((n = 139)\) of the nurses use action coping strategies to try to fix a situation, 80% \((n = 128)\) use information strategies to cope such as educating themselves about a situation, and 75% \((n = 120)\) use emotional coping strategies such as venting or crying to cope with the stress of the situation (Theodoratou, Tadiadis, Mpekos, & Skiloyanni, 2006). The study results indicate that nurses tend to use multiple positive coping techniques to cope with workplace stress.

**Coping in the Military**

There are few published studies about the concept of coping within a population of Soldiers directly. A significant degree of research exists regarding the concept of coping within the military as to how a Soldier’s family copes with the stress of deployment (Padden, Connors, & Agazio, 2001; White, DeBurgh, Fear, & Iversen, 2011). Some researchers explored specific topics such as, how do Soldiers cope with the loss of a limb (McFarland, Choppa, Betz, Pruden, & Reiber, 2010; Reiber, et al., 2010; Robbins, Vreeman, Sothmann, Wilson, & Oldridge, 2009) or the death of a colleague (Toblina, Riviere, Thomas, Adler, Kok, & Hoge, 2012). Coping in Soldiers is similar to how the general population copes with adverse situations; however, Soldiers have the additional stressors of fear for their safety and of colleagues and prolonged separation from loved ones.

Johnsen, Laberg, and Eid (1998) examined coping strategies and the development of mental health problems in a population of Soldiers \((n = 26)\) in the Norwegian Army. The longitudinal study consisted of the administration of four questionnaires at four
different time points. The questionnaires consisted of the General Coping Questionnaire, which comprised three measures: (a) Ursin’s Health Inventory (UHI) (Ursin H, 1988), (b) the General Health Questionnaire (GHQ) (Goldberg & Williams, 1988), and the (c) Alcohol Use Disorders Identification Test (AUDIT) (Babor, Higgins-Biddle, Saunders, & Monteiro, 2001). The four time points used were: (a) 2 weeks before entering the military, (b) 2 weeks after entering the military, (c) 2 months after entering the military, and (d) 8 months after entering the military. Subjects were placed into 3 groups based on coping styles: (a) an avoidance-focused group, (b) a task-focused group, and (c) an emotion-focused group (Johnsen, Laberg, & Eid, 1998). The GHQ results showed a main effect of factor time \( (F(3,69) = 11.84, p < 0.05) \) and increased from before entering the military to 4 and 8 months of service showing an increase in psychological problems. The UHI showed a main effect of time \( (F(3,69) = 6.17, p < 0.05) \) increasing from the time the Soldier enter service until 2 to 8 months later indicating an increase in health problems reported by the subjects. The main effect of coping style as seen in the AUDIT was found \( (F(2,23) = 3.34, p < 0.05) \) to be due to individuals in the avoidance-focused group reporting higher audit scores. The researchers concluded that mandatory military service on a person’s mental health is moderated by the person’s coping style. In addition, individuals who have avoidance-focused coping skills reported a low level of being able to adapt to the military and demonstrated higher physical and psychological symptoms.

More recently, Dolan and Ender (2008) examined coping in the U.S. Army and how it pertains to work and stress using a qualitative analysis of interviews of Soldiers \( (n = 141) \) and their leaders \( (n = 20) \). By using open, axial, and selective coding, the
researchers discovered that coping techniques in the U.S. Army could be paradoxical. That is, viewed as effective ways to cope with stress but can lead to additional stress as well, such as drinking alcohol and going to the leadership to discuss problems. Many of the Soldiers viewed that their stress stemmed from leaders giving them missions to accomplish. The stress of work may lead the Soldier to drink alcohol as a stress relief, which can become problematic (Dolan & Ender, 2008). It is important to note that the interviews from Soldiers in the Dolan and Ender (2008) study occurred in a population of Soldiers stationed in Europe prior to the start of the wars in Iraq and Afghanistan.

**Military Healthcare Provider Coping**

Limited research exists about the concept of coping within a population of military nurses. Jackson (1987) examined the relationship between workplace stress and occupational related strain among military practical nurses \( n = 62 \) and if this relationship was mediated by coping. Using the Personal Resources Questionnaire (Brandt & Weinert, 1981), the Personal Strain Questionnaire (Osipow & Spokane, 1983) and the Occupational Environment Scales (Osipow & Spokane, 1983), the researchers showed that work roles, setting and shift were not effective buffers or mediators of occupational stress effects (Jackson, 1987).

Dahl and O’Neal (1993), nurses in the 403rd Combat Support Hospital (CSH), directed a study of deployed nurses \( n = 36 \) during Operation Desert Storm. The questionnaire used consisted of 16-items on stress and coping behaviors, such as: (a) verbal expressions of emotions, (b) loneliness, withdrawal, and (d) writing in journals. The most common stressors reported were: (a) lack of creature comforts, (b)
environmental conditions, (c) lack of recognition, and (d) lack of leadership and organization; however, the researchers did not publish specific statistics to support the findings (Dahl & O'Neal, 1993). Effective coping behaviors observed to counteract the participants’ stressors included: (a) exercise, (b) support from friends and colleagues, (c) spirituality, and (d) performing patient care. Of the nurses surveyed, 82% (n = 30) agreed that keeping a perspective, exercise, acceptance of situations that cannot be changed, humor, and discussing issues with supervisors were effective coping skills during the deployment. Eighty-two percent (n = 30) of the nurses surveyed agreed that the least effective coping skills were: (a) complaining, (b) listening to rumors, (c) getting angry, and (d) giving feedback to the chain of command (Dahl & O'Neal, 1993).

Hagerty, Williams, Bingham, and Richard (2011) carried out a qualitative phenomenological study of military nurses (n = 20) to better understand what military nurses experience. Implemented at three major military hospitals, focus groups were utilized to collect data from the participants. Regarding military nurses and coping, a majority (n = 19) reported using positive coping skills such as: (a) yoga, (b) running, (c) massage, (d) journaling and (e) time to reflect (Hagerty, Williams, Bingham, & Richard, 2011). Teamwork was also highlighted as a requirement for nurses to effectively cope with their situation. One nurse was unable to find effective coping techniques, describing anger, fatigue and lack of empathy and caring. This nurse had recently returned from a 15-month deployment in Iraq, stayed home for 2 months, and was preparing to deploy again for a second time (Hagerty, Williams, Bingham, & Richard, 2011).
Compassion Fatigue

Compassion fatigue is a relatively new phenomenon described in nursing. The concept first appeared in literature when Joinson (1992) was researching burnout in emergency room nurses and noticed that they seemed to have lost their ability to nurture. The term compassion fatigue was coined in 1995 by Figley as a euphemistic term for secondary traumatic stress disorder (STSD) (Coetzee & Klopper, 2010). There is some discussion whether STSD is the concept that Joinson described in 1992; however, nurses losing their compassion towards patients continues. Coetzee and Klopper (2010) devised a concept analysis deriving a theoretical definition of compassion fatigue as, “the final result of progressive and cumulative process that is caused by prolonged, continuous, and intense contact with patients, the use of self, and exposure to stress (p. 237).

Yoder (2010) examined the phenomenon of compassion fatigue using mixed quantitative and qualitative methods in a group of nurses (n = 71) using the Professional Quality of Life Scale (ProQOL) (Hudnall-Stamm, Blampied, Higson-Smith, Hudnall, Piland, & Stamm, 2010). The purpose of the study was to examine the prevalence of compassion fatigue and investigate the causes of compassion fatigue. The quantitative results of the ProQOL report were that of the 71 nurses sampled, 15.8% (n = 11) were at risk for compassion fatigue, 7.6% (n = 5) were at risk for burnout and 8.6% (n = 6) reported compassion satisfaction (Yoder, 2010).

In order to clarify the definition of compassion fatigue, Berzoff and Kita (2010) published a paper differentiating compassion fatigue from the phenomenon of countertransference. The authors contended that the definition of compassion fatigue has
not taken into account the psychodynamic meaning of the term (Berzoff & Kita, 2010).
Berzoff and Kita (2010) stated that the major difference between the two concepts is that “counter-transference happens in every clinical encounter while compassion fatigue does not” (p. 343). Compassion fatigue is described as the phenomenon that occurs to caregivers who continually care for others who suffer and as such experience exhaustion and depletion of energy.

Lynch and Lobo (2012) derived a concept analysis of compassion fatigue in family caregivers. The authors reported that there is not one single defining definition of the term “compassion fatigue”. They offered their own definition for family caregivers compassion fatigue, as, “compassion fatigue is a resultant condition experienced by caregivers who provide daily care to seriously ill or dying family members and are simultaneously exposed to the patient’s pain while experiencing their own emotional pain” (Lynch & Lobo, 2012, p. 2128). Defining attributes of compassion fatigue include: (a) a relationship between a patient and a caregiver, (b) empathy, (c) stress, the (d) sharing of experiences and a psychological response.

**Compassion Fatigue in the Military**

Hudnall-Stamm and colleagues (2010) define compassion fatigue as the negative aspect of helping those who experience traumatic stress and suffering and is demonstrated by feelings such as exhaustion, frustration, anger and depression. Lynch and Lobo (2012) similarly state that, “compassion fatigue is predominantly used with professional caregivers, such as nurses, doctors and social workers” (p. 2125). Because
compassion fatigue applies to people who care for others, traditionally in a healthcare role, it does not apply in the general Soldier population.

**Military Healthcare Provider Compassion Fatigue**

The combat operations in Iraq and Afghanistan have served as a catalyst for the examination and discussion of compassion fatigue in military healthcare providers. According to Pechacek, Bicknell, and Landry (2011), military providers differ from civilian providers because of “danger while delivering service, multiple deployments, working with detainees, cultural differences, and lack of time for reprieve” (p. 380).

Unlike their civilian counterparts, military healthcare providers deploy to war where they are placed in harm’s way and are exposed to extreme trauma (Stewart, 2009). Military healthcare providers will often work 12hr shifts, 6 days a week, where they are exposed to casualties with injuries that are rarely seen in civilian emergency rooms. Several U.S. Army Combat Support Hospitals (CSH) between the years of 2004 and 2010 operated Ibn Sina hospital, located in Baghdad, Iraq. In 2006, Ibn Sina Hospital accounted for 75% of the blood used by hospitals in Iraq and averaged 500 emergency room patient visits per month, of which 300 were traumas (Blankenship, 2007). According to Stewart (2009), the typical military healthcare provider deployed to Iraq or Afghanistan is between 18-30 years old. These younger providers are exposed to casualties in their own age group, coming “face-to-face with their own mortality” (p. 93).

The stress that can lead to compassion fatigue and burnout of military nurses is not limited to deployment. Kashani, Eliasson, Chrosniak, and Vernalis (2010) performed a study to examine the stress levels in military nurses at a major Military Medical Center.
The researchers carried out the 2007 study by administering questionnaires to military nurses \((n = 255)\) and examined perceived stress, morale, and sources of stress. The questionnaires consisted of asking nurses about their morale and perceived stress using a 5-point Likert Scale. Participants were also asked to list sources of stress. An additional 14 nurses completed a subgroup survey consisting of: (a) the Perceived Stress Scale 14 (PSS) (Cohen, Kamarck, & Meremstein, 1983), (b) the Pittsburgh Sleep Quality Index (PSQI) (Buysse, Reynolds, Monk, Berman, & Kupfer, 1989), (c) the Epworth Sleepiness Scale (ESS) (Johns, 1991), and (d) the Fatigue Visual Numeric Scale (FVNS) (Stanford University). Of the 255 nurses who returned the study, 55\% \((n = 140)\) reported very high stress and 26\% \((n = 66)\) reported moderately high stress as indicated by the scores of the researchers’ questionnaire. In the same questionnaire, morale was reported high in 47\% \((n = 120)\) and moderately high in 27\% \((n = 69)\) of nurses. The largest sources of stress were work related stress at 69\% \((n = 176)\) and fatigue at 39\% \((n = 99)\). Of the 14 nurses in the subgroup, 36\% \((n = 5)\) reported high levels of stress and 64\% \((n = 9)\) reported low to moderate levels of stress according to the results of the PSS. Interestingly, the nurses in the high stress group demonstrated increased sleepiness according to the ESS \((p = 0.06)\), increased fatigued per the FVNS \((p = 0.09)\) and being overweight \((p = 0.17)\) correlating high stress to sleeplessness, fatigue and obesity (Kashani, Eliasson, Chrosniak, & Vernalis, 2010).

In 2008, the Surgeon General of the U.S. Army ordered that all military and civilian members \((n = 50,478)\) assigned to the Army Medical Command (MEDCOM) take the ProQOL (Hudnall-Stamm, Blampied, Higson-Smith, Hudnall, Piland, & Stamm, 2010) measure of compassion satisfaction, burnout, and compassion fatigue.
(synonymously known as secondary exposure to traumatic stress). The MEDCOM members’ scores were compared with ProQOL data scores and determined to be significantly lower ($\chi^2 = 3,477.4, \text{df}=1, p < .001$). The MEDCOM compassion fatigue mean score was 9.8823 (minimum score = 0.00, maximum score = 50.00, $SD = 6.71681$, and variance = 45.116) compared to the ProQOL mean score of 12. This difference was statistically significant ($t = -70.835, p < 0.001, \text{df} = 50,477$) (Pechacek, Bicknell, & Landry, 2011). Hudnall-Stamm’s (2010) cut off score of 17 on the ProQOL to indicate the presence of compassion fatigue was used. According to Pechacek, Bicknell, and Landry (2011), 13.6% of MEDCOM healthcare providers ($n = 6,883$) met the compassion fatigue cut off score of 17 compared to 25% of the ProQOL data population. Similarly, 86.4% of MEDCOM healthcare providers ($n = 43,595$) who did not meet the cut off score of 17, meaning they did not experience compassion fatigue compared to the 75% cut off score of the ProQOL data population.

Scannell-Desch and Doherty (2010) implemented a qualitative phenomenological study to better understand the lived experiences of nurses ($n = 37$) who deployed in the Iraq and Afghanistan wars between the years 2003-2009. Interviews were conducted and data were collected using Colaizzi’s method of analysis. The researchers reported seven themes emerged as a result of the interviews, including: (a) deploying to war, (b) remembering war, (c) nurses in harm’s way, (d) kinship and bonding, (e) war stress, (f) professional growth, and (g) advice to deploying nurses. The researchers concluded that the findings indicate the “existence of PTSD symptoms and compassion fatigue in caregivers”, highlighting that war takes an emotional toll on everyone, including caregivers (Scannell-Desch & Doherty, 2010, p. 10).
With the wars in Iraq and Afghanistan ongoing for years, the Army realized that there was a toll being placed on healthcare providers from multiple deployments, exposure to traumatic injuries and being placed in austere conditions. Compassion fatigue, stress, and burnout were leading to healthcare providers leaving the military at an increased rate (Department of the Army, Office of the Surgeon General, 2008). In some cases, providers such as Army Psychologist Captain Peter Linneroot, became overburdened with the stressors of war and caring for the wounded, were taking their own lives (Cohen S., 2013). The Care Provider Support Program was developed to address these issues.

**Care Provider Support Program** (Formerly Provider Resiliency Training):

Created in 2007, the purpose of Provider Resiliency Training (PRT) was to construct a program where military healthcare providers could receive training on compassion fatigue to improve personal resiliency while promoting a culture of resiliency in the hospital organization. During the course, providers receive immediate feedback from the instructor and develop a self-care plan. The goals of the training are to prevent or ameliorate compassion fatigue and stress while providing analysis incidence and severity of fatigue and burnout to Medical Treatment Facilities and Regional Medical Commanders as well as the Office of the Surgeon General of the Army (OTSG). Additionally, data collected might be utilized as a basis for additional research programs.

In 2011, PRT was renamed the Care Provider Support Program (CPSP). The current program is mandatory for all Army healthcare providers worldwide. The theoretical framework of mind, body, and medicine draws from Siebert’s (2005)
characteristics of highly resilient people as flexible, who react to change and expect to bounce back after adversity. The program has a focus on self-awareness activities and energy management using a “here and now” perspective. CPSP trainers receive central training then return to their hospital organization with the mission of training the healthcare providers in their respective facilities. Using a compassion fatigue prevention model, CPSP can be used to teach providers to educate themselves about compassion fatigue, assess their own personal level of compassion fatigue and to take action.

Using the Professional Quality of Life (ProQOL) Assessment (Hudnall-Stamm et al., 2010), providers assess their own level of burnout, compassion fatigue, and job satisfaction prior to taking the course. During the course, healthcare providers are educated on how to build their resiliency by using self-care, and by examining the physical, mental, emotional, social and spiritual aspects of daily life. Teaching providers innovative ways on how to exercise, journal, self-meditate, pray, and interact with others are key aspects of the program. The assumption is when individuals learn to incorporate these techniques into their daily lives, their resiliency level will improve and they will be able to cope better with the stressors of combat and patient care preventing burnout and other mental conditions.

Theoretical Framework

The Neuman Systems Model (Neuman, 1982) was the theoretical framework for this study (See Figure 1). The concept of resiliency is at the core of the CPSP. By instructing healthcare providers on how to improve individual resiliency, compassion fatigue is reduced and stress and coping levels return to normal. The Neuman Systems
Model lends itself to examining this phenomenon. In the Neuman Systems Model (Neuman, 1982), people are viewed as individual systems that interact with each other and the environment. With a dynamic energy exchange, systems can positively or negatively change as they interact with the environment. A balance is maintained unless a stressor changes this balance. Neuman believes that early intervention can mitigate these reactions (Neuman, 2011; Parker & Smith, 2010). By viewing healthcare providers as systems interacting with the environment and each other, the effects of stressors such as caring for wounded patients can be mitigated with early intervention.

**Figure 1: Neuman Systems Model.**

(Neuman & Fawcett, 2011, p.13)
The Neuman Systems model is considered dynamic in nature as it may be used to continually examine a person’s relationship with environmental stressors (Neuman & Fawcett, 2011). These stressors can cause a person to react a certain way or not allow reconstitution after an event. The Neuman Systems Model (Neuman & Fawcett, 2011) contains the implication of how a person responds to stressors and tries to maintain a balance with the environment to maintain system stability. Neuman (2011) wrote, “The main nursing goal is to facilitate optimal wellness for the client through retention, attainment, or maintenance of a client system stability” (p.3).

Neuman identified four concepts in the nursing metaparadigm that the model relates to: (a) human beings, (b) the environment, (c) health, and (d) nursing. Neuman describes these concepts while encompassing wholism, an orientation towards wellness, not illness, and a person’s perception and motivation (Neuman & Fawcett, 2011). Energy and variables interact with the environment to alleviate harm from potential stressors within an individual. Nurses work with the individual to form a relationship promoting wellness to restore and maintain health to optimum levels. It is important to note that the Neuman Systems Model is interrelated and interdependent in all parts.

Neuman (2011) identifies ten different perspectives to describe and define concepts (p.14). They include:

1. Each individual, or system, is unique.

2. Each system is dynamic and is in constant energy exchange with the environment.
3. Many known and unknown stressors exist and each individual has a flexible line of defense that protects them against stressors.

4. Each individual has a normal range of response to the environment that is a normal line of defense.

5. When the flexible line of defense is not able to protect an individual against stressors, the stressor breaks through the normal line of defense and the individual's physiological, psychological, sociocultural, developmental and spiritual variables determine the nature and degree of reaction to the stressor.

6. The individual is a dynamic composite of the interrelationship of variables.

7. Each individual has internal resistance factors, known as lines of resistance, which function to stabilize the individual and return them to a normal line of defense or possibly to a higher level of stability following a stressor.

8. Primary prevention relates to general knowledge that is applied in assessment and intervention and reduction or mitigation of possible risk factors, which is primary prevention.

9. Secondary prevention relates to symptoms following a reaction to a stressor.

10. Tertiary prevention is the adaptive process that occurs as reconstitution begins and moves an individual back to primary prevention.

Neuman (1982) described five variables that make up what she calls the “client system”. They are: (a) Physiological, (b) Psychological, (c) Sociocultural, (d)
Developmental, and (e) Spiritual (Neuman & Fawcett, 2011, p.16). These five variables are within every person and should be considered simultaneously by the nurse. In an ideal situation, these five variables will work together and are considered stable in regards to influences from internal and external stress. The five client system variables are at the core of what Neuman calls the Basic Structure. The Basic Structure represents the process of living and dying among human beings and is the source of human survival factors. Each client system variable is unique to the individual and makes up the individual’s central core, based on genetics, strengths and weaknesses and innate features (Neuman & Fawcett, 2011).

Another aspect of the Neuman Systems Model is the concept of “Lines of Defense”. Each individual has a flexible and normal line of defense that functions to protect the individual by protecting his or her basic structure. The flexible line of defense is the outermost barrier of an individual or group and functions as a protective buffer to maintain a person’s (or groups) stability (Neuman & Fawcett, 2011). The flexible line of defense moves as necessary, outward to provide greater protection to an individual or group, or inward to provide less protection. This movement can occur rapidly or gradually over time. The buffering qualities of the flexible line of defense can be taxed with severe individual stressors or multiple stressors compiling, rendering it less effective. When these severe or multiple stressors penetrate the normal line of defense, an individual or group begins to demonstrate signs of illness or instability (Neuman & Fawcett, 2011).

The flexible line of defense protects the normal line of defense. The normal line of defense represents what an individual person or group usual wellness level has become
over time. The normal line of defense is influenced by factors such as coping patterns, lifestyle, spirituality, culture, and developmental influences (Neuman & Fawcett, 2011). The normal line of defense can be viewed as long-term physiological and psychological adjustment to stressors that affect the individual or group over time. When a stressor penetrates an individual’s line of defense, his or her lines of resistance becomes activated to protect a person’s “basic structure” (Neuman & Fawcett, 2011, p. 18). The flexible line of defense, normal line of defense, and lines of resistance work together in a dynamic relationship to protect the individual or group core and maintain optimum wellness.

The environment is a key aspect of the Neuman Systems Model and is defined as, “all internal and external factors or influences surrounding the client or client systems” (Neuman & Fawcett, 2011, p. 19). Within the model, environment refers to the internal environment, the external environment, and the created environment. The internal environment is described as all of the forces or influence within an individual or group and are, by definition, interpersonal in nature. The external environment is both the interpersonal and extrapersonal forces existing outside an individual or group. The created environment is the energy exchange between the internal and external environments to tie the two environments together to create wholeness (Neuman & Fawcett, 2011). The created environment is important as it creates an insulating effect allowing a person to change his or her response to environmental stressors. This phenomenon is a person’s perception of the environment and can be flawed, causing misperceptions. A person’s ability to cope is related to his or her own perception of the external environment. It is important for a nurse to understand an individual’s created environment to help him or her achieve optimum wellness.
Another important aspect of the Neuman Systems Model is the concept of stressors. Stressors are defined as, “tension-producing stimuli that have the potential to cause system instability” (Neuman & Fawcett, 2011, p. 22). The stressors can be either good or bad in nature depending on the individual’s perception and are classified as intrapersonal, interpersonal, and extrapersonal. Intrapersonal stressors are those that occur within an individual, such as a conditioned response. Interpersonal stressors occur between a person and others and are external to the person. Extra-personal stressors are similar to interpersonal stressors except that they affect the individual at a more distal range (Neuman & Fawcett, 2011). As stressors begin to affect the individual, the flexible and normal lines of defense begin to protect the person in order to maintain wellness. When the stressors become too great or overwhelming to the individual and more energy is expended to cope with the stressors, instability occurs and health may be affected.

The Neuman Systems Model (1982) is an individual’s health or wellness on a continuum whereas wellness is on one end of the continuum and illness is the other extreme. Health is considered an individual’s optimum level of stability and varies over time, increasing and decreasing throughout a person’s life. Energy levels within a person will vary over time, causing wellness when more energy is being produced than expended. The opposite is true for illness when more energy is being used than created. A bacterial infection may cause a person to use more energy to produce an immune response to fight the infection. Once the infection has been treated, a person would normally return to an optimum level of stability. The same is true for psychological stressors where an individual exposed to an emotionally stressful situation will develop ways to cope with the stress, expending more energy. Once the stressful situation is
removed or a person uses effective coping skills to alleviate the stressor, optimum level of stability occurs. The ideal state is for a person to develop an optimum state of balance (Neuman & Fawcett, 2011).

Researchers have utilized the Neuman Systems Model (1982) since its inception. Fawcett and Giangrande (2001) carried out a literature review of the Neuman Systems Model examining 62 published studies, of which, 37% \( (n = 23) \) of researchers examined preventative interventions using the Neuman Systems Model and 19% \( (n = 19) \) of researchers explored the perception of stressors (Fawcett & Giangrande, Neuman Systems Model-Based Research: An integrative review, 2001). Of the studies where researchers utilized the Neuman Systems Model, 45% \( (n = 28) \) were experimental studies, compared to 16% \( (n = 10) \) correlational studies, 36% \( (n = 22) \) descriptive studies and 3% \( (n = 2) \) that were for instrument development. Nurses were found to be the research subject in 19% \( (n = 12) \) of the 62 studies examined (p. 236).

Additionally, Fawcett and Giangrande (2001) determined a majority of studies (72%) were clinical in nature \( (n = 44) \) compared to 14% administrative \( (n = 9) \), 11% education \( (n = 7) \) and 3% continuing education \( (n = 2) \) (Fawcett & Giangrande, Neuman Systems Model-Based Research: An integrative review, 2001, p. 236). The results of the literature review demonstrate that the majority of researchers who utilized the Neuman Systems Model carried out experimental studies where the focus was on clinical issues and prevention interventions.

Black, Boore, and Parahoo (2010) implemented a study of nursing interventions towards family members of critically ill patients utilizing the Neuman Systems Model as
a theoretical framework. The premise of the study, according to the researchers, was that psychological disturbances (stressors) have been well documented, but not tested directly, in practice and evidence suggests family intervention in caring for patients may be beneficial in improving psychological wellbeing. The researchers used the Sickness Impact Profile (SIP) (Bergner, Bobbitt, Kressel, Pollard, Gibson, & Morris, 1981) that measures physical, psychological and emotions, along with the Therapeutic Intervention Scoring System- 28 (Miranda, de Rijk, & Schaufeli, 1996) and the Intensive Care Delirium Screening Checklist (Bergeron, Dubois, Dumont, Dial, & Strobik, 2001). The researchers asked family members of critically ill patients (n = 170) to complete the measures at three time points: (a) week 4, (b) week 8 and (c) week 12.

Participants were split into a control group (n = 83) or an intervention group (n = 87). The intervention group received nurse-facilitated family participation in psychological care during their stay in the hospital, allowing the families to speak directly to critically ill patients to convey information about their conditions after being educated by nursing staff. The critically ill patients and families in the control group received education from nursing staff directly regarding their conditions. Results of the study demonstrated that the mean SIP scores were significantly lower (p < 0.001) throughout all three time points in the intervention group when compared to the control group (η² = 0.25, 0.40, 0.24) indicating the intervention group perceived the impact of critical illness (stressor) on their functional wellbeing less than participants in the control group (Black, Boore, & Parahoo, 2011, p. 1097). By using the Neuman Systems Model as a theoretical framework for the study, researchers concluded that the use of intervention as primary
intervention, in this instance by family members, was beneficial during the 12-week study.

Pines and colleagues (2012) utilized the Neuman Systems Model in a correlational study to examine relationships of stress resiliency, conflict management, and psychological empowerment in a population of baccalaureate nursing students ($n = 166$). Using the Stress Resiliency Profile (SRP) (Thomas & Tymon, 1992), Psychological Empowerment Instrument (PEI) (Spreitzer, 1995) and Conflict Mode Instrument (CMI) (Thomas & Killmann, Thomas-Killmann Conflict Mode Instrument, 1974), the researchers collected data at one time point during the participants’ class period. The researchers reported that stress resiliency as measured by the SRP was predictive of empowerment of nursing students, showing the participants demonstrated high stress predisposition scores and used avoidance ($\beta = -0.16$, $p < 0.05$) and accommodation ($\beta = -0.21$, $p < 0.05$) as ways to manage conflict (Pines, et al., 2012, p. 1491). Primary prevention, a focus in the Neuman Systems Model (1982), can be used by nurse educators to assess the level of stress resilience in students and guide academic programs to address interpersonal conflict, psychological empowerment and stress resiliency.

Nursing interventions surrounding the Neuman Systems Model involve using “prevention as an intervention” (p. 25). That is the nurse should intervene before a stress reaction occurs within an individual. It is in this way that CPSP targets healthcare providers by intervening prior to exposure to a stressor, developing and strengthening the flexible line of defense while protecting the normal line of defense within the individual.
The CPSP is designed to assist an individual healthcare provider to learn to reduce the possible risk factors that lead to stress and compassion fatigue. Using the Neuman Systems Model as a theoretical guide, it is possible to improve healthcare providers’ resiliency levels, or flexible line of resistance, and allow them to achieve a higher level of stability after exposure to a stressor (See Figure 2). Hypotheses 1a: Resiliency will significantly increase as measured by the Connor-Davidson Resilience Scale (CD-RISC) from just prior to receiving CPSP training to 30-days post-CPSP training. Hypothesis 1b: Coping levels will significantly increase as measured by the Ways of Coping Questionnaire (WCQ) from just prior to receiving CPSP training to 30-days post-CPSP training, and Hypothesis 1c: Compassion fatigue as measured by Professional Quality of Life (ProQOL) scale will decrease from just prior to receiving CPSP training to 30-Days post CPSP training all lend themselves to the primary prevention level of the Neuman Systems Model as the education provided in CPSP occurs before a reaction to a stressor occurs.

According to Neuman and Fawcett (2011), “primary prevention as an intervention is used for primary prevention and wellness retention, that is, to protect the client system’s normal line of defense or usual wellness state by strengthening the flexible line of defense” (p. 26). Specific Aim 2: Explore the relationship among resiliency, coping, and compassion fatigue in a sample of Army Nurses, LPNs, and Medics, lends itself to the reaction level of the Neuman Systems Model as the focus is on learned resistance to stressors, in this case, a learned resistance developed from CPSP training. CPSP training ties the intervention level of the Neuman Systems Model where the degree of the reaction to a stressor affects the basic structure of Army Nurses, LPNs or Medics by improving
their response pattern and ego structure. As Army Nurses, LPNs or Medics learn to improve their learned resistance and the degree of reaction, changes to the individual’s basic structure occurs (Neuman & Fawcett, 2011).

According to Neuman and Fawcett (2011), “the normal line of defense reflects mastery of certain knowledge and skills” (p. 107). The CPSP provides knowledge to the healthcare providers who take the course that, over time, can strengthen the normal line of defense and improve wellness. What is not known is whether the CPSP strengthens the lines of defense over time and by what degree. In this study, the CD-RISC, WCQ, and ProQOL will be used to measure resiliency, coping, and provider burnout prior to training and 30-days post training. These tools lend themselves to the Neuman Systems Theory to measure these variables within a theoretical framework.

This literature review on resilience, coping, and compassion fatigue indicates that workplace stress is a significant issue among nurses. Military healthcare providers are faced with the additional stressors that are inherent within an Army at war, including prolonged deployments, fear for one’s own personal safety, and exposure to horrific injuries. Compassion fatigue can result from exposure to prolonged and significant workplace stress in nurses. Effective coping techniques can improve an individual’s overall resilience, which can reduce the presence of compassion fatigue within healthcare providers. These coping techniques can be learned but must be practiced to make a long-lasting improvement in an individual’s overall resilience.

Also apparent from the literature review is there are significant gaps in literature. The concepts of resilience and coping do not have a single, unifying definition. This lack
of definition can create confusion as to what phenomenon is being studied. The concept of compassion fatigue does not have a singular meaning. Some researchers believe the term is synonymous with secondary exposure to trauma and others do not. This confusion as to what compassion fatigue is has created confusion in the literature. What is agreed upon among authors is that compassion fatigue is a real phenomenon that significantly affects nurses. In addition, there is also a lack of research regarding resilience improvement within the population of military healthcare providers. The results of this research study should add to the knowledge base on healthcare provider resiliency within the military and serve as a basis for future studies.
CHAPTER III

Methods

This chapter is a description of the methods and procedures that were implemented in this study. The research objectives, specific aims and hypotheses, description of the study design, sample size, and sample criteria are outlined. The method of data collection, analysis, and procedures to handle missing data and protection of human subjects are also addressed.

Purpose

The purpose of this longitudinal cohort pilot study was to advance clinical practice by updating the current nursing knowledge base regarding resiliency, coping, and compassion fatigue that affects Army and Civilian Nurses, LPNs, and Medics who treat wounded Soldiers. For the purposes of this study, Medics is defined as any enlisted Soldier with the Military Occupational Specialty (MOS) that is in the 68 series (68W, 68P, etc.). The study includes three well-known measurements of resiliency, coping, and compassion fatigue, the Ways of Coping Questionnaire (Folkman & Lazarus, 2010), Connor-Davidson Resilience Scale (Connor & Davidson, 2003) and the Professional Quality of Life Scale (Hudnall-Stamm, Blampied, Higson-Smith, Hudnall, Piland, & Stamm, 2010) respectively, to collect objective data and accurately examine the presence of emotional symptoms. The study also has a focus on a population of Army Nurses, LPNs, and Medics who are receiving CPSP training to examine the resiliency, coping and compassion fatigue levels of these providers before and after training.
Specific Aims and Hypotheses

The Specific Aims and Hypotheses for this study were:

Specific Aim 1: Examine the impact of CPSP training on resiliency, coping, and compassion fatigue in a sample of Army and Civilian Nurses, LPNs, and Medics.

Hypothesis 1a: Resiliency will significantly increase as measured by the Connor-Davidson Resilience Scale (CD-RISC) from just prior to receiving CPSP training to 30-days post-CPSP training.

Hypothesis 1b: Coping levels will significantly increase as measured by the Ways of Coping Questionnaire (WCQ) from just prior to receiving CPSP training to 30-days post-CPSP training.

Hypothesis 1c: Compassion fatigue as measured by Professional Quality of Life (ProQOL) scale will decrease from just prior to receiving CPSP training to 30-Days post CPSP training.

Specific Aim 2: Explore the relationship among resiliency, coping, and compassion fatigue.

Procedures

The Onsite Primary Investigator (OPI), who instructs CPSP at an Army Medical Center acquired a list of potential participant names for the study from a database of scheduled recipients of the mandatory CPSP training and gave it to the Primary Investigator (PI) who contacted the CPSP participants via email to invite them to voluntarily participate in the study. The PI asked willing participants who volunteered to
participate in the study by email to arrive at the CPSP training site 30 minutes early. The PI explained the purpose of the study to those participants who voluntarily showed up at the training site 30 minutes before the training and confirmed the participant’s willingness to take part in the study. The PI informed participants that their responses would remain confidential. The PI handed out a consent form to the participants to read and sign. Once participants signed the consent form, the PI distributed a three-questionnaire packet that consisted of the CD-RISC, WCQ, and the ProQOL (Appendix I, II, and III) to complete in a quiet area of the classroom. The PI also distributed a demographic questionnaire to the participants to complete (Appendix IV). The PI ensured the CD-RISC, WCQ and ProQOL questionnaires were shuffled prior to distributing them to the participants so that they received the surveys in a one over manner. The entire three-questionnaire packet took approximately 20 minutes for the participants to complete. Upon completion of the consent and the questionnaire, the PI reviewed the questionnaire forms for completeness. The PI then distributed a business card to the participants and informed the participants to call in the event they had any questions at a later date or time. The PI also informed the participants that follow-up questionnaires would be mailed to them in 30 days. The PI then asked the participants to attend the scheduled CPSP training. The PI ensured that all surveys received an alphanumeric code to identify the form to the individual participant.

The PI conducted follow-up assessments 30-days after participants completed the CPSP training. The PI contacted the Army and Civilian Nurses, LPNs, and Medics who completed the earlier questionnaire packet and attended CPSP training 30-days prior by mailing the participants questionnaires to their home address. The PI mailed postcards
and sent text messages one week prior to mailing questionnaires to remind participants that the questionnaires were to be mailed to them shortly. Mailing the questionnaires to participants’ home addresses was done to minimize the participants using work hours to complete the questionnaires as they most probably will complete the questionnaires at home. The mailed questionnaires (CD-RISC, WCQ, and ProQOL) along with the demographic questionnaire included a self-addressed, stamped envelope to return the completed scales to the investigator. The PI ensured that the CD-RISC, WCQ, and ProQOL questionnaires were shuffled so that participants received the surveys in a one-over manner. The PI instructed the participants that after completing questionnaires, they should mail the completed questionnaires to the PI at the University of Miami School of Nursing and Health Studies in the self-addressed stamped envelope provided to them. Upon receipt of the completed questionnaires, the PI examined the questionnaires for completeness. After two weeks, the PI mailed a one-time reminder post card and sent a text message asking any participants who had not returned the questionnaires to do so if they had not done so already. The PI secured the questionnaires and all data in a locked filing cabinet in the investigators locked office at the University of Miami School of Nursing and Health Sciences. The PI input the data and maintained all data on a password-protected computer. The PI also backed-up data and secured all data on a password-protected external drive locked in the filing cabinet in his office at the University of Miami School of Nursing and Health Sciences.
**Study Design**

The study was a longitudinal, correlational, cohort, pilot study formulated to examine the impact of CPSP training on resiliency, coping and compassion fatigue over time (prior to CPSP training and 30-days post-training) in a population of Army and Civilian Nurses, LPNs, and Medics at an Army Medical Center. The study took four months to complete. Length of participation for study volunteers was 30-days and consisted of taking three questionnaires, the Connor-Davidson Resilience Scale (CD-RISC), the Ways of Coping Questionnaire (WCQ), and the Professional Quality of Life Scale (ProQOL) prior to training and retaking the scales 30-days after training. A Demographic Questionnaire was administered prior to CPSP training and again at 30 days post-training. At 30-days, the PI mailed the participants the CD-RISC, WCQ and ProQOL scales along with the demographic questionnaire to be completed and returned by mail to the PI.

**Sampling Procedure**

A convenience sample of 120 Army and Civilian Nurses, LPNs, and Medics attending CPSP training at an Army Medical Center between February 2013 and June 2013 was planned for the study. The primary site for data collection was an Army Medical Center on the eastern seaboard. The PI acquired the names of the participants attending the scheduled monthly CPSP training from the Army Medical Center onsite PI. Prior to attending CPSP training, the PI contacted scheduled CPSP participants via email to invite them to volunteer to participate in the study. Army and Civilian Nurses, LPNs, and Medics who were willing to participate were asked in the email to arrive at the
training site 30 minutes prior to the scheduled CPSP training. After participants gave consent for the study, the PI administered three questionnaires consisting of the CD-RISC, WCQ, the ProQOL, along with a demographic questionnaire to the participants to complete in a quiet area of the classroom.

**Sample Criteria**

The primary criteria for study participants in this study included Army and Civilian Nurses, LPNs, and Medics assigned to an Army Medical Center who are required to attend annual CPSP training at an Army Medical Center. Participants were greater than 18 years old and were not scheduled to move away from the Army Medical Center or deploy overseas within 30 days of consent to participate in the study.

**Sample Size**

There is limited research about resiliency and coping in military healthcare providers. The few prior studies in existence are qualitative in nature and contain discussions of participant feelings about the attending resiliency training. Given these identified circumstances, we were unable to calculate an effect size. For this pilot study, the focus was on generating an effect size that can later be used in future research to conduct a power analysis to determine necessary sample size to detect statistical significance. T-tests and mixed ANOVAs were used to examine the results of the study and significance. The sample size sought was 120, factoring in outliers (2%) and a 30% attrition rate, obtaining questionnaires from 81 participants.
Inclusion/Exclusion Criteria:

Inclusion Criteria:

1) 18 years old or older
2) Able to read and understand consent form and follow study instructions
3) Consent to participate in the study
4) Assignment as a Registered Nurse (BSN), LPN or Medic (68 Series MOS) employed by the United States Army

Exclusion Criterion:

1) Individuals who had deployment or permanent change of station orders within 30 days of attending the scheduled CPSP training.

Measurement

The self-administered questionnaires were administered using a pencil and paper format for four tools: The Connor-Davidson Resilience Scale (CD-RISC), the Ways of Coping Questionnaire (WCQ), the Professional Quality of Life Scale (ProQOL) and Demographic Questionnaire prior to CPSP training. Three tools, the Connor-Davidson Resilience Scale (CD-RISC), the Ways of Coping Questionnaire (WCQ), the Professional Quality of Life Scale (ProQOL) were self-administered by the participants 30-days after CPSP training.

Demographics

A demographic questionnaire consisting of military specific questions was used in order to ascertain information, such as deployment history, Military Occupational
Specialty (MOS), and time in federal service. These questions were used to determine if any correlations existed with deployment history, MOS, time in service, alcohol and tobacco use and resiliency, coping, or provider fatigue.

**Connor Davidson Resilience Scale**

Developed in 2003, the CD-RISC is used to assess multiple aspects within people that demonstrate resiliency of an individual over time. The CD-RISC consists of 25 questions that the individual answers on a 5-point Likert scale, where higher scores reflect a greater degree of resilience within the individual (Connor & Davidson, 2003). The CD-RISC measures the total resilience of an individual assessing areas such as personal competence, trust in one’s instincts, tolerance and the effects of stress (Connor & Davison, 2003). The scale is used to examine responses by individuals to determine how resilient an individual is at a particular moment. The reliability, validity, and factor analytic structure of the scale were previously evaluated. Connor and Davidson (2003) report a Cronbach’s alpha of 0.89 \((n = 577)\) with item-total correlations ranging from 0.30 to 0.70. CD-RISC scores demonstrate an intraclass correlation coefficient of 0.87 and test-retest reliability coefficients of .87 as has been shown in previous studies (Brown, 2008, Connor & Davison, 2003).

**Ways of Coping Questionnaire**

The Ways of Coping Questionnaire by Folkman and Lazarus (1988) is a 66-item instrument that is used to assess eight coping factors within individuals. These coping factors include Confrontive Coping, Distancing, Self-Controlling, Seeking Social
Support, Accepting Responsibility, Escape-Avoidance, Planful Problem Solving, and Positive Reappraisal (Folkman & Lazarus, 1988, 2010). The WCQ can be used to assess and identify thoughts that individuals use to cope with stressful encounters of everyday living. The WCQ captures both problem and emotion focused coping functions and changes in coping both across different encounters and within a particular encounter (Folkman & Lazarus, 1988). According to Folkman and Lazarus (2010), raw scores of the WCQ can be used to describe the coping effort for each of the eight types of coping whereas high raw scores indicate that the person often uses these behaviors in coping with a particular stressful event. Raw scores can be converted to relative scores to describe the proportion of effort for each type of coping behavior, expressing them as a percentage ranging from 0 to 100. The results of previous studies show reliability scores across subscales have averaged .73 (Folkman & Lazarus, 2010). Grabiak, Kim, and Mitchell (2005) examined the reliability and validity of the WCQ on participants who recently lost a family member to suicide. The authors found that reliability scores ranged from $\alpha = .57$ to $\alpha = .82$. Mean inter-item correlations of all eight subscales ranged from .23–.40. Internal consistency of the eight coping subscales ranged from $\alpha = .57$ (Accepting Responsibility) to $\alpha = .82$ (Escape-Avoidance) (Grabiak, Kim, & Mitchell, 2005).

**Professional Quality of Life Questionnaire**

The ProQOL is a 30-item measure of both the positive and negative effects of caring for others who experience suffering and trauma, making it ideal for the use in a population of healthcare providers (Hudnall-Stamm, Blampied, Higson-Smith, Hudnall,
Piland, & Stamm, 2010). The ProQOL, which is currently being administered in CPSP training, has three sub-scales to measure compassion satisfaction, burnout and secondary exposure to traumatic stress (Hudnall-Stamm, Blampied, Higson-Smith, Hudnall, Piland, & Stamm, 2010). The three ProQOL subscales are measured differently with higher scores on the compassion satisfaction subscore equating to a greater satisfaction in a person’s ability to be an effective caregiver. In contrast, increased scores on the burnout and compassion fatigue subscales make it more likely for a person’s risk for burnout and compassion fatigue respectively. (Hudnall-Stamm et al., 2010). According to Hudnall-Stamm and colleagues (2010), the ProQOL scale has decent construct validity with several published papers that have used the measure. The compassion fatigue scale showed 2% shared variance ($r = -.23; \text{co-}\sigma = 5\%; n = 1187$) with the secondary traumatic stress subscale and 5% shared variance ($r = -.14; \text{co-}\sigma = 2\%; n = 1187$) with the burnout subscale (Hudnall-Stamm, Blampied, Higson-Smith, Hudnall, Piland, & Stamm, 2010).

**Data Collection and Analysis**

**Procedure for Data Collection**

Recruitment: The PI recruited a convenience sample of the Army Nursing Team, which included Army and Civilian Registered Nurses, LPNs and Medics. The onsite investigator at the Army Medical Center, based on the study inclusion and exclusion criteria, determined eligibility for enrollment in the study. The PI asked for written informed consent from potential participants prior to administering any scales. Study description, rationale, benefits, risks, and right to withdraw were included in the discussion and all questions were answered. Any participant who was unable to verbalize
understanding of the protocol and risk of participation in the study for any reason was excluded. At the time study eligibility was determined, the PI asked for and the individuals gave informed consent to participate in the study and the PI answered any additional questions the participants may have about the study. The PI administered to the participants a survey packet to complete. Participation in the investigation was voluntary and participants were informed that they could withdraw at any time. The participants were assigned a unique participant number (not related to their Social Security Number) when they completed the informed consent form and this number was entered into a master participant list, which was maintained in a locked cabinet. Participants were not monetarily compensated for their involvement.

**Protection of Human Subjects**

Prior to conducting the study, the PI obtained permission to conduct the study at Army Medical Center from the Deputy Commander for Nursing and the Chief, Center for Nurse Science & Clinical Inquiry at an Army Medical Center (See attached letter). Permission was also obtained by the Army Medical Center, University of Miami and TSNRP Institutional Review Boards.

Benefits: There were no immediate benefits to the participant for participating in this study. The potential long-term benefit from participation in this study was contribution to (1) feasibility testing of a pilot study that may have wider application to military service members and (2) testing the effects of the CPSP training longer-term allows investigators to use information and data acquired to plan future studies.

Risks: The major risks for this study were associated with confidentiality and the stress and anxiety the nurse may have experienced completing the questionnaires.
Should a participant become suicidal or homicidal during the course of the study, the participant would be escorted to the emergency room of the Army Medical Center for evaluation and safety by emergency department physicians and on call mental health providers.

Safeguards for Protecting Subjects: A unique participant number was assigned to each participant by the PI at the time informed consent was received. Study documents did not contain identifiers, only the participants’ study number. All data collection forms and the master participant list were secured in an office at the University of Miami School of Nursing and Health Science, Coral Gables, Florida. All data maintained on a computer was password protected and only accessible by the study investigators. After a period of at least five years, the data will be destroyed in accordance with research department protocol. Full compliance with Health Insurance Portability and Accountability Act (HIPAA) standards would be upheld throughout the investigation to protect privacy and confidentiality.

Alternatives: Choosing not to participate was the alternative to participation in the study.

Data safety: All data collection sheets were maintained by the PI in a locked filing cabinet in his private office. The office was locked when not occupied by the primary investigator. De-identified data were coded and entered into a database on a laptop that was equipped with encryption software from the University of Miami. Only the PI had direct access to the data in electronic or hard copy form.
Monitoring Plan: Data collection was performed by the PI. Continuation reports were submitted to the Institutional Review Boards at the University of Miami, the Army Medical Center, and the Triservice Nursing Research Program as required.

Institutional Review Board: IRB approval was obtained from the Army Medical Center, the University of Miami and the Triservice Nursing Research Program (TSNRP).

HIPPA Compliance: A confidentiality and Privacy Rights (HIPPA Compliance) form was obtained from the participants at the time of consent. See Appendix V

Inclusion of Women and Minorities: Women and minorities were included in this investigation. No participant was excluded based on race or ethnicity and all participants, regardless of race or ethnicity, have an equal opportunity to participate in this study

Inclusion of Children: Inclusion criteria require participants to be at least 18 years of age. No children were included in the study.

Vertebrate Animals: No non-human vertebrate animals were used in this study.

Missing Data

The PI informed participants to give a response to each question to the best of their ability. The investigator was available to clarify any queries the participants had while the initial questionnaires were being completed. Each questionnaire was examined for completeness once turned in by the participant. Any questionnaire with greater than 30% missing data was discarded. There were no questionnaires returned that had greater than 30% missing data.

Data Analysis

T-tests and mixed ANOVAs were utilized to analyze data collected. In this study, the psychometric properties of the self-report instruments were evaluated by assessing
internal consistency of instrument scales and validity was also be examined for inter-
correlations between the measures. Descriptive statistics were generated on the
demographics of the subjects and scores/classification on the selected measures. These
data were compared to assess for baseline differences that needed to be accounted for in
the analysis. Distributions for tests were checked and non-parametric tests were used if
data did not meet assumptions.
CHAPTER IV

Results

Overview

The purpose of this study was to examine resiliency, coping, and compassion fatigue of Army and Civilian Nurses, LPNs, and Medics who treat wounded Soldiers. Additionally, this study was designed with the idea to explore whether resiliency and coping can be improved by CPSP and compassion fatigue diminished over a sustained period of time.

Specific Aims and Hypotheses

The Specific Aims and Hypotheses for this study were:

Specific Aim 1: Examine the impact of CPSP training on resiliency, coping, and compassion fatigue in a sample of Army and Civilian Nurses, LPNs, and Medics.

Hypothesis 1a: Resiliency will increase as measured by the Connor-Davidson Resilience Scale (CD-RISC) from just prior to receiving CPSP training to 30-days post-CPSP training.

Hypothesis 1b: Coping levels will increase as measured by the Ways of Coping Questionnaire (WCQ) from baseline 30-days post-CPSP training.

Hypothesis 1c: Compassion fatigue as measured by Professional Quality of Life (ProQOL) scale will decrease from baseline to 30-Days post CPSP training.
Specific Aim 2: Explore the relationship among resiliency, coping, and compassion fatigue.

Description of Sample

A convenience sample of 93 Army and civilian Nurses, LPNs, and Medics from prescheduled CPSP training at the Army Medical Center and surrounding clinics between February and June 2013 volunteered to participate in the study. Data were collected over this four-month period using an IRB approved demographic questionnaire, the Connor Davidson Resiliency Scale (Connor & Davidson, 2003), the Ways of Coping Questionnaire (Folkman & Lazarus, Ways of Coping Questionnaire Sampler Set: Manual, Test Booklet, Scoring Key, 1988), and the Professional Quality of Life Scale (Hudnall-Stamm, Blampied, Higson-Smith, Hudnall, Piland, & Stamm, 2010).

Healthcare providers received emails prior to CPSP training informing them of the study. Prior to the start of the CPSP training, the PI introduced himself and explained the purpose of the study. Ninety-seven participants were approached individually and asked of their willingness to volunteer in the study. Of the 97 potential participants, four did not wish to participate after reviewing the informed consent with the PI, resulting in a sample size of 93 participants.

Demographics

Of the 93 healthcare providers who agreed to participate in the study, the majority were civilian nurses and LPNs ($n = 55$) compared to military nurses and medics ($n = 38$). The military nurses and medics were overwhelmingly from the Army ($n = 37$) with one
nurse from the United States Public Health Service who recently transferred from the Army. A majority of the participants responded that they have taken some colleges classed or obtained a degree \( (n = 89) \) compared to only 4 participants who only had a high school education. A majority of healthcare providers reported being married or in a relationship \( (n = 59) \).

A majority of healthcare providers did not smoke cigarettes \( (n = 80) \). A majority of the participants reported that they were social drinkers \( (n = 54) \), drinking less than one drink of alcohol per week. Several other participants reported that they did not ever consume alcohol \( (n = 37) \). Participants reported that a majority have attended CPSP training prior to the study \( (n = 79) \) with only 12 reporting that they have never attended CPSP training. Twenty-nine percent \( (n = 11) \) of the military healthcare providers \( (n = 38) \) reported attending mental health counseling related to deployment on at least one occasion. A majority of military enlisted healthcare providers \( (n = 15) \) reported having an MOS of 68W, Healthcare Specialist. Military officers were equally divided from the MOS of 66B, Army Public Health Nurse \( (n = 4) \), 66C, Psychiatric Mental Health Nurse \( (n = 4) \), 66H, Medical-Surgical Nurse \( (n = 4) \), and 66P, Family Nurse Practitioner \( (n = 3) \).
### Table 2
Demographic Information of Healthcare Providers who Participated in the Study (n = 93)

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>(%)</th>
<th></th>
<th>n</th>
<th>(%)</th>
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<td></td>
<td>Education Level</td>
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<td>High School or GED</td>
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<td>Some College</td>
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<tr>
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<td>Post-Bachelor Degree</td>
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<td>58</td>
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<tr>
<td>E1-E4</td>
<td>11</td>
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<td>African American or Black</td>
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<td>30</td>
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<td>Hispanic or Latino</td>
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<td>5</td>
</tr>
<tr>
<td>O1-O3</td>
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<td>10</td>
<td>American Indian or Native Alaskan</td>
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<td>1</td>
</tr>
<tr>
<td>O4-O6</td>
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<td>6</td>
<td>Asian</td>
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<td>3</td>
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<tr>
<td>MOS</td>
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<td>Pacific Islander</td>
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<td>0</td>
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<td>68 Series (Medics)</td>
<td>23</td>
<td>25</td>
<td>Other</td>
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<td>2</td>
</tr>
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<td>66 Series (Army Nurse)</td>
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<td>Relationship Status</td>
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<td>Single</td>
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<td>10</td>
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<td></td>
<td></td>
<td></td>
<td>Married</td>
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<td>61</td>
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<td>RN</td>
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<td>In a current relationship</td>
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<td>Divorced</td>
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<td>17</td>
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<td>Widowed</td>
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<td>3</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Separated from spouse</td>
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Table 3
Alcohol, Smoking, and Prior CPSP Training for Healthcare Providers ($n = 93$)

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<tr>
<th>Smoking Status</th>
<th>$n$</th>
<th>(%)</th>
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</thead>
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<tr>
<td>Did not smoke</td>
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<td>Smoke</td>
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<td>13</td>
</tr>
<tr>
<td>Did not respond</td>
<td>1</td>
<td>1</td>
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<table>
<thead>
<tr>
<th>Alcohol Consumption</th>
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<th></th>
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</thead>
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<tr>
<td>Did not drink</td>
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<td>40</td>
</tr>
<tr>
<td>Social drinker (&lt;1/day)</td>
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<tr>
<td>Frequent drinker (&gt;1/day)</td>
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<td>1</td>
</tr>
<tr>
<td>Did not respond</td>
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<td>1</td>
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</table>

<table>
<thead>
<tr>
<th>Prior CPSP Training</th>
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<td>No Prior Training</td>
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<td>13</td>
</tr>
<tr>
<td>1 time</td>
<td>16</td>
<td>17</td>
</tr>
<tr>
<td>2 times</td>
<td>21</td>
<td>23</td>
</tr>
<tr>
<td>3 or more times</td>
<td>42</td>
<td>45</td>
</tr>
<tr>
<td>Did not respond</td>
<td>2</td>
<td>2</td>
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Table 4
Mental Health Counseling reported related to deployment

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<th>Mental Health Contacts</th>
<th>n</th>
<th>%</th>
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<tr>
<td>One occasion</td>
<td>5</td>
<td>13</td>
</tr>
<tr>
<td>Three occasions</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Nine or more occasions</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td>Total</td>
<td>11</td>
<td>29</td>
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Table 5
Military Healthcare Provider Enlisted MOS by Frequency \((n = 23)\)

<table>
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<tr>
<th>MOS</th>
<th>Description</th>
<th>n</th>
<th>%</th>
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<tbody>
<tr>
<td>68D</td>
<td>Operating Room Specialist</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>68K</td>
<td>Medical Laboratory Specialist</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>68P</td>
<td>Radiology Specialist</td>
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<td>13</td>
</tr>
<tr>
<td>68S</td>
<td>Preventive Medicine Specialist</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>68W</td>
<td>Health Care Specialist</td>
<td>15</td>
<td>65</td>
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Table 6
Military Healthcare Provider Officer MOS by Frequency \((n = 15)\)

<table>
<thead>
<tr>
<th>MOS</th>
<th>Description</th>
<th>n</th>
<th>%</th>
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</thead>
<tbody>
<tr>
<td>66B</td>
<td>Army Public Health Nurse</td>
<td>4</td>
<td>25</td>
</tr>
<tr>
<td>66C</td>
<td>Psychiatric / Mental Health Nurse</td>
<td>4</td>
<td>25</td>
</tr>
<tr>
<td>66H</td>
<td>Medical-Surgical Nurse</td>
<td>4</td>
<td>25</td>
</tr>
<tr>
<td>66P</td>
<td>Family Nurse Practitioner</td>
<td>3</td>
<td>19</td>
</tr>
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</table>
**Study Variables**

*Resiliency:* This section is a description of the results of the Connor Davidson Resiliency Scale (CD-RISC) in the population of Army and Civilian Nurses, LPNs, and Medics sampled. The CD-RISC consists of 25 questions that the individual answers on a 5-point Likert scale, where higher scores reflect a greater degree of resilience within the individual (Connor & Davidson, 2003). The CD-RISC measures the total resilience of an individual assessing areas such as personal competence, trust in one’s instincts, tolerance and the effects of stress at a particular moment (Connor & Davison, 2003). The total of all questions are summed resulting in overall scores ranging from 0 to 100, with higher scores reflecting greater resiliency within an individual (Table 7).

*Coping:* The Ways of Coping Questionnaire (WCQ) was utilized in this study to measure an individual’s coping ability. The WCQ is a 66-item instrument (only 50 items are scored per the scale’s design) that is used to assess eight coping factors within individuals, including Confrontive Coping, Distancing, Self-Controlling, Seeking Social Support, Accepting Responsibility, Escape-Avoidance, Planful Problem Solving, and Positive Reappraisal (Folkman & Lazarus, 1988, 2010). The WCQ can be used to assess and identify thoughts that individuals use to cope with stressful encounters of everyday living. Raw scores can be converted to relative scores to describe the proportion of effort for each type of coping behavior, expressing them as a percentage ranging from 0 to 100. The mean coping scores using the WCQ for the participants prior to receiving CPSP training can be seen in Table 8.
Compassion Fatigue: Professional Quality of Life Scale (ProQOL) was utilized in this study to measure an individual’s level of compassion fatigue. The authors of the ProQOL write, “Compassion fatigue is characterized by the negative aspects of providing care to those who have experienced extreme or traumatic stressors” (Hudnall-Stamm, Blampied, Higson-Smith, Hudnall, Piland, & Stamm, 2010, p. 21). The 30-item Likert scale ProQOL produces individual raw scores and t-scores that measure an individual’s compassion satisfaction, burnout, and secondary traumatic stress. Participants scores on the ProQOL prior to receiving CPSP training \((n = 93)\) ranged from 23 to 50 in Compassion Satisfaction, 10 to 36 in burnout, and 11 to 37 in secondary traumatic stress. The average score according to Hudnam-Stamm (2010) is 50 for all three scales with Compassion Satisfaction (SD 10; alpha .88), Burnout (SD 10; alpha .75) and Secondary Traumatic Stress (SD 10; alpha .81) showing good reliability (p.2). The after CPSP group \((n = 28)\) reported scores of 23 to 30 in Compassion Satisfaction, 10 to 36 in burnout, and 11 to 37 in secondary traumatic stress (Table 7).

Table 7:

<table>
<thead>
<tr>
<th></th>
<th>Resiliency (CD-RISC)</th>
<th>Coping (WCQ)</th>
<th>Compassion Fatigue (ProQOL)</th>
<th>Compassion Satisfaction (ProQOL)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>(M(SD))</td>
<td>(M(SD))</td>
<td>(M(SD))</td>
<td>(M(SD))</td>
</tr>
<tr>
<td></td>
<td>(n)</td>
<td></td>
<td>Burnout</td>
<td>Secondary Traumatic Stress</td>
</tr>
<tr>
<td>E1–E4</td>
<td>11</td>
<td>72.64 (10.71)</td>
<td>95.82 (20.66)</td>
<td>21.82 (5.17)</td>
</tr>
<tr>
<td>E5–E9</td>
<td>12</td>
<td>75.08 (14.09)</td>
<td>82.50 (33.39)</td>
<td>21.17 (4.84)</td>
</tr>
<tr>
<td>O1–O3</td>
<td>9</td>
<td>72.38 (14.79)</td>
<td>100.50 (30.44)</td>
<td>19.75 (5.45)</td>
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<tr>
<td>O4–O6</td>
<td>6</td>
<td>79.60 (2.20)</td>
<td>77.17 (30.33)</td>
<td>21.83 (3.66)</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th></th>
<th>E1 – E4</th>
<th>E5 – E9</th>
<th>O1– O3</th>
<th>O4– O6</th>
<th>DOD Civilian</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>11</td>
<td>12</td>
<td>9</td>
<td>6</td>
<td>55</td>
<td>93</td>
</tr>
<tr>
<td>M(SD)</td>
<td>7.09</td>
<td>6.50</td>
<td>7.13</td>
<td>6.33</td>
<td>7.25</td>
<td>7.02</td>
</tr>
<tr>
<td>(SD)</td>
<td>(3.36)</td>
<td>(2.88)</td>
<td>(2.80)</td>
<td>(4.18)</td>
<td>(3.43)</td>
<td>(3.27)</td>
</tr>
<tr>
<td>Confrontive Coping M(SD)</td>
<td>8.91</td>
<td>5.92</td>
<td>5.88</td>
<td>5.17</td>
<td>6.81</td>
<td>6.77</td>
</tr>
<tr>
<td>Distancing M(SD)</td>
<td>(3.75)</td>
<td>(2.88)</td>
<td>(3.31)</td>
<td>(1.84)</td>
<td>(3.12)</td>
<td>(3.18)</td>
</tr>
<tr>
<td>Self-Controlling M(SD)</td>
<td>15.45</td>
<td>10.58</td>
<td>11.88</td>
<td>10.83</td>
<td>11.60</td>
<td>11.89</td>
</tr>
<tr>
<td>Seeking Social Support M(SD)</td>
<td>6.36</td>
<td>7.58</td>
<td>10.88</td>
<td>8.17</td>
<td>9.44</td>
<td>8.81</td>
</tr>
</tbody>
</table>

Table 8

Mean Scores of the Army Healthcare Providers WCQ Subscales Prior to CPSP Training (n = 93)

<table>
<thead>
<tr>
<th>n</th>
<th>E1 – E4</th>
<th>E5 – E9</th>
<th>O1– O3</th>
<th>O4– O6</th>
<th>DOD Civilian</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>M(SD)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5.09</td>
<td>4.00</td>
<td>5.75</td>
<td>3.50</td>
<td>4.88</td>
<td>4.74</td>
</tr>
<tr>
<td>(SD)</td>
<td>(3.18)</td>
<td>(2.52)</td>
<td>(3.37)</td>
<td>(2.43)</td>
<td>(3.28)</td>
<td>(3.09)</td>
</tr>
<tr>
<td>Accepting Responsibility M(SD)</td>
<td>9.55</td>
<td>6.00</td>
<td>10.63</td>
<td>4.17</td>
<td>7.92</td>
<td>7.77</td>
</tr>
<tr>
<td>Escape Avoidance M(SD)</td>
<td>(3.88)</td>
<td>(4.16)</td>
<td>(4.00)</td>
<td>(4.17)</td>
<td>(4.66)</td>
<td>(4.61)</td>
</tr>
<tr>
<td>Planful Problem Solving M(SD)</td>
<td>9.73</td>
<td>9.75</td>
<td>11.13</td>
<td>9.67</td>
<td>9.90</td>
<td>10.02</td>
</tr>
<tr>
<td>Positive Reappraisal M(SD)</td>
<td>(3.52)</td>
<td>(4.05)</td>
<td>(4.91)</td>
<td>(4.93)</td>
<td>(4.15)</td>
<td>(4.09)</td>
</tr>
</tbody>
</table>

Range of Scores

49-98  29-153  10-36  11-37  23-50
Table 9
Mean Army Healthcare Providers CD-RISC and ProQOL Scores Prior to CPSP by Grade ($n = 28$)

<table>
<thead>
<tr>
<th>Grade</th>
<th>n</th>
<th>Resiliency (CD-RISC) M(SD)</th>
<th>Compassion Fatigue (ProQOL) M(SD)</th>
<th>Compassion Satisfaction (ProQOL) M(SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>E1 – E4</td>
<td>3</td>
<td>67.67 (2.52) 21.67 (1.15) 27.33 (11.24)</td>
<td>32.33 (7.02)</td>
<td></td>
</tr>
<tr>
<td>E5 – E9</td>
<td>3</td>
<td>73.67 (18.45) 25.33 (3.51) 15.33 (4.16)</td>
<td>33.00 (10.44)</td>
<td></td>
</tr>
<tr>
<td>O1– O3</td>
<td>4</td>
<td>77.50 (20.68) 29.50 (5.20) 18.25 (3.40)</td>
<td>38.00 (11.78)</td>
<td></td>
</tr>
<tr>
<td>O4– O6</td>
<td>2</td>
<td>81.50 (2.12) 32.50 (2.12) 17.00 (4.24)</td>
<td>42.50 (.71)</td>
<td></td>
</tr>
<tr>
<td>DOD Civilian</td>
<td>16</td>
<td>74.25 (11.38) 30.00 (2.55) 20.56 (3.92)</td>
<td>42.31 (5.06)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>28</td>
<td>74.46 (12.47) 28.71 (4.09) 20.14 (5.55)</td>
<td>39.64 (7.58)</td>
<td></td>
</tr>
</tbody>
</table>

Table 10
Mean Army Healthcare Providers CD-RISC and ProQOL Scores 30-Days Post-CPSP by Grade ($n = 28$)

<table>
<thead>
<tr>
<th>Grade</th>
<th>n</th>
<th>Resiliency (CD-RISC) M(SD)</th>
<th>Compassion Fatigue (ProQOL) M(SD)</th>
<th>Compassion Satisfaction (ProQOL) M(SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>E1 – E4</td>
<td>3</td>
<td>67.67 (2.08) 23.00 (5.20) 23.00 (5.29)</td>
<td>29.67 (9.71)</td>
<td></td>
</tr>
<tr>
<td>E5 – E9</td>
<td>3</td>
<td>75.33 (22.50) 21.33 (6.43) 15.00 (1.73)</td>
<td>35.00 (9.84)</td>
<td></td>
</tr>
<tr>
<td>O1– O3</td>
<td>4</td>
<td>74.00 (40.04) 21.50 (13.18) 17.50 (4.51)</td>
<td>37.00 (15.47)</td>
<td></td>
</tr>
<tr>
<td>O4– O6</td>
<td>2</td>
<td>74.00 (7.07) 18.50 (3.54) 19.5 (7.79)</td>
<td>42.50 (9.19)</td>
<td></td>
</tr>
<tr>
<td>DOD Civilian</td>
<td>16</td>
<td>75.88 (13.22) 18.63 (3.59) 19.75 (5.21)</td>
<td>41.88 (6.55)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>28</td>
<td>74.54 (17.93) 19.79 (5.90) 19.25 (5.10)</td>
<td>39.19 (9.25)</td>
<td></td>
</tr>
</tbody>
</table>
Results

Paired samples t-tests were conducted using SPSS 19 to compare scores of the CD-RISC, WCQ, and ProQOL scores from two time points: prior to a participant receiving CPSP training and 30-days post CPSP training. Using the hypotheses of this study, the results are as follows:

Hypothesis 1a: Resiliency will significantly increase as measured by the Connor-Davidson Resilience Scale (CD-RISC) from just prior to receiving CPSP training to 30-days post-CPSP training.

A paired-samples t-test was conducted using SPSS 19 to compare scores of the CD-RISC from two time points: prior to a participant receiving CPSP training and 30-days post CPSP training. There was no statistically significant difference in CD-RISC scores between prior to receiving CPSP training ($M = 74.46, SD = 12.47$) and 30-days post CPSP training at ($M = 74.54, SD = 17.93$); $t(27) = 0.04, p = .970$.

Hypothesis 1b: Coping levels will significantly increase as measured by the Ways of Coping Questionnaire (WCQ) from just prior to receiving CPSP training to 30-days post-CPSP training.

A paired-samples t-test was conducted using SPSS 19 to compare total scores and scores of the eight coping factors of the WCQ from two time points: prior to a participant receiving CPSP training and 30-days post CPSP training. There was no statistically significant difference in Total WCQ scores between prior to receiving CPSP training ($M = 86.46, SD = 27.89$) and 30-days post CPSP training at ($M = 80.61, SD = 22.92$); $t(27) = -1.20, p = .240$. 
The 8 coping factors of Confrontive Coping, Distancing, Self-Controlling, Seeking Social Support, Accepting Responsibility, Escape-Avoidance, Planful Problem Solving, and Positive Reappraisal were examined from prior to a participant receiving CPSP training (time 1) and 30-days post CPSP training (time 2). There was no significant difference with the exception of the coping factor Positive Reappraisal ($p = .025$) (Table 11).

Table 11

Army Healthcare Providers T-test Scores of the 8 Coping Factors on the WCQ Prior to Receiving CPSP Training and 30-days Post-CPSP training ($n = 28$)

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>$t$</th>
<th>$df(27)$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confrontive Coping</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time 1</td>
<td>6.96</td>
<td>3.48</td>
<td>-0.49</td>
<td></td>
<td>.631</td>
</tr>
<tr>
<td>Time 2</td>
<td>6.61</td>
<td>3.26</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distancing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time 1</td>
<td>6.68</td>
<td>3.37</td>
<td>-1.08</td>
<td></td>
<td>.291</td>
</tr>
<tr>
<td>Time 2</td>
<td>6.07</td>
<td>3.79</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-Controlling</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time 1</td>
<td>11.04</td>
<td>3.49</td>
<td>-0.49</td>
<td></td>
<td>.630</td>
</tr>
<tr>
<td>Time 2</td>
<td>10.68</td>
<td>3.02</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seeking Social Support</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time 1</td>
<td>7.82</td>
<td>4.18</td>
<td>-0.69</td>
<td></td>
<td>.496</td>
</tr>
<tr>
<td>Time 2</td>
<td>7.25</td>
<td>4.03</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accepting Responsibility</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time 1</td>
<td>4.25</td>
<td>3.06</td>
<td>-0.97</td>
<td></td>
<td>.339</td>
</tr>
<tr>
<td>Time 2</td>
<td>3.71</td>
<td>3.43</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Escape-Avoidance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time 1</td>
<td>6.64</td>
<td>4.58</td>
<td>-0.05</td>
<td></td>
<td>.965</td>
</tr>
<tr>
<td>Time 2</td>
<td>6.60</td>
<td>4.89</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Planful Problem Solving</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time 1</td>
<td>9.00</td>
<td>4.23</td>
<td>0.86</td>
<td></td>
<td>.399</td>
</tr>
</tbody>
</table>
Hypothesis 1c: Compassion fatigue as measured by Professional Quality of Life (ProQOL) scale will decrease from just prior to receiving CPSP training to 30-Days post CPSP training.

A paired-samples t-test was conducted using SPSS 19 to compare scores of the ProQOL from two time points: prior to a participant receiving CPSP training and 30-days post CPSP training. The three sub-scales of the ProQOL of compassion satisfaction, burnout and secondary exposure to traumatic stress were examined. There was no statistically significant difference between Compassion Satisfaction scores in participants prior to receiving CPSP ($M = 39.64, SD = 7.58$) and the scores 30-days post CPSP training ($M = 39.18, SD = 9.25$); $t(27) = -51, p = .618$. There was no statistically significant difference between Secondary exposure to traumatic stress scores in participants prior to receiving CPSP ($M = 19.25, SD = 5.10$) and the scores 30-days post CPSP training ($M = 20.14, SD = 5.55$); $t(27) = 1.32, p = .200$. There was a statistically significant difference between Burnout scores in participants prior to receiving CPSP ($M = 28.71, SD=4.09$) and the scores 30-days post CPSP training ($M = 19.79, SD = 5.90$); $t(27) = -5.43, p < .001$.

Specific Aim 2: Explore the relationship among resiliency, coping, and compassion fatigue in a sample of Army and Civilian Nurses, LPNs, and Medics.
Mixed ANOVAs were utilized to explore the relationships among military nurses, medics, civilian RNs and LPNs \((n = 28)\) who completed the questionnaires prior to receiving CPSP training and 30-days post CPSP training and scores on the CD-RISC, WCQ, and ProQOL scores. The independent demographic variables of MOS, level of education, and deployment history were examined as between-subjects variables while Pre and Posttest scores of the CD-RISC, WCQ, and ProQOL scales were run using as within-subjects variables.

Table 12
Army Healthcare Providers CD-RISC/ ProQOL Mean Scores 30-Days Post-CPSP by Occupation \((n = 28)\)

<table>
<thead>
<tr>
<th>Occupation</th>
<th>n</th>
<th>Resiliency (CD-RISC) (M(SD))</th>
<th>Compassion Fatigue (ProQOL) Burnout (M(SD))</th>
<th>Compassion Fatigue (ProQOL) Secondary Traumatic Stress (M(SD))</th>
<th>Compassion Satisfaction (ProQOL) (M(SD))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Military RN</td>
<td>6</td>
<td>6.54 (31.18)</td>
<td>31.00 (4.24)</td>
<td>20.57 (7.85)</td>
<td>37.29 (10.40)</td>
</tr>
<tr>
<td>Military Medic</td>
<td>6</td>
<td>71.5 (14.90)</td>
<td>23.50 (3.08)</td>
<td>21.33 (10.03)</td>
<td>32.67 (7.97)</td>
</tr>
<tr>
<td>Civilian RN</td>
<td>7</td>
<td>76.86 (12.02)</td>
<td>30.00 (2.38)</td>
<td>20.86 (2.19)</td>
<td>41.71 (4.61)</td>
</tr>
<tr>
<td>Civilian LPN</td>
<td>9</td>
<td>75.11 (14.76)</td>
<td>30.00 (2.83)</td>
<td>20.33 (5.00)</td>
<td>42.78 (5.61)</td>
</tr>
<tr>
<td>Total</td>
<td>28</td>
<td>74.54 (17.93)</td>
<td>28.90 (4.13)</td>
<td>20.72 (6.28)</td>
<td>39.10 (7.99)</td>
</tr>
</tbody>
</table>

A mixed ANOVA using resiliency scores (dependent variable) as measured by the CD-RISC at 2 time points (prior to CPSP training and 30-days Post CPSP training), occupation (Army Nurse Officer, Medic, Civilian RN, Civilian LPN), and highest level of education (High School/GED, Some College, Associates Degree, Bachelor’s Degree, Post Bachelors) was used to evaluate the degree to which the participants’ \((n = 28)\)
resiliency scores were differently impacted. The within-subjects contrasts were statistically insignificant for the main effect of CPSP training on resiliency scores $F (1, 16) = .204, p = .658$. The interaction of resiliency scores and occupation was not statistically significant at $F (2, 16) = .571, p = .576$. The interaction of resiliency scores and level of education was not statistically significant at $F (4, 16) = .252, p = .904$. The between-subjects effects were not statistically significant for the main effect of CPSP training on resiliency scores with occupation at $F (2, 16) = .673, p = .524$. The effect on highest education was not statistically significant at $F (4, 16) = .241, p = .911$. The interaction between education and occupation was also not statistically significant at $F (1, 16) = 1.96, p = .180$.

A mixed ANOVA using coping scores (dependent variable) as measured by the WCQ at 2 time points (prior to CPSP training and 30-days Post CPSP training), occupation (Army Nurse Officer, Medic, Civilian RN, Civilian LPN), and highest level of education (High School/GED, Some College, Associates Degree, Bachelor’s Degree, Post Bachelors) was used to evaluate the degree to which the participants ($n = 28$) coping scores were impacted. The within-subjects contrasts were statistically not significant for the main effect of CPSP training on coping scores $F (1, 16) = 1.055, p = .320$. There was no statistically significant difference between the interaction of coping scores and occupation between the two time points ($F (2, 16) = 1.438, p = .266$). There was no statistically significant difference between the interaction of coping scores and level of education ($F (4, 16) = .523, p = .720$). The between-subjects effects were not statistically significant for the main effect of CPSP training on coping scores with occupation at $F (2, 16) = .442, p = .650$. There was no statistically significant difference between the effect
on highest education \( F(4, 16) = 2.190, p = .116 \). The interaction between education and occupation was also not significant statistically at \( F(1, 16) = .002, p = .967 \).

A mixed ANOVA using compassion fatigue and satisfaction scores (dependent variable) as measured by the ProQOL at 2 time points (prior to CPSP training and 30-days Post CPSP training), occupation (Army Nurse Officer, Medic, Civilian RN, Civilian LPN), and highest level of education (High School/GED, Some College, Associates Degree, Bachelor’s Degree, Post Bachelors) was used to evaluate the degree to which the participants \( n = 28 \), secondary traumatic stress, burnout (compassion fatigue) and compassion satisfaction scores were impacted. Analysis of the ProQOL scores was undertaken to evaluate the subscales of secondary traumatic stress, compassion satisfaction and burnout. The within subject effect of the subscale of burnout proved to be statistically significant \( F(1, 16) = 17.1, p < .001 \). There was no statistically significant interaction between burnout and occupation, \( F(2, 16) = .954, p = .406 \), or burnout and education level \( F(4, 16) = .722, p = .589 \). The between-subjects effect of the burnout subscale did not show a statistical significance between occupation \( F(2, 16) = .628, p = .546 \), education level \( F(4, 16) = 1.55, p = .235 \). There was no statistical significance found in the interaction between burnout and jobs and education level \( F(1, 16) = .073, p = .790 \).

**Summary**

Mixed ANOVA and t tests were conducted on the data and examined. There was no statistically significant difference in CD-RISC resilience scores from prior to CPSP training and 30-days Post training regardless of occupation (MOS) or education level.
Total WCQ scores were not statistically significant from prior to CPSP training to 30-days post CPSP training; however, the subscale of Positive Reappraisal was statistically significant ($p < 0.05$). The ProQOL subscale of burnout was found to be statistically significant ($t (27) = -5.43, p < .001$).

These preliminary findings suggest that CPSP training has an impact on ProQOL scores and indicates a decrease in burnout and compassion fatigue in a population of Army and Civilian Nurses, LPNs, and Medics. Additionally, in this small sample, it CPSP did not impact overall coping as measured with the WCQ, there was a statistically significant effect on the subscale of Positive Reappraisal, which measures an individual’s ability to create positive meaning from a situation by focusing on one’s own personal growth. Resiliency levels as measured by the CD-RISC did not change after CPSP training, however, further analysis of the data are required as additional questionnaires are returned.
CHAPTER V

Discussion and Conclusions

Overview

This chapter is a summary of the study. The discussion of the findings is presented in relation to the specific aims and hypotheses. Study limitations and the implications for nursing, nursing education, nursing theory, implications for the military leadership, and future research are also included.

Summary of the Study

There is an urgent need to address resiliency in military servicemembers. According to the Office of the Surgeon General (OTSG), the number of newly diagnosed cases of Posttraumatic Stress Disorder (PTSD), depression, suicidality, and other mental health conditions for Soldiers with a deployment history has increased significantly over a decade of our country being at war. (United States Army, 2010). The problem continues to worsen with suicides outpacing combat deaths in Afghanistan with the first six months of 2012, the Pentagon reporting that 154 Servicemembers were suspected of or confirmed to have committed suicide, compared to 127 Servicemembers killed in action in Afghanistan (Zoroya, 2012).

Military healthcare providers often experience mental health conditions often associated with deployment just as any Soldier would. Additionally, many healthcare providers in the military have deployed several times to care for severely wounded Soldiers in both Iraq and Afghanistan. Given the duration of the wars coupled with
weapons like improvised explosive devices (IEDs) and mortars, military healthcare providers have been exposed to horrific wounds in the casualties they treat which may conceivably precipitate or exacerbate mental health conditions.

Military healthcare providers who deployed to Iraq and Afghanistan appear to be at greater risk of developing mental health problems. Boone, Camarillo, Landry and DeLucia (2008) explain just by “being in close proximity to the trauma of our patients, both geographically and emotionally, it should come as no surprise that Army healthcare providers can themselves experience some aspects of traumatization” (p. 57). Additionally, Grieger and colleagues (2007) report \( n = 102 \) that 9% \( n = 9 \) of healthcare providers self-described symptoms of PTSD with an additional 5% citing symptoms of depression. Similarly, Hickling, Gibbons, Barnett, and Watts (2011) examined the psychological effects of deployment on military healthcare providers who deployed to Iraq or Afghanistan by examining the secondary data source of the 2005 Department of Defense Survey of Health Related Behaviors among Active Duty Personnel. The results of the study demonstrated that military healthcare providers \( n = 6,116 \) had significant psychological symptoms to include anxiety, depression, PTSD and alcohol abuse.

Grieger and colleagues (2007) and Hickling, Gibbons, Barnett, and Watts (2011) are the researchers who examined the prevalence of mental disorders of healthcare providers in modern-day warfare, however their research are some of the few conducted in recent years. To find additional research on the effect of combat stress and trauma on healthcare providers, one needs to review studies on personnel involved in the Vietnam War. Carson and colleagues (2010) examined whether witnessing death and injury could produce psychophysically responsive PTSD in a sample of nurses \( n = 38 \) who
served in the Vietnam War. The results indicated that witnessing death and serious injury to others is sufficiently stressful to cause PTSD in healthcare providers.

Since 2008, many military healthcare providers received resiliency training at military medical facilities worldwide though the Army’s Care Provider Support Program (CPSP) training. Care Provider Support Program training was designed to improve the resiliency of Army healthcare providers by teaching coping skills aimed at reducing compassion fatigue and stress. However, there is little research on the longer-term impact of the program. As such, there is no information as to the long-term benefits on resiliency that may occur in individuals who received CPSP training.

The Neuman Systems Model (Neuman, 1982) is the theoretical framework for this study. The concept of resiliency is at the core of the CPSP. By instructing healthcare providers on how to improve individual resiliency, compassion fatigue is reduced and stress and coping levels return to normal. The Neuman Systems Model lends itself to examining this phenomenon. From this theoretical framework, several study questions were generated:

Specific Aim 1: Examine the impact of the CPSP training on resiliency, coping, and compassion fatigue in a sample of Army and Civilian Nurses, LPNs, and Medics.

Hypothesis 1a: Resiliency will significantly increase as measured by the Connor-Davidson Resilience Scale (CD-RISC) from just prior to receiving CPSP training to 30-days post-CPSP training.
Hypothesis 1b: Coping levels will significantly increase as measured by the Ways of Coping Questionnaire (WCQ) from just prior to receiving CPSP training to 30-days post-CPSP training.

Hypothesis 1c: Compassion fatigue as measured by Professional Quality of Life (ProQOL) scale will decrease from just prior to receiving CPSP training to 30-Days post CPSP training.

Specific Aim 2: Explore the relationship among resiliency, coping, and compassion fatigue in a sample of Army and Civilian Nurses, LPNs, and Medics.

A pilot longitudinal cohort study was utilized with a convenience sample ($n=93$) of Army and Civilian Nurses, LPNs, and Medics, including civilian and allied healthcare providers, assigned to an Army Medical Center. Data were collected via self-report questionnaires including the Connor-Davidson Resilience Scale (Connor & Davidson, 2003), the Ways of Coping Questionnaire (Folkman & Lazarus, 2010), and the Professional Quality of Life Scale (Hudnall-Stamm, Blampied, Higson-Smith, Hudnall, Piland, & Stamm, 2010) over a four-month period – March through June 2013. Data were analyzed using SPSS 19.0. T-tests and mixed ANOVAs were conducted on the questionnaires completed by the participants.

Discussion

The focus of this study was to investigate the levels of resiliency, coping skills, and compassion fatigue using three scientific questionnaires along with a demographic questionnaire in a population of military and civilian Army and Civilian Nurses, LPNs
and Medics assigned to an Army Medical Center. The Neuman Systems Model was used as the theoretical framework for conducting the research (Neuman, 1982).

Specific Aim 1

Examine the impact of the CPSP training on resiliency, coping, and compassion fatigue in a sample of Army and Civilian Nurses, LPNs, and Medics.

Hypothesis 1a

Resiliency will significantly increase as measured by the Connor-Davidson Resilience Scale (CD-RISC) from just prior to receiving CPSP training to 30-days post-CPSP training.

The results of this study suggest that CPSP training appears to have no effect on resiliency scores as measured using the CD-RISC scale over the 30-day timeframe. The mean CPSP score from pre-CPSP training ($M = 74.46$, $SD = 12.47$) and 30 days post-CPSP training ($M = 74.54$, $SD = 17.93$) did not significantly change in the study ($n = 28$). Mean CD-RISC scores for the participants are: civilian nurses ($M = 76.86$, $SD = 12.02$, $n = 7$), LPNs ($M = 75.11$, $SD = 14.76$, $n = 9$), Army Nurse Corps Officers ($M = 74.00$, $SD = 31.18$, $n = 6$) and Army medics ($M = 71.5$, $SD = 14.90$, $n = 6$).

The mean scores of the Nurses, Medics and LPNs on the CD-RISC in this study were consistent with the scores from other research studies that utilized a population of U.S. Military personnel. Pietrzak and colleagues (2009) utilized the CD-RISC to explore resiliency levels in a population of Iraq and Afghanistan war veterans ($n = 272$) and observed a Mean Score of 73.8 ($SD = 16.1$) which is consistent with the scores in this study (Table 6). Additionally, the mean scores of the nurses, medics and LPNs on the
CD-RISC in this study were consistent with the scores from other studies that contained a population of nurses. Gabriel, Diefendorff, and Erickson (2011) utilized the CD-RISC on a sample of 57 nurses to measure accomplishment satisfaction and affect and observed a Mean Score of 66.49 (SD = 13.42) which is consistent with the scores in this study.

Hypothesis 1b

Coping levels will significantly increase as measured by the Ways of Coping Questionnaire (WCQ) from just prior to receiving CPSP training to 30-days post-CPSP training.

The results of this study suggest that CPSP training appears to have a small effect on coping scores as measured using the WCQ scale over the 30-day timeframe (Table 10). Of the 8 coping factor subscales measured by the WCQ of Confrontive Coping, Distancing, Self-Controlling, Seeking Social Support, Accepting Responsibility, Escape-Avoidance, Planful Problem Solving, and Positive Reappraisal, only the subscale of Positive Reappraisal showed a significant change from pre-CPSP training to 30-days post-CPSP training (\(p = .025\)). Positive Reappraisal is defined as an individual’s ability to create positive meaning from a situation by focusing on one’s own personal growth (Folkman & Lazarus, 2010, p. 8). Neuman and Fawcett (2011) detail a phenomenon similar to positive appraisal as secondary prevention, where an individual protects himself or herself by strengthening their internal lines of resistance (p. 27).

The Positive Reappraisal score in this study demonstrated a statistically significant decrease from prior to receiving CPSP (\(M = 10.21, SD = 5.69\)) to 30-days post CPSP training (\(M = 8.18, SD = 5.05, p = 0.025\)). A decrease in WCQ scores may
indicate that the participants \((n = 28)\) had a decrease in stressful events during this
timeframe as the instructions on the WCQ inform individuals to think of a stressful event
over the previous week. It could also mean that an individual utilized a different method
of coping.

Dirkwzager, Bramsen, and van der Ploeg (2003) utilized the WCQ to investigate
PTSD in a group of Dutch Peacekeepers \((n = 499)\) over time, which produced WCQ
scores that are similar with this study with results including Positive Reappraisal mean
scores of 11.36 \((SD= 3.46)\). Additionally, Chang and colleagues (2007) explored
cultural differences in how nurses \((n = 225)\) cope with adversity utilizing the WCQ in
New Zealand and Australia. The results produced similar scores to this study with New
South Wales nurses reporting a Positive Reappraisal Mean of 8.55 \((SD =3.68)\) and New
Zealand nurses reporting a mean of 9.02 \((SD = 3.74)\) which produced similar mean
scores to this study.

Hypothesis 1c

Compassion fatigue as measured by Professional Quality of Life (ProQOL) scale
will decrease from just prior to receiving CPSP training to 30-Days post CPSP training.

The results of this study suggest that CPSP training has a positive effect on the
ProQOL burnout subscale which decreased from pre-CPSP \((M = 28.71, SD = 4.09)\) to \((M = 19.79, \ SD = 5.90)\) 30-days post CPSP training \((F(1, 16) = 17.1, p < .001)\). Secondary
traumatic stress scores \((M=19.25, SD=5.10)\) and the scores 30-days post CPSP training
\((M=20.14, SD=5.55)\) were not statistically significant \((t(27) = 1.32, \ p = .200)\).
Compassion satisfaction scores from prior to CPSP \((M=39.64, SD=7.58)\) and the scores
30-days post CPSP training (M=39.18, SD=9.25) were not found to be not statistically significant \((t(27) = -51, p = .618)\).

According to Hudnall-Stamm and colleagues (2010), compassion fatigue is observed when there is an increase in burnout and secondary traumatic stress scores. The burnout scale is measured by a score of 22 or less having a low burnout level, between 23-41 as average burnout level, and a score of 42 or above as high burnout. By decreasing burnout in a population of Army nurses, LPNs, medics, including civilian and allied healthcare providers, a decrease in compassion fatigue may occur. The between-subjects effect of the burnout subscale did not show statistical significance between occupation, education level, or the interaction between burnout and jobs and education level.

Specific Aim 2

Explore the relationship among resiliency, coping, and compassion fatigue in a sample of Army Nurses, LPNs, and Medics.

The researcher in this study explored the relationship between resiliency scores using the CD-RISC, coping methods using the WCQ, and compassion fatigue and satisfaction among Army and Civilian Nurses, LPN, and Medics and demographic information, such as highest level of education and occupation, yielded no statistically significant results. There was no relationship between MOS, level of education, and deployment history in the study regarding resiliency scores as measured by the CD-RISC. Prior CPSP training did not appear to affect the scores of the CD-RISC.
The researcher in this study explored the relationship between coping scores using the WCQ to explore coping methods among Army and Civilian Nurses, LPN, and Medics and demographic information, such as highest level of education and occupation, yielded no statistically significant results. There was no relationship between MOS, level of education, and deployment history within the healthcare providers in coping scores as measured by the WCQ. Prior CPSP training did not appear to affect the scores of the WCQ. A majority of the nurses in the study utilized the coping factors of self-controlling and positive reappraisal. Self-controlling is defined by Folkman and Lazarus (2010) as “efforts to regulate one's feelings and actions” and positive reappraisal as, “efforts to create positive meaning by focusing on personal growth” (p. 8).

ProQOL subscales among Army and Civilian Nurses, LPN, and Medics and demographic information, such as highest level of education and occupation, showed no statistically significant interaction between burnout and occupation or burnout and education level. The between-subjects effect of the burnout subscale did not show a statistical significance between occupation or education level. There was no statistical significance found in the interaction between burnout and jobs and education level.

Implications for Nursing

Due to the large number of veterans leaving the military and reintegrating into civilian society, nurses would be wise to focus on the unique healthcare issues that surround the veteran population, including increased incidence of PTSD, depression, and suicide. Rubin (2012) states that a recent Pew report suggests that as many as 37% of deployed Servicemembers are returning from war with varying degrees of PTSD,
estimating that up to 800,000 Servicemembers may be reintegrating into society with, “some form of psychological trauma” (p. 293), including healthcare providers who have experienced secondary trauma from treating wounded physically or psychologically from their wartime service. Additionally, results of a recent study from Haley and Kenney (2013) indicate that over 1.3 million veterans lack healthcare insurance, of which approximately 535,000 veterans fall below the poverty level. With the number of veterans reintegrating into civilian life with multiple physical or psychological injuries sustained during war, there is a potential for a healthcare crisis occurring in this population as the burden on the Veteran’s Affair medical system increases.

Military healthcare providers reintegrating into the civilian population after leaving the military will face the challenges that many returning veterans experience. Some military healthcare providers may experience PTSD, depression, anxiety and alcohol abuse as reported by Grieger and Colleagues (2007) and Hickling, Gibbons, Barnett, and Watts (2011). Beyond the impact on personal lives, professional work performance must be considered as a secondary effect. Gartner, Nieuwenhuijsen, van Dijk, and Sluiter (2010) conducted a systematic review exploring mental health conditions in civilian nurses and health professionals and determined that common mental health conditions can lead to an increase in medical errors such as medication errors, patient safety and patient satisfaction and recommend preventive interventions to improve healthcare providers.

Nurses are in a unique position to address the issues of the veteran healthcare providers returning from combat and reintegrating into life after the military. Assessment and diagnostic skills learned in nursing schools may help nurses identify former military
healthcare providers who are at risk for PTSD, depression or mental illness. Educating nurses currently in the workforce on the unique conditions that affect veteran healthcare providers is also essential to improving the outcome of veteran healthcare providers and can take a variety of formats, including hospital in-services or more formal coursework at a University or college. The Florida Action Coalition as part of the Initiative on the Future of Nursing is preparing a presentation available to all nurse educators and practitioners in the State of Florida in order to address the unique healthcare needs of military veterans. This project may be used in a classroom to educate nursing students or as part of an in-service in a hospital setting to increase the awareness of the specific issues that affect the military veteran population. The idea to certify Florida nurses in Veteran healthcare issues, such as PTSD, traumatic brain injury, and homelessness, is currently in discussion.

**Implications for Nursing Education**

There are several implications for nursing education. Nurse educators nationwide might benefit by examining course content to prepare the coming generation of nurses for the unique needs of all veteran healthcare providers. Based on the sheer number of returning veterans into the general civilian population, nursing professors would be wise to consider the physical and psychological needs and requirements for the disabled veterans. Physical needs may include chronic care for the devastating injuries borne from IEDs, e.g., post-burn care and multiple limb amputations. Psychological needs include care for veterans return to the general population with disfiguring injuries, and mental conditions such as PTSD, depression, and the psychological effects associated with Traumatic Brain Injury (TBI).
The concept of healthcare resilience extends beyond military healthcare providers. It may also apply to civilian nurses who work in high-stressed environments such as Emergency medicine, intensive care units, operating rooms or anywhere life or death experiences may occur. It is important that nurses understand the potential psychological burden that they may experience in the performance of nursing duties. While the findings of this study may not be generalizable to civilian medical treatment facilities, further research may be required. To ameliorate increases in burnout, compassion fatigue and ineffective coping, nursing programs might benefit by preparing students to manage the stressors they will inevitably experience in the performance of nursing duties. Applying resiliency training, similar to CPSP, to nursing curricula may better prepare future nurses to better manage stress and decrease burnout and compassion fatigue. Additionally, tools like 50-item self-reported survey called the Nurses Work Functioning Questionnaire (NWFQ) created by Gartner, Nieuwenhuijsen, van Dijk, and Sluiter (2011) may assist the veteran providers self-assess if they may be suffering from a common mental disorder (p. 125).

**Implications for Nursing Theory**

Neumann’s Systems Model worked well as a conceptual framework for the researcher when examining the concepts of resilience, coping, and compassion fatigue; however, there is a need for the creation of middle range or practice level nursing theories. By creating a middle-range theory unique to the phenomena of resiliency, coping, and compassion fatigue, future researchers can focus on creating descriptive research to better define the concepts of resilience, coping, and compassion fatigue and
perhaps develop explanatory theories to explore relationships among the concepts. (Fawcett, 1993).

Fawcett and Giangrande (2001) report research utilizing the Neuman Systems Model should follow seven rules, which were used to guide the researcher in conducting this study. The seven rules are:

1. Neuman Systems Model research should predict the effects of primary, secondary and tertiary prevention interventions on the client system.

2. The phenomena being studied encompasses physical, sociological, psychological variables centering around the core of the client system.

3. The problem to be studied focuses on stressors that impact the client system regarding psychological, physical, sociological variables.

4. Study participants should be a client system of individuals, groups, communities and/or organizations.

5. Research designs should encompass both inductive and deductive research techniques using qualitative and quantitative research approaches with data encompassing both the clients and data collectors perspectives to negotiate goal setting.

6. Appropriate data collection methods should be utilized with an emphasis that quantitative research focusing on the flexible line of defense as a moderator and lines of defense as a mediator variable.
Research should advance the understanding of prevention interventions on the relations between stressors and the client system. (Fawcett & Giangrande, Neuman Systems Model-Based Research: An Integrative Review Project, 2001, p. 232)

In reviewing the conduct of this study, the researcher adhered to these guidelines by focusing on examining CPSP as prevention to the psychological variables of compassion fatigue and burnout by improving coping skills and resiliency. The client system is the nursing community at the Army Medical Center with the goal of the research to advance the understanding of prevention interventions, such as CPSP, on the relations between stressors and the client system. According to Fawcett and Giangrande (2001), the research should include “both inductive and deductive” research techniques (p. 232), indicating that a mixed-method study be utilized to gather the participant’s and researcher’s perspectives when collecting data. Since this was a quantitative study and not a mixed-methods study, the researcher varied from this approach. Future researchers may want to consider utilizing a mixed-method’s study when examining the concepts of resiliency, coping, and compassion fatigue.

**Implications for Military Research**

Since this researcher focused on CPSP training at one military installation, the results may not be generalizable to other locations or services due to training methods of the particular individual conducting CPSP training. Regardless, the results of this study suggest CPSP is effective at reducing the level of burnout experienced by Army and Civilian Nurses, LPNs, and Medics. Coping skills and resiliency levels do not appear
affected by CPSP training, it may be possible that coping skills and resiliency levels require a more active approach from individuals receiving the training. That is, for a person to change the way he or she copes in a certain situation, it may require that the people practice the coping techniques over an extended period of time. A repeat of this study with a larger sample size with multiple timeframes may be necessary.

Further military researchers may focus on expanding the scope of this study to several installations that provide CPSP training in order to determine if there is a difference in results due to individual teaching methods as well as the general effectiveness of the program within a larger population. Perhaps, conducting a mixed-method study as mentioned in the Neuman Systems Model to explore an individual attending CPSP training may yield greater input as to the effect the training may prove beneficial.

Additionally, CPSP training classes vary from a few individuals participating (4 or 5) up to over 100 military and civilian healthcare providers based on the venue requiring annual training. It may be that CPSP training is best presented in small group sizes with a focus on active participation to receive a better impact on the audience (Crosby, 1996). Since the researcher in this study recruited primarily Registered Nurses, Licensed Practical Nurses and Combat Medics, it may be beneficial that future research should focus on all Military Occupational Specialties (MOS) throughout the AMEDD to examine a broader population of military healthcare providers, including physicians and physician assistants.
Implications for Military Leadership

Military leadership might be wise to remain proactive in improving the resiliency and coping levels in their Soldiers by commanders supporting CPSP training and ensure the Soldiers attend. It might be prudent for commands to continue to monitor Soldiers for the signs of burnout and fatigue. First line supervisors are key in discovering Soldiers who may be in need of additional support. The stigma that burnout and fatigue are a sign of weakness and requires mental healthcare still exists (Green-Shortridge, Britt, & Castro, 2007). It might be beneficial for leadership to continue to consider ways to dispel this stigma while promoting an environment where the command supports the emotional needs of the Soldier.

Study Limitations

Based on the number of participants in this pilot study \( n = 93 \) and the participants who returned questionnaires was small \( n = 28 \), the biggest limitation of this study is the sample size. A larger sample of Army Nurses, LPNs and medics may yield different results. The study was conducted at an Army Medical Center over the spring of 2013 in a population of Army and Civilian Nurses, LPNs, and Medics. Because CPSP training occurs at various Army Medical Centers throughout the world, the results may not be generalizable civilian MTFs or to other installations due to instructors and instruction methods varying across locations.

Due to sequestration and budget cuts within the Department of Defense, a hiring freeze was implemented during the data collection phase of this study. The hiring freeze led to small groups attending newcomer’s orientation where a significant amount of data
collection was to take place. Of the participants who volunteered for this study, several participants voiced concerns about potential furloughs being a concern to them. It is unclear how much of this stress contributed to individuals’ scores on the CD-RISC, WCQ, or ProQOL. Future researchers could consider utilizing a mixed method study to gather the subjective feelings that the participants share.

Because CPSP is an annual requirement, many of the active duty Servicemembers at the Army Medical Center completed their CPSP training at the beginning of the Fiscal year (October 2012) and were not due to take CPSP training during the timeframe of this study. Because of this, much of the data collection occurred at outlying clinics that fall under the Army Medical Center. The outlying clinics contained a minimum staff of Active Duty Servicemembers, a significant portion of the participants were civilian who had not deployed to Iraq of Afghanistan.

Based on the number of participants in this pilot study ($n = 93$) and the participants who returned questionnaires was small ($n = 28$), a larger sample of Army Nurses, LPNs and medics may yield different results. As additional surveys are returned, they will be added and presented in any future publications or dissemination of findings.

**Conclusions**

Based on the findings of this study, CPSP training decreases the burnout level in Army and Civilian Nurses, LPNs, and Medics, which may lead to a decrease in a healthcare provider’s overall compassion fatigue. Resiliency and coping skills were not impacted by CPSP training utilizing the CD-RISC and WCQ in this study. Further researchers may want to consider ways to better define the term of resiliency, particularly
compared to the interaction between coping skill development and compassion fatigue. It might be beneficial to recreate this study in a larger population of healthcare providers throughout the military at multiple installations to explore the concept of resiliency in greater numbers.

Finally, exploring ways to improve CPSP training in order to make it more effective in training healthcare providers may be beneficial. Small groups where healthcare providers actively participate may be more effective than large groups receiving the information by PowerPoint. By continually reassessing CPSP effectiveness and conducting additional studies, the healthcare providers are receiving the best possible information and skills to improve resiliency and coping skills to handle complex situations that are an everyday part of military life.
References


measures the thoughts and actions people use to handle stressful encounters: http://www.mindgarden.com/products/wayss.htm


Secretary of the Army. (2012). *Army ready and resilient campaign plan*. Washington, DC.


Appendix I – Connor Davidson Resilience Scale (CD-RISC)
## Connor-Davidson Resilience Scale 25 (CD-RISC-25)

**For each item, please mark an “X” in the box that best indicates how much you agree with the following statements as they apply to you over the last month. If a particular situation has not occurred recently, answer according to how you think you would have felt.**

<table>
<thead>
<tr>
<th>Item</th>
<th>Not True at All (0)</th>
<th>Rarely True (1)</th>
<th>Sometimes True (2)</th>
<th>Often True (3)</th>
<th>True Nearly All the Time (4)</th>
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<tbody>
<tr>
<td>1. I am able to adapt when changes occur.</td>
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<td>2. I have at least one close and secure relationship that</td>
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<td>helps me when I am stressed.</td>
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<td>3. When there are no clear solutions to my problems, sometimes</td>
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<td>fast or God can help.</td>
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<td>4. I can deal with whatever comes my way.</td>
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<td>5. Past successes give me confidence in dealing with</td>
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<td>new challenges and difficulties.</td>
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<td>6. I try to see the humorous side of things when I am</td>
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<td>faced with problems.</td>
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<td>7. Having to cope with stress can make me stronger.</td>
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<td>8. I tend to bounce back after illness, injury, or other</td>
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<td>hardships.</td>
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<td>9. Good or bad, I believe that most things happen for a</td>
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<td>reason.</td>
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<td>10. I give my best effort no matter what the outcome may be</td>
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<td>11. I believe I can achieve my goals, even if there are</td>
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<td>obstacles.</td>
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<td>12. Even when things look hopeless, I don’t give up.</td>
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<td>13. During times of stress/crisis, I know where to turn for help.</td>
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<td>15. I prefer to take the lead in solving problems rather than</td>
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<td>letting others make all the decisions.</td>
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<td>16. I am not easily discouraged by failures.</td>
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<td>17. I think of myself as a strong person when dealing with life’s</td>
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<td>challenges and difficulties.</td>
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<td>18. I can make unpopular or difficult decisions that affect</td>
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<td>other people, if it is necessary.</td>
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<td>19. I am able to handle unpleasant or painful feelings like</td>
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<td>sadness, fear, and anger.</td>
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<td>20. In dealing with life’s problems, you have to act on a</td>
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<td>hunch without knowing why.</td>
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<td>21. I have a strong sense of purpose in life.</td>
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<td>22. I feel in control of my life.</td>
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<td>23. I like challenges.</td>
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<td>24. I work to attain my goals no matter what roadblocks I</td>
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<td>encounter along the way.</td>
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<td>25. I take pride in my achievements.</td>
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Appendix II – Ways of Coping Questionnaire (WCQ)
Ways of Coping

Test Booklet

By

Susan Folkman, Ph.D.
and
Richard S. Lazarus, Ph.D.
Please provide the following information:

Name: ___________________________ Date: ___________________________

Identification Number (optional): __________ Gender (Circle): M F Age:

Marital Status (check): □ Single □ Married □ Widowed □ Separate/Divorced

TO THE COUNSELOR

Fill out your Institutional Address below:

Name/ Institution: ___________________________

Address

Instructions

To respond to the statements in this questionnaire, you must have a specific stressful situation in mind. Take a few moments and think about the most stressful situation that you have experienced in the past week.

By "stressful" we mean a situation that was difficult or troubling for you, either because you felt distressed about what happened, or because you had to use considerable effort to deal with the situation. The situation may have involved your family, your job, your friends, or something else important to you. Before responding to the statements, think about the details of this stressful situation, such as where it happened, who was involved, how you acted, and why it was important to you. While you may still be involved in the situation, or it could have already happened, it should be the most stressful situation that you experienced during the week.

As you respond to each of the statements, please keep this stressful situation in mind. Read each statement carefully and indicate, by circling 0, 1, 2 or 3, to what extent you used it in the situation.

Key:  
0 = Does not apply or not used  
1 = Used somewhat  
2 = Used quite a bit  
3 = Used a great deal

Please try to respond to every question.
0 = Does not apply or not used  1 = Used somewhat  2 = Used quite a bit  3 = Used a great deal

1. I just concentrated on what I had to do next – the next step.  0 1 2 3
2. I tried to analyze the problem in order to understand it better.  0 1 2 3
3. I turned to work or another activity to take my mind off things  0 1 2 3
4. I felt that time would have made a difference – the only thing was to wait.  0 1 2 3
5. I bargained or compromised to get something positive from the situation. ................................................................. ... 0 1 2 3
Appendix III – Professional Quality of Life Scale (ProQOL)
Professional Quality of Life Scale
(ProQOL)

Compassion Satisfaction and
Compassion Fatigue
(ProQOL)
Version 5 (2009)

When you help people you have direct contact with their lives. As you may have found, your compassion for those you help can affect you in positive and negative ways. Below are some questions about your experiences, both positive and negative, as a helper. Consider each of the following questions about you and your current work situation. Select the number that honestly reflects how frequently you experienced these things in the last 30 days.

<table>
<thead>
<tr>
<th>1=Never</th>
<th>2=Rarely</th>
<th>3=Sometimes</th>
<th>4=Often</th>
<th>5=Very Often</th>
</tr>
</thead>
</table>

1. I am happy.
2. I am preoccupied with more than one person I help.
3. I get satisfaction from being able to help people.
4. I feel connected to others.
5. I jump or am startled by unexpected sounds.
6. I feel invigorated after working with those I help.
7. I find it difficult to separate my personal life from my life as a helper.
8. I am not as productive at work because I am losing sleep over traumatic experiences of a person I help.
9. I think that I might have been affected by the traumatic stress of those I help.
10. I feel trapped by my job as a helper.
11. Because of my helping, I have felt "on edge" about various things.
12. I like my work as a helper.
13. I feel depressed because of the traumatic experiences of the people I help.
14. I feel as though I am experiencing the trauma of someone I have helped.
15. I have beliefs that sustain me.
16. I am pleased with how I am able to keep up with helping techniques and protocols.
17. I am the person I always wanted to be.
18. My work makes me feel satisfied.
19. I feel worn out because of my work as a helper.
20. I have happy thoughts and feelings about those I help and how I could help them.
22. I believe I can make a difference through my work.
23. I avoid certain activities or situations because they remind me of frightening experiences of the people I help.
24. I am proud of what I can do to [help].
25. As a result of my [helping], I have intrusive, frightening thoughts.
26. I feel "bogged down" by the system.
27. I have thoughts that I am a "success" as a [helper].
28. I can't recall important parts of my work with trauma victims.
29. I am a very caring person.
30. I am happy that I chose to do this work.
Appendix IV – Demographic Questionnaire
Demographic Questionnaire: Check all that apply.

1. What Service are you in?
   ○ Army           ○ Navy           ○ USAF   ○ USMC   ○ Civilian  ○ Other______

2. What is your pay grade?
   ○ E1-E4          ○ WO1-CW5      ○ O1-O3     ○ DoD Civilian
   ○ E5-E9          ○ O4-O6         ○ O7-O10

3. What is your gender?
   ○ Male           ○ Female

4. What is your highest level of education?
   ○ Did not graduate from high school
   ○ High School Diploma/GED
   ○ Some college but not a 4-year degree
   ○ Associates Degree
   ○ 4-year college degree (BA, BS or equivalent)
   ○ Post-Bachelors Degree

5. How old were you on your last birthday? Enter your age in the boxes. Use both boxes. ONE number to a box.
   

6. What is your current relationship status?
   ○ Single          ○ Married        ○ In a relationship, not legally married
   ○ Divorced        ○ Separated      ○ Widowed

7. Are you currently living with your spouse or partner?
   ○ YES             ○ NO            ○ Not Applicable

8. What is your ethnicity? (Mark one of more to indicate what you consider yourself to be.)
   ○ White, Non-Hispanic
   ○ Black or African American
   ○ Hispanic
   ○ American Indian/Native Alaskan
   ○ Asian (e.g. Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese)
   ○ Native Hawaiian or Pacific Islander (e.g. Samoan, Guamanian)
   ○ Other

9. How long have you been on active duty? (If you had a break in service, count current time AND in previous tours, but not time during the break in service)
10. How many months since September 11, 2001 have you been deployed?

11. What is your MOS?

12. Do you smoke cigarettes?
   ○ YES  ○ NO
   If yes, how many cigarettes do you smoke per day? _____ How many years have you smoked? ____

13. Do you drink alcoholic beverages?
   ○ YES  ○ NO
   If yes, how many drinks do you consume per day? _____

14. How many occasions, prior to today, have you received Care Provider Support Program (CPSP) training, (previously known as Provider Resiliency Training)?

   ____
Appendix V- Informed Consent
ARMY MEDICAL CENTER

This consent form is valid only if it contains the IRB stamped date

Consent for Voluntary Participation in a Non-Clinical Research Study Entitled: CPSP as a mediator of resiliency and coping among Military Health Care Personnel

Principal Investigator On-Site: Ms Marlene Martin, MA, RN,LPC, Care Provider Support Program
Resiliency Instructor, Phone:910-907-8002

Study site: XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

1. INTRODUCTION OF THE STUDY

You are being asked to be in this research study because you are either an Army Nurse, Licensed Practical Nurse (LPN) or Medic in the U.S. Army assigned to the Army Medical Center. Your participation is voluntary. Refusal to participate will not result in any punishment or loss of benefits to which you are otherwise permitted. Please read the information below, and ask questions about anything you do not understand, before deciding whether to take part in this research study.

2. PURPOSE OF THE STUDY

The purpose of this study is examine the relationship among resiliency, coping skills, and compassion fatigue and determine whether the Care Provider Support Program (CPSP), previously known as PRT, significantly affects these factors in Active Duty Army Nurses (Bachelors prepared), Licensed Practical Nurses (LPNs) and Medics.

CPSP training is designed to enhance a healthcare provider’s ability to manage the psychological stress inherent on the modern battlefield. Using questionnaires, this study will examine an individual’s resiliency, coping skills, and compassion fatigue prior to receiving CPSP training and again 30-days post training to examine change in these levels over time.

3. ALTERNATIVES TO PARTICIPATION:

Not participating in this study is the alternative to participating in this study.

4. PROCEDURES TO BE FOLLOWED

Prior to attending CPSP training, you who be asked to come to the training site 30 minutes early. The investigator will explain the purpose of the study to the you to
determine your willingness to participate. Your responses in this study will remain confidential. If you agree to participate, you will be administer four short questionnaires consisting of the CD-RISC, WCQ, ProQOL, and the CPSP Evaluation Tool to complete. Additionally, you will also be given a demographic questionnaire to be completed. Upon completion of the consent and the questionnaire, the forms will be reviewed by the investigator for completeness and a business card will be given to you should you have any questions at a later time. Once complete, you will begin CPSP training. Immediately upon completing CPSP training, you will be asked to complete the CPSP Evaluation Tool.

In 30 days, you will be receiving a packet in the mail consisting of the CD-RISC, WCQ, ProQOL, and CPSP Evaluation Tool questionnaires along with a self-addressed, stamped envelope to return the completed scales to the investigator. The investigator will contact you to remind you of the questionnaires being mailed to you. Once you complete the four questionnaire, please mail them to the address listed in the enclosed self-address stamped envelopes. If you agree to participate in this study, you will be asked to read and sign this consent form.

<table>
<thead>
<tr>
<th>Inclusion criteria</th>
<th>Exclusion Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) at least 18 years of age</td>
<td>(1) does not meet all listed inclusion criteria</td>
</tr>
<tr>
<td>(2) speak and read English</td>
<td>(2) individuals who have deployment or permanent change of station orders within 30 days of attending the scheduled CPSP training.</td>
</tr>
<tr>
<td>(3) gives written consent for study Participation</td>
<td></td>
</tr>
<tr>
<td>(4) is an Army Nurse, LPN or Medic assigned to the Army Medical Center</td>
<td></td>
</tr>
</tbody>
</table>

5. AMOUNT OF TIME FOR YOU TO COMPLETE THE STUDY

You will be part of this study for 1 month. During this time you will be asked to complete 4 surveys on two separate occasions. Each survey will take approximately 5-10 minutes to complete. Total time commitment for the study is approximately 60 minutes over a 1 month period. This time includes answering any questions you may have.

6. NUMBER OF PEOPLE THAT WILL TAKE PART IN THIS STUDY

A total of up to 120 participants are expected to take part in this study.

7. POSSIBLE RISKS OR DISCOMFORTS FROM BEING IN THIS STUDY

Potential burden that you may experience is concern about disclosure regarding certain survey questions and recalling personal information that may represent prior
challenges and discomforts in the deployed environment. The time needed to answer the questionnaires may be an added burden, considering the long duties hours. No invasive procedures will take place as part of this study. It is believed that the potential benefits of your participation in this study may outweigh the potential risks. There is minimal risk anticipated in this study.

8. POSSIBLE BENEFITS FROM BEING IN THIS STUDY

You may potentially have no direct benefits for participating in this research study, but, information learned from your participation in this study may benefit future Army Nurses, LPNs, and Medics by assisting in improving knowledge on the subject of resiliency, coping, and compassion fatigue and by laying the groundwork for future studies.

9. CONFIDENTIALITY/PRIVACY OF YOUR IDENTITY AND YOUR RESEARCH RECORDS

The principal investigator will keep your research records in a locked file cabinet in his office. These records may be looked at by staff from: the Army Medical Center Institutional Review Board (IRB), the Army Clinical Investigation Regulatory Office (CIRO), the Army Human Research Protection Office (AHRPO), Uniformed Services University Institutional Review Board, TriService Nursing Research Program (who is funding this study), the University of Miami Institution Review Board or other agencies as part of their normal duties. These duties include making sure that the research participants are protected. Confidentiality of your records will be protected to the extent possible under existing regulations and laws but cannot be guaranteed. Complete confidentiality cannot be promised, particularly for military personnel, because information bearing on your health may be required to be reported to appropriate medical or command authorities. Your name will not appear in any published paper or presentation related to this study.

This research study meets the confidentiality requirements of the Health Insurance Portability and Accountability Act (HIPAA).

10. CONDITIONS UNDER WHICH YOUR PARTICIPATION IN THIS STUDY MAY BE STOPPED WITHOUT YOUR CONSENT

Your taking part in this study may be stopped without your consent if remaining in the study might be dangerous or harmful to you. Your taking part in this study may also be stopped without your consent if the military mission requires it.

11. ELIGIBILITY AND PAYMENT FOR BEING IN THIS STUDY

You will not receive any payment for being in this study.
12. COMPENSATION IF INJURED AND LIMITS TO MEDICAL CARE

You will not receive any compensation (payment) if you are injured as a direct result of being in this study. You should understand that this is not a waiver or release of your legal rights. You should discuss this issue thoroughly with the principal investigator before you enroll in this study. Should you be injured as a result of your participation in this study, you will be given medical care for that injury at no cost to you.

Medical care is limited to the care normally allowed for Department of Defense health care beneficiaries (patients eligible for care at military hospitals and clinics). Necessary medical care does not include in-home care or nursing home care.

If at any time you believe you have suffered an injury or illness as a result of participating in this research project, you should contact Christopher Weidlich, MS, ARNP, BC at 561-504-0423 or Marlene Martin at 910-907-8002.

13. IF YOU DECIDE TO STOP TAKING PART IN THIS STUDY AND THE INSTRUCTIONS FOR STOPPING EARLY

You have the right to withdraw from this study at any time. If you decide to stop taking part in this study, you should tell the principal investigator as soon as possible; by leaving this study at any time, you in no way risk losing your right to medical care.

14. YOUR RIGHTS IF YOU TAKE PART IN THIS STUDY

Taking part in this study is your choice. You may choose either to take part or not to take part in the study. If you decide to take part in this study, you may leave the study at any time. No matter what decision you make, there will be no penalty to you and you will not lose any of your regular benefits. Leaving the study will not affect your medical care.

15. AUTHORIZATION FOR RESEARCH USE OF PROTECTED HEALTH INFORMATION

The Federal Health Insurance Portability and Accountability Act (HIPAA) includes a Privacy Rule that gives special safeguards to Protected Health Information (PHI) that is identifiable, in other words, can be directly linked to you (for example, by your name, birth date, etc.). We are required to advise you how your PHI will be used.

(1). What information will be collected?

For this research study, we will be collecting information about name, APO address, phone number and email address.
(2). Who may use your PHI within the Military Healthcare System?

The members of the research team will have access to your health information in order to find out if you qualify to participate in this study and to analyze the research data. Additionally, your PHI may be made available to health oversight groups such as the Army Medical Center Institutional Review Board, TriService Nursing Research Program, the University of Miami Institutional Review Board and Uniformed Services Institutional Review Board.

(3). What persons outside of the Military Healthcare System who are under the HIPAA requirements will receive your PHI?

The Principle Investigator and the Onsite Investigator actively participating in this research will have access to your health information.

(4). What is the purpose for using or disclosing your PHI?

The research team will need to use your PHI in order to send surveys to you over the course of the study. Access to your name, APO address, and email address is necessary to send surveys to you at 1 month after your initial enrollment in the study.

(5). How long will the researchers keep your PHI?

The research team involved in this study will keep the research data for up to three years after the end of the study. After three years, the research information will be archived. The master code (which links you to the information) will be destroyed at the end of the study.

(6). Can you review your own research information?

You may look at your personal research information at any time.

(7). Can you cancel this Authorization?

Yes. If you cancel this Authorization, however, you will no longer be included in the research study. The information we collected from you can be destroyed at your request. If you want to cancel your Authorization, please contact the Principal Investigator in writing.

(8). What will happen if you decide not to grant this Authorization?

If you decide not to grant this Authorization, you will not be able to participate in this research study. Refusal to grant this Authorization will not result in any loss of medical benefits to which you are otherwise entitled.
(9). Can your PHI be disclosed to parties not included in this Authorization who are not under the HIPAA requirements?

There is a potential that your research information will be shared with another party not listed in this Authorization in order to meet legal or regulatory requirements. Examples of persons who may access your PHI include representatives of the Army Medical Center Institutional Review Board (IRB), the University of Miami Institutional Review Board, the Army Clinical Investigation Regulatory Office (CIRO), the Army Human Research Protection Office (AHRPO) the Department of Health and Human Services (DHHS) Office for Human Research Protections (OHRP), and the DHHS Office for Civil Rights. This disclosure is unlikely to occur, but in that case, your health information would no longer be protected by the HIPAA Privacy Rule.

(10). Who should you contact if you have any complaints?

You are encouraged to ask questions, at any time, that will help you to understand how this study will be performed and/or how it will affect you. Please contact Christopher Weidlich, MS, ARNP, BC at 561-504-0423 or Marlene Martin at 910-907-8002.

Also, if you have any questions or concerns about this study or your rights as a study subject you may contact the Human Protections Administrator (HPA), Army Medical Center

Your signature at the end of this document acknowledges that you authorize Army Medical Center personnel to use and disclose your Protected Health Information (PHI) collected about you for research purposes as described above.

16. CONTACTS FOR QUESTIONS CONCERNING YOUR RIGHTS ON STUDY RELATED INJURY

Should any further questions arise concerning my rights on the study related injury, I may contact the Center Judge Advocate at XXXXXX Army Medical Center

A copy of this consent form will be provided to you.

SIGNATURE OF RESEARCH PARTICIPANT OR LEGAL REPRESENTATIVE

You have read (or someone has read to you) the information in this consent form. You have been given a chance to ask questions and all your questions have been answered to your satisfaction.
BY SIGNING THIS CONSENT FORM, YOU FREELY AGREE TO TAKE PART IN THE RESEARCH IT DESCRIBES.

________________________________  ______________
Participant’s Signature                             Date

________________________________
Participant’s Printed Name

SIGNATURE OF INDIVIDUAL OBTAINING CONSENT
Your signature attests that you undertook the consent process with the research participant.

__________________________________________ Date (must be the same as the participant’s)
Signature

Printed Name
Appendix VI – Email Script
Dear Sir or Ma’am,

I am writing to let you know about an opportunity to participate in a research study examining resiliency, coping, and compassion fatigue in Army Nurses, LPNs and Combat Medics who receive Care Provider Support Program (CPSP) training. This study is being conducted by the University of Miami School of Nursing and Health Studies at an Army Medical Center. This study will examine a healthcare provider’s resiliency, coping and compassion fatigue level using three questionnaires prior to CPSP training and again, 30 days later. I received your email from the CPSP Instructor as you are scheduled to attend an upcoming CPSP training program. As such, you may be eligible to participate in this study, helping further the knowledge base on resiliency in healthcare providers within the Army.

If you are willing to participate in this study, I ask that you arrive at the CPSP training site 30 minutes prior to the previously scheduled training. Should you agree to participate in the study, the questionnaires you will receive will take approximately 20 minutes to complete. Thirty days after CPSP training, you will be mailed the same questionnaires to retake.

Agreement to be contacted or a request for more information does not obligate you to participate in the study. If you would like additional information about this study, please call Chris Weidlich at 561-504-0423 or email chris.weidlich@umiami.edu.

Thank you again for considering this research opportunity.

Sincerely,

Chris Weidlich, PhD (c), ARNP, BC

University of Miami School of Nursing and Health Studies
Appendix VII – Army Medical Center Permissions
MEMORANDUM FOR LTC Christopher P. Weidlich, PhD Candidate, University of Miami School of Nursing and Health Studies, Coral Gables, FL 33146

SUBJECT: Letter of Support for research regarding Provider Resilience Training (PRT) in Army Nurses, LPNs and Medics

1. This letter is to confirm my support for LTC Christopher Weidlich’s participation in the proposed research study entitled “PRT as a mediator of resiliency and coping among Military Health Care Personnel”. I am aware that LTC Weidlich will conduct research under the guidance of the Center of Nurse Science and Clinical Inquiry.

2. Upon review of the proposal, I believe that participation in this study does not pose a risk to participants. I believe there are adequate safeguards in place to protect the privacy and confidentiality of the participants and will not negatively impact the mission of Womack Army Medical Center. The military significance of this project is timely and relevant. The aims of this project is to examine the relationship between coping behaviors and resiliency among Army Nurses, LPNs, and Medics using a theoretically driven model and to examine the post-PRT training change in coping and resiliency.

3. Please let this memorandum serves to communicate my complete support of your important research endeavor. I look forward to hearing about the process and results of this study.

VINETTE E GORDON
COL, AN
Deputy Commander for Nursing/Patient Services
MEMORANDUM FOR LTC Christopher P. Weidlich, PhD Candidate, University of Miami School of Nursing and Health Studies, Coral Gables, FL 33146

SUBJECT: Letter of Support for research regarding Provider Resilience Training (PRT) in Army Nurses, LPNs and Medics

1. This letter is to confirm my support for LTC Christopher Weidlich’s participation for the proposed research study entitled “PRT as a mediator of resiliency and coping among Military Health Care Personnel”.

2. Upon review of the proposal, I believe that participation in this study does not pose a risk to participants. I believe there are adequate safeguards in place to protect the privacy and confidentiality of the participants and will not negatively impact the mission of Womack Army Medical Center. Furthermore, my department is available to support him as needed during data collection process.

3. The purpose of this pilot study is to examine the relationship between resiliency and coping skills and determine whether the Provider Resilience Training, now called the Care Provider Support Program (CPSP), significantly affects coping skills in Active Duty Army Nurses, Licensed Practical Nurses (LPNs) and Medics. The military significance of this project is timely and relevant. The results of the study may be transferrable to all military providers throughout the services by maintaining a fit and ready force and providing care for the caregiver by improving resiliency, coping skills, and inevitably improved patient care.

4. Please let this memorandum serve to communicate my complete support for your important research endeavor.
NANCY M. STEELE LTC, AN
Chief, Center for Nursing Research