RESILIENCE FACTORS OF COMBAT WARRIORS RETURNING TO COLLEGE

by

A. MICHAEL ZIMMERMANN

(Under the Direction of Brian A. Glaser)

ABSTRACT

The present study investigated the risk and resiliency factors of combat warriors who matriculate into higher learning institutions after military service. The study explores specific variables that influence risk and resilience from a Positive Psychology standpoint. One hundred and eleven participants from across the country were administered the *Deployment Risk and Resilience Inventory*, the *Combat Exposure Scale*, and the *Human Spirituality Survey*. The results obtained in this survey suggest that levels of PTSD are high among matriculating warriors. The majority of participants had more than one deployment ($\overline{X}$ = 2.17, SD = 1.48), had spent more than a year and a half deployed ($\overline{X}$ = 1.69, SD = 1.11), and 59% had never fired their weapon in combat. This is a stark change from previous findings, suggesting that as the conflict has progressed, the nature of military warriors has changed. Many expected differences in combat exposure, unit social support, and harassment due to branch or job specialty were found. Unexpectedly, limited combat exposure in both Air Force and Navy personnel did not

protect against higher levels of PTSD. Warriors showed very low levels of spirituality, and there was a non-significant trend to suggest spirituality as a resilience factor against PTSD.

INDEX WORDS: College Students, Military Psychology, Positive Psychology, PTSD, Post Traumatic Growth, Resilience, Spirituality, Trauma

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DEDICATION

Without a doubt, this project has been focused, from conceptualization to completion, on building the knowledge base of understanding and treating the warriors who have come home. The service members who took part in this study have helped those of us who treat them, treat them more effectively. The warriors who give their all every day are the inspiration and impetus for all that I do. This study is dedicated to them.

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CHAPTER 1

INTRODUCTION

As America enters the second decade of the Global War on Terror (GWOT), we find ourselves engaged in the second-longest running combat situation in our country's history. Well over 2 million service members have been deployed in response to the GWOT, with more than 800,000 having been deployed more than once (Marine Times, 2009). In Iraq and Afghanistan, the two primary theaters of conflict, substantial rates of PTSD, major depressive disorder and many anxiety disorders are found among warriors (Hoge, 2006). Among U.S soldiers deployed to Iraq alone, the diagnosis rate of PTSD is as high as 17%. With extended exposure to combat situations, it is no surprise that troops show increasingly higher levels of mental disorders.

Although the prevalence of mental disorders is rising, dysfunction after combat is not the typical response. In fact, when viewing the diagnostic rates from a Positive Psychology standpoint, we observe that 83% of warriors[1] do not experience PTSD. The majority of service members returning home from combat function in a mentally healthy manner. In a broad sense, these warriors are defined as being "resilient" to the stressors of combat. But what is it about these warriors that make them able to withstand the

[1] There are a number of different terms throughout the literature when referring to deployed service members. To reduce a perceived bias toward one branch of service (i.e. Soldiers, Airmen or Marines) and for the sake of continuity, the term "warriors" will be used as a descriptor for all servicemen and servicewomen; regardless of branch, theatre of combat, or era in history. The one caveat will be when addressing specific studies that observe only one group (e.g. US Army soldiers), and in this instance, the more specific identifier will be used.

trauma of war when others cannot? Are these differences innate or learned? And is it possible to train resiliency skills to troops going into combat, thus decreasing their distress and improving their quality of life?

Anecdotal perceptions of warriors on campus include pejorative comments such as the "crazy veteran in the back of the classroom," provoking curiosity in the naïve freshman who wants to know if the warrior has "killed anyone." Hollywood glamorizes the front-line experiences of infantry (e.g., "Saving Private Ryan," "Full Metal Jacket," and "Platoon") and more recently, Ordinance Disposal Units (i.e., "The Hurt Locker"). Unfortunately, these movies may be the most exposure to combat warriors that young college students experience prior to meeting a true warrior. Further, these movies fail to chronicle the vast experiences of our soldiers, leaving many unrepresented. For example, is a warrior less of a warrior if he never fired his weapon? Is she less of a veteran if she never was on patrol because she was on a naval battleship?

One of the primary aims of this project is to build an understanding of who are warriors are and who they are not. Until we know the basics about this population in an academic setting, we can't begin to identify their needs. Once we understand what the warriors of this generation have experienced, we can then begin to build effective outreach programs to assist and encourage them throughout their collegiate experience.

I would be remiss if I failed to address suicide in this project. According to the Veteran's Administration, roughly 22 veterans died by suicide every day in 2010. Of the 147,763 suicides reported in 21 states, 27,062 (18.3%) were identified as having a history of U.S. military service on their death certificates (Kemp & Bossarte, 2012). While this statistic is an estimate based on partial data, the lower boundary for this number is still 21

per day. The majority of individuals who commit suicide in the US are veterans (74%). The vast majority of veterans who complete suicide are male (97%), and of those male suicides, approximately 44% of them were over the age of 50 (Kemp & Bossarte). Three hundred and nine active-duty warriors completed suicide in 2009. Of active-duty warriors that year, the suicide rate is 18.5 per 100,000, just below the national average of 18.8. That rate is up from 10.3 suicides per 100,000 warriors in 2002 (DoD, 2013). These statistics have provided a clarion call to clinicians to address this problem.

Another aim of this study is to give warriors, clinicians, and academics tools to proactively stem the tide of the profound loss that leads a warrior to end his or her life. This study is not about suicide; it is about the exact opposite. Suicide, from the standpoint of Positive Psychology, is the outcome when all resilience fails. The hope is to arm our warriors with the tools and skills that can bolster resilience so that the outcome is never suicide, but rather the choice and the ability to live life more fully.

Positive Psychology and Counseling

To some, Positive Psychology seems to consist of a few fringe psychologists with rose-colored glasses studying unimportant phenomena; however, Positive Psychology is a burgeoning psychological orientation that focuses on positive and adaptive cognitive and emotional states in order to increase our production and life satisfaction. Unfortunately, the historical standpoint of psychology has been built from a deficit-based model. As Fuller (2001) noted, when comparing the amount of research on depression versus joy, there is almost a 99:1 disparity in the two areas. A more recent web-based search, performed in July of 2013, revealed a 27:1 disparity. A similar online search on depression versus positive emotion research yielded a 36:1 disparity. In the early years of

this century, the National Institute of Mental Health (NIMH) budget allocated less than 2% of annual funding to studying the strengths of the human spirit (Myers, 2000). Taken on its face, these findings suggest that the disease- and deficit-based constructs of mental functioning are the most standard ways to approach disorders, as well as the most profitable to study.

Yet, this needs not to be the prevailing paradigm. Frederickson and colleagues have focused their attention on the effect of positive emotions on improving cognition (Fredrickson & Brainigan, 2005), well-being (Frederickson & Joiner, 2002), physical improvement of the body (Frederickson & Levenson, 1996), the minimum amount of positivity needed to flourish (Frederickson & Losada, 2005), and positive emotions as a resilience factor during and after crises (Frederickson et al., 2003).

These lines of research, along with many others, are based upon Frederickson's (2001) broaden-and-build theory. This theory states that positive emotions broaden our thought-action repertoires and allow us to experiment with novel approaches to unfamiliar situations. These positive emotions also build our intellectual, social, and psychological resources. Negative emotions, in contrast, restrict our thought-action repertoires to time-tested behaviors that increase our chances for survival. As such, the broaden-and-build theory is not only helpful in conceptualizing how to address dysfunction in a different manner, but it also allows a framework for effective research in a counseling setting.

Seligman and colleagues (2006) chose to use the foundations of Positive Psychology as a basis for treating depression in college students. This study was based on Seligman's earlier work (2002), which identified three core components of happiness:

positive emotion, engagement (also known as flow) and meaning. This construct has been further adapted to include healthy, positive relationships and recognition/achievement in life (Seligman, 2011). Using the initial core components, Seligman et al. (2006) pilot-tested a Positive Psychology treatment modality (PPT) on 40 students with mild to moderate depressive symptoms. Seligman et al. used a standard group therapy format to teach the concepts of personal strengths, gratitude and savoring. Participants in the experimental group showed significant decreases in depressive symptoms and maintained their gains for at least one year. The control group showed no decrease in their symptoms. In the second portion of the study, 45 participants were recruited and were randomly selected into three groups: PPT (individual therapy), Treatment as Usual (TAU) or TAU with medication (TAUMED). Thirteen participants dropped out, leaving a final participation of 32 students. After 12 weeks of treatment, participants in the PPT condition reported significantly higher functioning than those in the TAUMED condition, both of whom fared significantly better than participants in the TAU group. Effect sizes (Cohen's *d*) ranged from 1.03 to 1.44 in comparing the groups, suggesting that not only was PPT significant at the $p < .05$, but that there was a large effect across treatment settings. Thus, PPT appears to be a promising theoretical orientation and treatment modality – at least for depression.

The use of Positive Psychology constructs in counseling settings has been encouraged, but with reservation (Harris, Thoresen & Lopez, 2007). While several books, and even special journal issues (e.g., *The American Psychologist, 55*[1]; *Journal of Social & Clinical Psychology, 19*[1]), have been dedicated toward discussions of the research and theory of positive psychology, there is little research on how and when

positive psychology can be applied in a therapeutic setting. Generally, academic research appears to either support the use of positive psychology in certain settings (e.g. Seligman, et al., 2006) or suggests an abundance of caution when even considering the inclusion of possible positive psychology constructs (Harris, et al., 2007). Unfortunately, this gives the impression that positive psychology in therapy is akin to phrenology, voodoo, or traditional Chinese medicine.

Often, opponents to PPT state "positive emotions are not a panacea for all client problems" (e.g. Fitzpatrick & Stalikas, 2008; Harris et al, 2007; Stalikas & Fitzpatrick, 2008). It appears as though the detractors of positive psychology have confused the entirety of positive psychology with positive emotion. Without a doubt, the use of positive psychology in the therapy room has minimal to moderate research support, and clinicians who choose to use positive psychology should follow all the ethical standards of care; however, the only way to determine if the results that Seligman and others have found are valid is to replicate their studies and expand upon their ideas. Further, positive emotion is only one component of positive psychology (Seligman, 2011) and using merely positive emotion in counseling would be akin to treating a client using only Beck's Cognitive Triad instead of the totality of Cognitive-Behavior Therapy.

Counseling and the Undergraduate Warrior

A cursory web search of scholarly research articles devoted to counseling with military service members or veterans revealed over 114,000 journal articles, of which 98,000 have been published within the past 20 years. There is an undeniable link between Counseling Psychology and the warriors who have served their country, though finding warriors in need of counseling in a college setting is more difficult than initially

perceived. While undergraduate warriors represent almost 4% of the undergraduate population (Radford, 2009), they account for less than 2% of students who seek services on campus (Center for Collegiate Mental Health, 2009). There are several possible reasons for this phenomenon: the stigma with seeking psychological or medical help, the military posture against being perceived as weak and the time constraints implicit with the multiple roles that warriors must juggle (parent, employee, student) are above and beyond what most undergraduates experience.

Undergraduate warriors face many unique challenges, but the majority of them do not face physical handicaps. Tanielian and Jaycox (2008) found that nearly 70% of returning warriors do not have a significant physical or mental health diagnosis. While 30% of warriors do cope with a physical disability, traumatic brain injury (TBI), or a mental health disorder; the majority of high-functioning warriors do not. Based upon their research, Bonar and Domenici (2011) posit three primary principles of care when treating the undergraduate warrior. Principle 1 encourages cultural competence. While this construct is obvious to the point of redundancy to someone within the military community, it is reasonable to assume that many clinicians may not be aware that the warrior culture is as distinct and pervasive as any racial or ethnic culture. Principle 2 states that assessment and treatment should take place within the College Counseling Centers. University Counseling Centers are the most-equipped areas for treatment of PTSD due to combat or rape, and there are several well-validated treatment modalities that can be employed (Bonar & Domenici). The third and final principle suggests that warrior outreach should be encouraged and increased, especially considering how prevalent warriors are on campuses across the country. Unfortunately, outreach

programs appear to be rare, despite the large number of undergraduates with military ties (Bonar & Domenici).

Given this preponderance of research and the clearly delineated connections of Counseling Psychology, college students and warriors, it is this author's belief that a study on the subset of warriors who matriculate into post-secondary education is fully warranted and supported. Further, the research suggests an ever-growing need for clinicians who are skilled and competent in working with warriors inside college settings. Using the findings of this study, and other studies of a similar nature, it is hoped that the field of Counseling Psychology can improve the experience of warriors on campus in their readjustment to civilian life while equipping them with the tools needed to succeed on campus and in their future.

Statement of the Problem

This chapter will address several areas in which the current literature has yet to explore. It will begin by analyzing several incorrect assumptions of military personnel made by previous researchers. In addition, it will explore the differences among the different branches of military service. Finally, it will address the historical reluctance of studying the spiritual aspects of resilience and the need to include this dimension.

Interestingly, given the GWOT, only one line of research is currently investigating active duty soldiers and their resilience factors (Cornum, Matthews, & Seligman, 2011); however, this study is currently ongoing and no information can be obtained about its results as of yet. Recently, Schaubroeck, Riolli, Peng and Spain (2011) studied a metaconstruct of resilience in soldiers while deployed. While informative, this study has

some limitations. Most notably, there are substantial differences between National Guard and Reserve troops and their active duty counterparts, a vital component that most scholarly research fails to address.

Another aspect that current research neglects is the generational component. Of the published literature that examines combat troops and resilience, the vast majority identifies factors in warriors of every combat era up to the Gulf War. To assume that the current combat forces are comparable to the combat forces of 20 or 40 years ago is, at best, naïve. Researchers in the education field have identified a group they term "Millennials." those individuals born after 1978 (Strauss & Howe, 1991). Millennials present very differently in college classes than students from previous generations; millennials are more collaborative, ethnically diverse, eager for variety and interactivity, prefer working in groups, and easily bored (Oblinger, 2003; Raines, 2002; Prensky, 2001; Twenge, 2006). Millennials in college classrooms are the same age as the warriors currently on the battlefield; as such, differences in generational factors need to be investigated to determine if the risk and resiliency factors are also influenced.

While it has never been scientifically investigated, there is also anecdotal evidence that suggests intrinsic differences among the different branches of the military. Whether through selection bias or environmental learning, the causal factor is not known. The end result becomes apparent when working with individuals from different branches. To assume that Active-Duty Marine Corps Infantry have the same resiliency factors as National Guard or Reserve Logistics personnel simply demonstrates a failure to understand the unique culture within each branch of the military. It is possible that the Marine Corps Infantry and Army Infantry personnel may have similar risk and resiliency

factors, however this has never been explored in the literature either. Further, it stands to reason that there may be other cross-branch similarities (e.g. Air Force, Marine, and Army aviators) borne out in the data.

One final factor mentioned in resiliency literature is spirituality. While the term has varying operationalization, spirituality is considered an important aspect in resilience. Even in the earliest historical records, a need for a spiritual foundation is imperative for individuals who return from combat (see Numbers 31:19). A strong spiritual foundation has been shown to be a protective factor against many mental health disorders (Pargament & Sweeny, 2011). Even with this evidence, the subject of spirituality is approached with apprehension, if it is approached at all. Studies funded by grants from the government often exclude spiritual discussions, perhaps with the desire to maintain a separation between church and state or so as not to appear to support one ideology over another. This problem is further compounded by a lack of available, empirically validated, measures of spirituality that are narrow enough to capture the construct of spirituality while being broad enough to represent many divergent views. Even though Christianity is the most common religious belief in North America, the different subsets of Christianity are very idiosyncratic in their belief structure, some to the point of being almost incompatible with each other. Additionally, monotheistic beliefs are only held by roughly half of the world's population, further limiting the ability to cohesively study spirituality.

Purpose of the Study

The purpose of this study is to investigate the innate and cultural differences in warriors across branches of service and job categories on measures of risk and resilience.

While there is an abundance of literature that discusses the negative aspects of combat exposure, namely PTSD, and the debilitating nature of such negative experiences, there is a growing body of research that looks at the human ability to adapt to negative or difficult situations and grow in personal strength from the experience. It is from this basis that the construct of Positive Psychology began to take shape (Seligman & Csikszentmihalyi, 2000).

The aim of the Positive Psychology movement is to direct attention away from pathology and toward positive aspects of mental health functioning, such as resilience, growth potential, hope and spirituality (Seligman & Csikszentmihalyi, 2000). The experiences of combat will shape a warrior's perceptions for the rest of his or her life, but is it possible for this change to be positive? Can this change be growth-oriented instead of deficit-oriented? Positive Psychologists would argue yes to both questions. Some (Belsky, et al., 2007; Pluess & Belsky, 2013) would posit that those most changed by the experiences of war could have the greatest difficulty in adapting once they return to civilian life. As several researchers (Hoge, et al, 2007, Pluess & Belsky) have noted, behaviors and coping strategies that once worked well in a high-threat environment often are counterproductive in non-combat environments.

Definition of Terms

Branch (of service) – a portion of the Armed Forces, namely the Army (USA), Navy (USN), Air Force (USAF), Marine Corps (USMC), and Coast Guard (USCG)

Deployment – the process of preparing for and going to a combat zone for an indeterminate period of time

MOS – (Military Occupational Specialty), what a warrior is trained to do during routine activities. Some branches have primary and secondary MOS's (e.g., USMC, where everyone has a secondary MOS of Infantry)

OIF/OEF – Operation Iraqi Freedom / Operation Enduring Freedom. These are names given to the two primary areas of U.S. combat operation in the Middle East. OIF refers to combat operations in Iraq, OEF to combat operations in Afghanistan

Positive Psychology – a branch of psychology that focuses on improving 5 aspects of human experience (identified by the acronym PERMA: positive emotion, engagement (flow), relationships, meaning in life, and achievement) in order to improve the totality of human experience

Resilience – effective adaptation and coping in the face of adversity

Spirituality – behavior closely associated with strong personal values toward God or the Universe or a journey to search for what is sacred in one's life

Warrior – a descriptor for all servicemen and servicewomen; regardless of branch, theatre of combat, or era in history

Research Questions and Hypotheses

The present study aims to address the following questions and hypotheses:

Research Question 1: Do OIF/OEF warriors who matriculate into college have higher levels of PTSD than warriors from previous military conflicts?

Research Question 2: Do differences exist in warriors who matriculate into college on measures of risk and resiliency?

Null hypothesis 2.1. There will be no statistically significant difference between warriors who matriculate into two-year universities and four-year universities on the DRRI subscale scores.

Null hypothesis 2.2. There will be no statistically significant difference between warriors who matriculate into two-year universities and four-year universities on the CES full-scale scores.

Null hypothesis 2.3. There will be no statistically significant difference between warriors who matriculate into two-year universities and four-year universities on the HSS full-scale scores.

Null hypothesis 2.4: There will be no statistically significant difference between warriors of either gender who matriculate into universities.

Research Question 3: Do branch of service or military occupation serve as predictors of resilience in warriors?

Null hypothesis 3.1. Branch of service will not be a predictor of resilience.

Null hypothesis 3.2. Military occupation will not be a predictor of resilience.

Research Question 4: What role, if any, does spirituality play as a measure of resilience?

LITERATURE REVIEW

Warriors in College

With the war in Iraq now officially complete, and combat operations in Afghanistan surpassing the 10-year mark, there is understandably a strong concern about the mental health of those service members who have gone to combat and are now returning to civilian life. There is little information about how many warriors are in college at this point in time. Current estimates note that 270,000 OIF/OEF veterans took advantage of the G.I. Bill during the 2009-2010 academic year (Sewell, 2010), while others note that almost 460,000 OIF/OEF veterans are anticipated to enroll annually (United States Army, 2009). These numbers only reflect the number of beneficiaries using the G.I. Bill to help pay for expenses, which may not be an entirely accurate reflection of the true population of warriors on campus. Even with limitations on accurate numbers, it is clearly apparent that serving the veteran population on campus is incredibly important.

This information lends itself to the question, Do warriors who matriculate at postsecondary education institutions have similar levels of PTSD and other mental diagnoses as those who do not go to college? There is also a question as to the differences between those warriors who attend two-year institutions as opposed to four-year institutions, as the research suggests that the majority of service members with PTSD are disproportionately represented in the bottom 15% of service members on tests of physical and mental health (Seligman et al., 2009). Thus, it is reasonable to assume that those

warriors who fall in that bottom 15% may either choose not to pursue an academic degree after their military service, or choose a trade school or less rigorous program of study. To date, this has not been investigated by any research.

Post-traumatic Stress Disorder in the Military

Posttraumatic Stress Disorder (PTSD) is a psychiatric condition that is experienced by a subset of individuals after exposure to an event that involves life threat (Criterion A1) and elicits feelings of fear, helplessness, and/or horror in the individual (Criterion A2), according to the DSM-IV-TR (2000). With the newest version, the DSM-V, Criterion A2 has been dropped from the diagnostic requirement for a number of reasons (see Kubany, Ralston, & Hill, 2010 for discussion), positive predictive validity being one of the most notable. PTSD is characterized by several symptom clusters, including re-experiencing symptoms (e.g., intrusive thoughts, recurrent dreams, flashbacks, distress and physiologic reactivity upon exposure to trauma cues), avoidance and emotional numbing symptoms (e.g., avoidance of traumatic reminders, anhedonia, detachment from others, restricted emotional experiences, sense of foreshortened future) and hyperarousal symptoms (e.g., sleep difficulties, irritability and anger, concentration problems, hypervigilence, exaggerated startle response; American Psychiatric Association).

PTSD symptoms, like all other diagnoses, vary from person to person in frequency, intensity, and duration of symptoms; however, warriors are a unique subset of individuals who experience PTSD differentially than those who experience other types of trauma (e.g., motor vehicle accidents, violent crime, or natural disasters). While PTSD prevalence rates in the general population range from 7-8%, rates for OIF/OEF warriors

report to be as high as 14-16% (Hoge, et al., 2004; Hoge, Terhakopian, Castro,Messer, & Engel, 2007). This number may actually be higher, given the warrior's propensity to under-report symptoms because of stigma or damage to one's career (Hoge, et al.).

The majority of individuals exposed to trauma do not develop clinical levels of PTSD, suggesting that other factors influence the onset of symptoms (Keane, Marx, & Sloan, 2009). Characteristics of the trauma event (e.g., trauma severity, perceived life threat, and combat-related injury) and post-trauma factors (e.g., lack of social support and exposure to additional life stressors) have been strongly associated with risk of PTSD in multiple studies. In contrast, there have only been weak to moderate associations reported for pre-trauma factors, such as age and prior psychiatric history (see Gates, et al., 2012, for full discussion of PTSD epidemiology).

Resiliency

As the field of psychology has progressed over time, the majority of research is focused on deficit-based constructs. There is no denial that war is a terrible thing, and the majority of the literature that addresses combat related events has investigated increases of depression, PTSD and anxiety. What these lines of research fail to address are the potentially positive outcomes for individuals. Yes, the experience of combat touches all warriors, but not all warriors who experience combat return with a diagnosis of a mental health disorder. The majority of warriors return without a mental health diagnosis. Through adversity, the human spirit becomes stronger, yet almost all research has focused on how individuals only negatively adapt to their experiences after combat.

According to Positive Psychology literature, some individuals are unable to mediate the impact of traumatic stress and as a result suffer significant physical and

psychological health symptoms. Others have the ability to rebound with little deficit in their functioning. These latter individuals are considered to possess resiliency; that is, individuals who adapt effectively and can cope in the face of adversity (Tugade & Fredrickson, 2004).

Bartone (1999) identified hardiness (a term with a similar construct to resiliency, used before 2000) as a significant moderator of combat stress in 787 National Guard and Reserve soldiers from medical units who were deployed to the first Gulf War. Bartone found that hardy individuals have a high sense of life and work commitment, a greater feeling of control and are more open to change and challenges in life. In his study, hardiness was a good predictor of continued good health after combat and a lower level of PTSD symptomology.

Pietrzak and colleagues (2009) surveyed 272 warriors from Connecticut to identify their resiliency and protective factors against PTSD and other psychological symptoms. They observed that almost no scientific study had been attempted on OIF/OEF warriors to that point in time. Overall, they found that OIF/OEF warriors reported levels of resiliency consistent with civilian counterparts, but those warriors with PTSD symptoms reported lower levels of resiliency and unit post-deployment social support compared to warriors without PTSD. Therefore, resiliency and post-deployment social support were negatively associated with traumatic stress and depressive symptoms even after controlling for combat exposure.

Pietrzak's most pronounced finding was on the subscale of personal control ($p < .001$, $d = 1.44$), which assesses the extent to which an individual feels in control, knows where to turn for help and has a sense of purpose (Pietrzak, et al., 2007). This finding is

consistent with Bandura's (1998) social cognitive theory, which states that beliefs about one's ability to manage and control events in life are important in determining behavioral and effective responses to highly stressful situations. Most of the findings by Pietrzak et al. (2009) on resiliency scores in relation to PTSD status had effect sizes larger than 1.0.

Germane to the current study, the resiliency factor of Spiritual Orientation to the Future was non-significant and had an effect size of 0.21; however, this factor only had two identifying items – "…fate or God...," which may suggest that either the construct of spiritual orientation was not effectively captured in their study, or that spirituality does not necessarily belong in a discussion of resiliency factors.

Schaubroeck, Riolli, Peng and Spain (2011) examined the influence of positive psychological capital (PsyCap), a meta-construct of resiliency measures, on soldiers (i.e. U.S. Army warriors) during a combat deployment. They sampled 648 soldiers who were actively involved in dealing with the Iraqi insurgency during the summer of 2004 (a period of heavy fighting against insurgents in some areas of Iraq). They found that trait PsyCap was negatively correlated with depression, anxiety, and somatic complaints. Additionally, soldiers with high levels of trait PsyCap were more likely to have "challenge appraisals" when faced with various combat events as opposed to "threat" or "loss" appraisals of the environment.

A growing body of research addresses positive life changes (i.e. post-traumatic growth) that result after exposure to traumatic incidents (Cordova, Cunningham, Carlson, & Andrykowski, 2001; Frazier, Conlon, & Glaser, 2001; Linley & Joseph, 2004). One study (Aldwin, Levinson, and Spiro, 1994) found a linear relationship between combat exposure and positive development outcomes in a sample of World War II and Korea

veterans. However, Card (1983) found that while Vietnam-era veterans reported greater sensitivity toward others, Vietnam War combat veterans did not. Fontana and Rosenheck (1998) observed a nonlinear (i.e. quadratic) trend in combat exposure and psychological benefit with other Vietnam veterans. Maguen, Vogt, King, King and Litz (2006) found that some Gulf War I warriors who perceived greater threat in the combat zone reported higher appreciation of life, and those warriors who had higher post deployment social support reported greater personal strength and more positive interpersonal relationships with others. Given this, it is understood that the construct of resiliency can also include post-traumatic growth.

Seligman's Comprehensive Soldier Fitness

In 2008, Seligman was approached by the US Army to discuss the problems of returning warriors. From these discussions grew the Comprehensive Solider Fitness (CSF) studies, a project that teaches the skills of resilience and positive psychology, thereby producing less depression and anxiety (Seligman, Ernst, Gillham, Reivich, & Linkins, 2009). CSF is designed build resilience in soldiers, family members and Army civilians by developing five dimensions of strength: physical, emotional, social, spiritual and family. The goal of the CSF is to produce an Army of balanced, healthy, self-confident soldiers, family members and Army civilians whose resilience and total fitness enables them to thrive in an era of high-operational tempo and persistent conflict (Seligman, et al., 2009). Thus, the end state of Comprehensive Soldier Fitness is a fit, resilient, and ready Army comprised of individuals with strong minds and strong bodies.

The first step in the CSS is to assess where the soldier is in his or her "resiliency path." The Global Assessment Tool (GAT) is a survey-based instrument used to assess

warriors on four of the five dimensions of strengths listed above: emotional, social, spiritual, and family. Developed by subject matter experts from the U.S. Military and civilian universities, the GAT comprises a series of web-based questions drawn from scientifically validated measures. The GAT is primarily designed as a soldier self-assessment tool, although aggregate scores assist the Army in determining which training is most effective in further developing the four dimensions of strength. In the near future, the CSF will offer a menu of Comprehensive Resilience Modules targeted to each soldier based on their individual GAT results. These modules will assist soldiers in improving the four disciplines of strength.

CSF focuses on training warriors in three areas: preparation, sustainment, and enhancement (US Army, 2009). During the preparation phase, the warrior focuses on learning, fundamental resilience, competency by using self-awareness, self-regulation, optimism, mental agility, and strengths of character connections. In the sustainment phase, the warrior implements resilience in leadership education and operations (e.g., by using resilience first aid, and leader education throughout all stages of deployment). In the enhancement phase, the soldier will focus on elevating personal and professional performance by using goal setting, energy management, imagery, attention control, and confidence.

Spirituality

The meanings of *spirit* and *spirituality* have changed over the past decades (Zinbauer, Pargament, & Scott, 1999), and the terms continue to evolve (Pargarment & Sweeney, 2011). Spirit and spirituality carry many meanings, depending on the group providing the definition. Current research operationalizes spirit as the essential core of

the individual, the deepest part of the self, and one's evolving human essence (Sweeney, Hannah, & Snider 2007; Pargarment & Sweeney). The human spirit may play an important role in driving individuals to behave in a moral or ethical manner when outside pressures run counter to their beliefs. Examples of this include Dr. Martin Luther King Jr. standing up for racial injustices or the American pilot in Vietnam who stopped the My Lai massacre (Thompson, 2002).

The definition of *spirituality* naturally progresses from the definition of spirit. Many scholars express spirituality as a behavior closely associated with strong personal values toward God or the Universe (i.e., Wheat, 1992) or a journey to search for what is sacred in one's life (Paragarment, 2007). From this perspective, people can take numerous pathways to develop their spirituality, whether through conventional means such as attending a house of worship or through less conventional means such as exercise, nature, art, or community involvement.

The use of the term spirituality as opposed to religion, religiosity, or faith was intentional in this study. All of these terms have somewhat similar meanings, and many aspects of these words show a high degree of overlap. The term *religion* comes from the Latin for conscientiousness or piety. It is generally considered as "a set of beliefs concerning the cause, nature, and purpose of the universe, usually involving devotional and ritual observances, and often containing a moral code governing the conduct of human affairs" (Webster's dictionary). Another definition, more suited toward academic pursuits, finds religion to be "… an attempt to represent an order police, feelings, imaginings and actions that arise response to direct experience of the sacred and the spiritual" (Usman, 2007). Religiosity is a term ascribed to behaviors that are often elicited

by individuals purporting to be religious. This distinction is made due to the fact that beliefs are internal experiences and are much more difficult to measure; however, behaviors are much easier to identify, measure, and study. Behaviors associated with religiosity include religious coping, social support, perceived meaning of life, and positive affective states (Watterson & Giesler, 2012). Faith is generally considered to be a "belief in God or the doctrines of religion" (Webster's dictionary). Again, this is another term that relies upon internal states that are difficult to operationally define.

In general, spirituality is considered a positive force, and spiritual coping with traumatic situations is associated with greater wellbeing and mental health (Moreira-Almeida, Lotufo Neto, & Koenig, 2006). Positive spiritual coping has been associated not only with better physical and mental outcomes in medically ill patients (Koenig et al., 2001; Pargament, Koenig, Tarakeshwar, & Hahn, 2004), but also among trauma survivors such as people affected by large-scale floods (Smith et al., 2000).

METHODOLOGY AND PROCEDURES

The present study utilizes regressional and correlational research methods to explore resiliency factors among warriors returning college. The study identifies independent variables of interest using a demographical questionnaire and explores between- and within-group differences on measures of risk and resiliency, combat exposure, post-traumatic stress, and spirituality. The study also explores differences from previously established group norms and current matriculating warriors.

Target Population

A power analysis using the GPOWER software (Faul, Erdfelder, Lang, & Buchner, 2007) was conducted to determine the sample size for the present study. The power analysis indicated that a total of 130 participants would be needed assuming a medium effect size of .25, an alpha of .05, and a power of .90. The power analysis indicated that if these variables were to hold at these levels, the power of the study would be .9003 and that a critical t-value of 1.656 would be needed to reach significance. Participants for the present study were OIF/OEF warriors currently enrolled in post-secondary education during the Spring and Fall 2011 semesters. Responses from 120 participants were obtained. After removing incomplete responses from nine participants, the final sample consisted of 111 participants, which suggests excellent statistical power.

Instrumentation

A demographic questionnaire was used to obtain descriptive information of the sample. The questionnaire consisted of nine questions that ask warriors to identify the

following variables to be used in data analysis: ethnicity, gender, age, education level, military job code, rank, current income level, number of times deployed, and total linkable deployments.

The *Deployment Risk and Resilience Inventory* (DRRI; King, King & Vogt, 2003) was used to measure risk and resilience measures associated with possible military deployment stress-related reactions that may have implications for veterans' long-term health. The DRRI assesses 14 risk and resilience factors, including two Pre-deployment/prewar factors, ten Deployment/War-zone factors, and two Postemployment/Postwar factors. The current study utilized nine of the factors, excluding the 4 factors that had small effect sizes ($r < .20$) or where there was redundancy (e.g. combat exposure items). This left a total of 135 items, all of which used either *yes/no* responses or 5-point Likert scale responses, ranging from 5: *strongly agree/often* to 1: *strongly disagree/never*. Additionally, all participants were allowed not to answer any item they did not want to. All subscales used in the DRRI can be found in Appendix A.

The DRRI has demonstrated acceptable internal consistency, reliability, and criterion-related validity (King, King, & Vogt, 2003). This instrument was standardized using more than 1100 active-duty and reserve service members and has been used in research with several veterans populations in the US and Canada (Goldmann, et al., Fikretoglu et al., 2006). The DRRI has been shown to correlate with multiple mental health outcomes and neurocognitive deficits with modest to moderate effect sizes ($d \leq .20$). Further, it has shown to have support for the validity of the measures in terms of their demonstrated associations with important health outcomes, the ability to

discriminate between veteran subgroups, and fairly weak associations with a measure of social desirability (King, King, & Vogt).

The *Combat Exposure Scale* (CES; Keane, Fairbank, Caddell, Zimering, Taylor & Mora, 1989) was designed to measure the subjective report of wartime stressors experienced by combatants. This instrument was standardized on 362 Vietnam-era veterans and shown to have sound psychometric properties. Keane et al. found good internal consistency (*a*=.85) and test-retest reliability (*r* = .97). The 7-question scale is scored on a 5-point Likert scale with higher scores indicating more severe levels of distress. The CES can be found in Appendix B.

The *Human Spirituality Scale* (HSS; Wheat, 1992) was designed to assess spirituality in a non-clinical, adult population. The HSS was created in order to identify spiritual factors without necessitating a belief in a deity. The HSS defines spirituality as "the personal valuing, experiencing, or behavioral expression of (a) a sense of oneness or unity with the universe and its inhabitants, (b) a larger context or structure in which to view the events of one's life, and (c) a sense of meaning and purpose in life" (Wheat, p 82). Wheat utilized four studies to develop the HSS, and demonstrated good construct validity in three. Chronbach's alpha for the final form was .89. Each item on the HSS is assigned a numeric value of one through five (1 = *Never/ Almost never;* 5 = *Constantly/Almost constantly*) corresponding to the Likert-type scale in which a respondent's total score comprises the summation of all 20 items. Use of the HSS has been utilized in populations of adolescents, college students, and older adults. The HSS can be found in Appendix C.

The *PTSD Checklist-Military* (PCL-M; Weathers, Litz, Huska, & Keane, 1994) is a 17-item, DSM-IV-based questionnaire used to assess the extent to which symptoms of PTSD related to stressful military situations have been experienced over the previous month. Each item correlates to a diagnostic criterion of PTSD, with events anchored to "stressful military experiences." Items are scored on a 5-point Likert scale (1 = *Not at all*; 5 = *Extremely*) with higher scores indicating higher levels of distress. Consistent with previous research studies and with the PCL-M authors' findings, the PCL-M cut-off score of 50 was used to establish the presence of probable PTSD. Weathers and colleagues (1993) found that this cut-off score yields PTSD diagnostic sensitivity of 0.82 and specificity of 0.83 in a combat veteran sample. The PCL-M can be found in Appendix D.

Data Collection Procedures

The present study utilizes electronic data collection methods. Participants were gathered through a variety of means. Initially, a "group" on the social media site www.Facebook.com was created. Facebook™ was chosen given its popularity of use. Currently, over 700 million people in the world use Facebook, 154 million in the U.S. alone (insidenetwork.com, 2011). This is a 15% increase in active users in the U.S. in the last year, and a 42% increase of users worldwide during the same time period. Further, almost 52% of users are aged 18-34, the largest demographic for both Facebook and the current study.

Several veterans' support organizations were also contacted. The Student Veterans of America (SVA), which currently has over 500 chapters nationwide, is designed to "provide military veterans with the resources, support, and advocacy needed to succeed in higher education and following graduation"

(www.studentveterans.org/aboutus, 2012). Four hundred and eighty-two (482) chapters were contacted with a request to pass along information about the study. Three hundred and four (304) chapter presidents or vice-presidents responded affirmatively to the request.

The Military Officer's Association of America (MOAA) was also identified as a possible resource. The MOAA states that they are the largest and most influential association of military officers, with over 370,000 members. The MOAA plays an active role in military personnel matters and specifically proposed legislation affecting the career force, retired community, and veterans of the uniformed services. The author contacted local chapters in the southeast and gave them information to pass along to their members if they desired.

Thirdly, every university in the U.S. has a Veterans Affairs liaison. The author also contacted several two- and four-year institutions in the southeast with the recruitment information. Liasons were asked to forward the email to the veterans they serve, within the limits of their institution's regulations. A follow-up (reminder) email was sent one month later. As stated in the solicitation, participants were directed to an online survey site, where they completed a demographic form and the questions identified in Appendices A-D. Appendix E displays the solicitation email.

Incentives were offered to encourage student participation. To achieve higher response rates when conducting research online, Cobanoglu and colleagues (2003) recommend that researchers provide participants with incentives. All students who elected to participate in the study had the opportunity to receive a $25.00 Amazon.com gift card. Participants were asked to provide their email address in order to collect their

gift card incentive. Following data collection, the list of student emails was downloaded from the internet survey website. Using a random number generator, five participants were identified to receive the gift card. Forty-seven (n = 47) participants elected to participate in the gift card incentive by providing their email addresses.

Data Analysis Methods

The IBM SPSS Statistics 21 (Formerly: Statistical Package for the Social Sciences, SPSS) was utilized to analyze the data for this current study. The following independent variables were identified: (a) Military Occupational Specialty, (b) gender, (c) branch of service, (d) type of service [Active Duty, Reserve, National Guard], (e) number of deployments, and (f) type of institution [two-year, four-year, Master's-level].

Research Question 1: Do OIF/OEF warriors who matriculate into college have higher levels of PTSD than warriors from previous military conflicts?

Statistical Analysis: An independent samples t-test was conducted to compare matriculating warriors to non-matriculating warriors. Post hoc comparisons were conducted using the Tukey HSD and Bonferroni procedures to determine if independent variable differences contributed to the findings.

Research Question 2: Do differences exist in warriors who matriculate into college on measures of risk and resiliency?

Null hypothesis 2.1. There will be no statistically significant difference between warriors who matriculate into two-year universities and four-year universities on the DRRI subscale scores.

Null hypothesis 2.2. There will be no statistically significant difference between warriors who matriculate into two-year universities and four-year universities on the CES full-scale scores.

Null hypothesis 2.3. There will be no statistically significant difference between warriors who matriculate into two-year universities and four-year universities on the HSS full-scale scores.

Null hypothesis 2.4: There will be no statistically significant difference between warriors of either gender who matriculate into universities.

Statistical Analysis:

Independent-samples t-tests were used to determine if there were differences in warriors who chose two-year versus four-year universities.

Research Question 3: Do branch of service or military occupation serve as predictors of resilience in warriors?

Null hypothesis 3.1. Branch of service will not be a predictor of resilience.

Null hypothesis 3.2. Military occupation will not be a predictor of resilience.

Statistical Analysis:

Independent-samples t-tests were used to determine if there were differences in warriors who chose two-year versus four-year universities.

Research Question 4: What role, if any, does spirituality play as a measure of resilience?

Statistical Analysis:

Independent-samples t-tests were used to determine if there were differences in warriors who scored higher on measures of PTSD.

RESULTS

The purpose of this chapter is to present a description of the sample as well as the results of the statistical analyses that were conducted. The four research questions, corresponding null hypotheses, and related results are presented. Tables and figures are provided throughout the chapter.

Description of the Sample

The current study surveyed a wide range of military warriors across the United States and data were obtained from a sample of matriculated warriors (n=122). Responses from eleven (n=11) participants were removed from the study because they did not fully complete the research instrumentation. The final sample for the current study consisted of one hundred and eleven (n=111) matriculated warriors. The mean age of the sample was 32.79 years (SD = 9.49) with a range from 19 to 65 years. It should be noted that 5.4% of participants (n = 6) elected not to disclose their age on the demographical questionnaire. More than 60% of Active Duty (AD) military forces are under the age of 30, with an average age of 28 (Defense Manpower Data Center, DMDC, 2008). Table 1 presents the age make-up of the sample for this study and the AD comparison. The gender make-up of this sample over-represented females as compared to AD status, but under-represented as compared to a traditional college sample. Males accounted for 70.3% (n=78) of the sample, whereas females accounted for 25.2% (n = 28) of the sample. It should be noted that 4.5% (n = 5) of participants elected not to

disclose their gender. The military has always been predominantly male, and the current AD warriors are no exception. Roughly 14% of all AD warriors are female, with the USMC having the lowest (5.9%), and the USAF having the highest (18.9%) percentage of AD female warriors (DMDC). Table 2 presents the gender make-up of the sample for this study.

Table 1
Age of Participants

Age	*N*	Percentage	AD Comparison Percentage
18-20	1	.9%	19.9%
21-29	47	42.3%	47%
30-39	41	36.9%	24.8%
40-49	8	7.2%	8%
50-59	6	5.4%	0.6%
60+	2	1.8%	*unk*

Table 2
Gender of Participants

Gender	*N*	Percentage	AD Comparison Percentage
Male	78	70.3%	85.71%
Female	28	25.2%	14.29%

Table 3 provides information on the participants' self-reported race and ethnicity along with the AD comparison. As can be seen, the majority of the participants were Caucasian and accounted for 70.3% (n = 78) of the sample. The racial and ethnic breakdown of the sample somewhat under-represents the racial and ethnic profile as compared to AD warriors. Over 19% of the sample identified as an ethnic minority, which is slightly less than AD warriors (25%). For comparison, the branch with the least diversity is the USMC, which reports 16.3% of AD warriors identify as an ethnic minority. The USN has the most diversity, with 33.8% of AD warriors identifying as an

ethnic minority (DMDC, 2008). Fourteen (n=14, 12.6%) participants chose not to report their ethnicity.

Table 3
Racial/Ethnic Make-up of Participants

Race/ Ethnicity	*N*	Percentage	AD Comparison Percentage
Caucasian	78	70.3%	74.6%
African-American	8	7.2%	17.8%
Hispanic	8	7.2%	All others 7.6% total
Asian American	2	1.8%	All others 7.6% total
Bi-racial	1	0.9%	All others 7.6% total
Did not report	14	12.6%	

Table 4 provides information on the participants' self-reported branch of service and the AD comparison. The Army accounted for the largest percentage of participants, at 45.9%, which is over-representative of their AD counterparts. The USMC, at 16.2% of participants, was also over-representative of their AD counterparts. The other two primary branches were under-represented in this sample, the USAF accounted for 17.1% of participants, and the USN accounted for 16.2%. Six participants (n=6, 5.4%) chose not to report their branch of service.

Table 4
Branch of Service of Participants

Branch	*N*	Percentage	AD Comparison Percentage
Army	51	45.9%	37.8%
Navy	17	15.3%	22.9%
Air Force	19	17.1%	22.6%
Marines	18	16.2%	13.9%
Did not report	6	5.4%	

For a better understanding of potential combat exposure, participants were also asked about their job duties. Different branches refer to these with different titles: the

Army and USMC call these Military Occupational Specialties (MOS), the USAF describes them as Air Force Specialty Codes (AFSC), and the USN simply considers jobs as "ratings." The US Army (Army, 2013) codified three classes of MOS's into their respective combat roles. Combat Arms (CA), the first class, comprises all MOS's that are front-line combat units including Infantry, Armor, Artillery, and all Special Forces. Combat Support (CS), the next class, is comprised of jobs directly supporting combat operations; such as military police, pilots, air cavalry, medics, and other closely-tied MOS's. Combat Service Support (CSS), the third class, represents the remainder of job categories. These MOS's, while vital to combat operations, are not typically engaged in live-fire or front-line operations. CSS includes finance, personnel, supply, maintenance, cooks, and other support MOS's. Participants who were unsure of which category their job belonged to were allowed to enter their specific MOS, AFSC or rating, and the researcher categorized their job *ad hoc*. Participants in CA accounted for 27% (n=30) of the sample, CS accounted for 26.1% (n=29), and CSS represented 41.4% (n=46) of the sample. Table 5 provides information on the MOS breakdown of the sample. Six (n=6, 5.4%) participants chose not to disclose their job category.

Table 5
Occupational Specialty of Participants

Class	*N*	Percentage
Combat Arms	30	27.0%
Combat Support	29	26.1%
Combat Service Support	46	41.4%
Did not report	6	5.4%

Participants were also asked to report their highest rank achieved. Ranks were broken down into categories based on pay grade and responsibility. "E" designates an Enlisted rank, "WO" or "CW" represents Warrant Officers, and "O" designates officers.

E- and O-pay grades range from 1-9, and WO/CW pay grades range from 1-5. It was assumed that no General Officers (O-7+) would be matriculating, as all Generals are required to have a M.S., M.B.A. or Ph.D. Lower Enlisted (E-1 – E-4 [Specialist]) accounted for 19.8% (n=22) of the sample. Junior NCO's (E-4[Corporal] & E-5) accounted for 53.2% (n=59) of the sample. Senior NCO's (E-6 – E-9) accounted for 16.2% (n=18) of the sample. Warrant Officers (WO1 – CW5) accounted for 1.8% (n=2) of the sample. Company-grade Officers (O-1 – O-3) accounted for 1.8% (n=2) of the sample. Field-grade Officers (O-4 – O-6) accounted for 1.8% (n=2) of the sample. Table 6 provides information on the Rank breakdown of the sample.

Table 6
Highest Rank Achieved of Participants

Rank	*N*	Percentage
Lower Enlisted (E-1 – E-4 SPC)	22	19.8%
Junior NCO (E-4 CPL – E-5)	59	53.2%
Senior NCO (E-6 – E-9)	18	16.2%
Warrant Officer (WO1 – CW5)	2	1.8%
Company-grade Officer (O-1 – O-3)	2	1.8%
Field-grade Officer (O-4 – O-6)	2	1.8%
Did not report	6	5.4%

This study was conducted while combat operations were still ongoing in two theatres (Iraq & Afghanistan). As of this writing, combat operations have ceased in Iraq, and there is a strong drawdown of operations in Afghanistan. Given the total manpower of AD and Reserve units, however, most warriors have seen multiple deployments. Thus, many warriors have spent a substantial time away from home. Table 7 provides information of the number of deployments each participant reported. Participants averaged 2.17 deployments (SD = 1.48). Forty-four participants (n=44, 39.6%) reported being on one deployment. Thirty participants (n = 30, 27%) reported two deployments.

Sixteen participants (n = 16, 14.4%) reported three deployments. Five participants (n = 5, 4.5%) reported four deployments. Nine participants (n = 9, 8.1%) reported five or more deployments. Seven participants (n = 7, 6.3%) did not disclose how many deployments they had been on.

Table 7
Number of Deployments by Participants

Number	*N*	Percentage
1	44	39.6%
2	30	27.0%
3	16	14.4%
4	5	4.5%
5+	9	8.1%
Did not report	7	6.3%

Time in a combat zone can differ, depending on branch of service and combat mission / role. For example, the USAF can have deployments as short as 6 months, while the USMC has been known to have individual deployments last up to 18 months. Table 8 provides information on the total length of time that participants had been deployed. Twelve participants (n = 12, 10.8%) reported having been deployed a total of less than 6 months. Thirty-four participants (n = 34, 30.6%) reported having been deployed a total of 6 months to a year. Thirty-nine participants (n = 39, 35.1%) reported having been deployed a total of one to two years. Fourteen participants (n = 14, 12.6%) reported having been deployed a total of two to three years. Three participants (n = 3, 2.7%) reported having been deployed a total of three to four years. Two participants (n = 2, 1.8%) reported having been deployed a total of four years or more. Seven participants (n = 7, 6.3%) did not disclose their total length of deployment.

Table 8
Total Length of Deployments by Participants

Length of Time	*N*	Percentage
0-6 months	12	10.8%
6 months – 1 year	34	30.6%
1-2 years	39	35.1%
2-3 years	14	12.6%
3-4 years	3	2.7%
4 years or more	2	1.8%
Did not report	7	6.3%

Preliminary Analysis

A regression analysis was performed to determine if the DRRI was a good predictor of PTSD symptoms in the current sample. It was determined that the DRRI accounted for a significant portion of the variance in PCL-M scores, $R^2 = .441$, $F_{(8, 71)} = 7.013$, $p < .001$. Further analysis of the model showed that Post-deployment Stressors also significantly predicted PCL-M scores, $b = .447$, $t(79) = 4.634$, $p < .001$.

Initial analysis was completed to look at the correlations among the PCL-M and the DRRI subscales. Table 9 displays the full list of correlations. PCL-M scores were correlated with difficult living and working environments ($r = 3.14$, $p < .01$), the perceived threat in the combat environment ($r = .412$, $p < .001$), exposure to the aftermath of battle ($r = .349$, $p < .01$), and post-deployment stressors ($r = .548$, $p < .001$). Not displayed in Table 9, PCL-M scores also correlated with Combat Exposure ($r = .365$, $p < .01$).

In the operational theatre, several correlations were also notable. A difficult living and working environment was correlated with elevated scores of general harassment ($r = .229$, $p < .05$), perceived threat ($r = .55$, $p < .001$), experiences with the aftermath of battle ($r = .312$, $p < .01$), and post-deployment stressors ($r = .218$, $p < .05$). The

perception of threats in the combat environment was correlated with seeing the aftermath of battle ($r = .32$, $p < .01$). The perception of being well prepared by commanders for the deployment was correlated with several other measures. Social support within the unit ($r = .571$, $p < .001$) and after deployment ($r = .395$, $p < .001$) correlated significantly with unit preparedness. There was also a negative correlation with both forms of harassment, seen stronger with general ($r = -.389$, $p < .001$) and more modest with sexual ($r = .312$, $p < .01$).

Experiences of social engagement in the unit also showed several correlations. Expectedly, Unit social support was strongly negatively correlated with general harassment ($r = .512$, $p < .001$). Conversely, stronger unit support was positively correlated with post-deployment social support ($r = .456$, $p < .001$). High scores of general harassment were correlated with high scores of sexual harassment ($r = .37$, $p < .001$). Lastly, beyond what has already been stated, higher scores of sexual harassment while deployed were correlated with higher levels of post-deployment stressors ($r = .236$, $p < .05$).

Table 9
PCL-M & DRRI Correlations

		1	2	3	4	5	6	7	8	9	10	11
PTSD Checklist-Military (1)	r-value Sig. (2-tailed) N	1 80	.314 .005** 80	-.027 .811 80	.149 .187 80	.090 .425 80	.412 .000*** 80	.349 .001** 80	-.208 .064 80	.548 .000*** 80	-.056 .626 79	.548 .000*** 80
Difficult Living & Working Environment (2)	r-value Sig. (2-tailed) N		1 97	.169 .104 94	.229 .026* 94	.088 .397 94	.550 .000*** 93	.312 .002** 92	-.142 .188 87	.218 .042* 87	.033 .748 96	.218 .042* 87
Unit Social Support (3)	r-value Sig. (2-tailed) N			1 94	-.512 .000*** 94	-.156 .134 94	.032 .757 93	-.121 .249 92	.456 .000*** 87	-.062 .566 87	.571*** .000 93	-.062 .566 87
General Harassment (4)	r-value Sig. (2-tailed) N				1 94	.370 .000*** 94	.154 .139 93	.132 .211 92	-.053 .626 87	.126 .246 87	-.389*** .000 93	.126 .246 87
Sexual Harassment (5)	r-value Sig. (2-tailed) N					1 93	.050 .631 93	.102 .336 92	.042 .701 87	.236 .028* 87	-.258* .021 93	.236 .028* 87
Perceived Threat (6)	r-value Sig. (2-tailed) N						1 92	.320 .002** 92	-.054 .622 87	.178 .099 87	-.132 .21 92	.178 .099 87
Aftermath of Battle (7)	r-value Sig. (2-tailed) N							1 92	.098 .365 87	.140 .195 87	.053 .621 91	.140 .195 87
Post-Deployment Social Support (8)	r-value Sig. (2-tailed) N								1 87	-.151 .161 87	.395 .000*** 86	-.151 .161 87
Post-Deployment Stressors (9)	r-value Sig. (2-tailed) N									1 87	-.047 .667 87	.154 .139 87
Unit Preparedness (10)	r-value Sig. (2-tailed) N										1 93	-.121 .249 92
Human Spirituality Scale (11)	r-value Sig. (2-tailed) N											1 87

Data Analysis

Research Question 1: Do OIF/OEF warriors who matriculate into college have higher levels of PTSD than warriors from previous military conflicts?

Comparing this sample to PCL-M averages and suggested cut-off scores, the majority of this sample of warriors showed higher-than-minimum scores recommended for a diagnosis of PTSD. To reiterate, the PCL-M scores range from 17 to 85, with higher scores suggesting higher levels of PTSD. According to the Veteran's Administration guidelines (VA National Center, 2010), the minimum screening scores on the PCL-M range from 25 (OIF/OEF Active Duty) to 48 (PTSD Specialty Mental Health Clinic). To receive a diagnosis, warriors must achieve a minimum score between 28 and 56, respectively. Bliese et al. (2008) identified that a cut-off score between 30 and 34 on the PCL-M resulted in high levels of specificity (at or above .90) and high levels of sensitivity (above .70), suggesting that with this population, using a higher cut-off score did not result in significantly less false positive diagnoses or significantly more false negatives.

Warriors in this sample had an average score of 43.20 (SD = 19.06, 95% CI = 39.11 – 47.59). Male warriors had an average score of 42.37 (SD = 19) and female warriors had an average score of 42.67 (SD = 19.82). Female Combat Support warriors had the lowest PCL-M scores ($\overline{X}$ = 35, SD = 19.95), while male Combat Arms warriors had the highest scores ($\overline{X}$ = 46.3, SD = 18.15). Given these scores, the average warrior in this sample would meet criteria for a diagnosis in the majority of settings, including civilian and VA primary care clinics. In fact, in this sample, 73.8% of participants (N= 59) scored above 28, the suggested diagnostic cut-off for OIF/OEF warriors. Further examination of the

scores revealed that 43.75% (N=35) of the participants scored at or above 48, and 31.25% (N=25) scored 56 or higher. It is unknown how many warriors in this sample received any treatment for PTSD.

Research Question 2: Do differences exist in warriors who matriculate into college on measures of risk and resiliency?

Null hypothesis 2.1. There will be no statistically significant difference between warriors who matriculate into two-year universities and four-year universities on the DRRI subscale scores.

When comparing warriors by type of institution, the null hypothesis was retained, as no scores on the DRRI achieved significance. F-values ranged from 0.015 (Post-deployment social support, $p = .904$, ns) to 3.393 (Sexual Harassment, $p = .069$, ns).

Null hypothesis 2.2. There will be no statistically significant difference between warriors who matriculate into two-year universities and four-year universities on the CES full-scale scores.

When comparing warriors by type of institution, the null hypothesis was retained, as scores on the CES failed to reach significance ($F_{2, 91} = 0.234$, $p = .63$, ns).

Null hypothesis 2.3. There will be no statistically significant difference between warriors who matriculate into two-year universities and four-year universities on the HSS full-scale scores.

When comparing warriors by type of institution, the null hypothesis was retained, as scores on the HSS failed to reach significance ($F_{2, 88} = 0.086$, $p = .77$, ns).

Null hypothesis 2.4: There will be no statistically significant difference between warriors of either gender who matriculate into universities.

When comparing warriors by gender, the null hypothesis was rejected, as gender accounted for a significant level of variance on several measures of the DRRI. As displayed in Table 11, female warriors were less likely to perceive strong levels of social support from their unit ($F_{1, 86} = 4.476$, $p = .037$) and felt that their units were less prepared ($F_{1, 91} = 7.920$, $p = .006$) as compared to males. Females also reported much higher levels of sexual harassment in their units ($F_{1, 86} = 24.031$, $p < .001$). Males, as expected, were more likely to engage in higher levels of combat ($F_{1, 79} = 4.246$, $p = .043$) and have higher exposure to the aftermath of battle ($F_{1, 84} = 6.585$, $p = .012$). Female warriors also showed a tendency to perceive higher levels of general harassment in their unit ($F_{1, 86}$=3.703, $p = .058$, *ns*). Table 10 represents DRRI raw score averages by gender.

Table 10
DRRI Raw Score Averages by Gender

	Overall (n=111)		Male (n=78)		Female (n=28)	
	Mean	SD	Mean	SD	Mean	SD
Unit Preparedness	51.27	9.453	52.4	9.287	47.67	9.318
Difficult Environment	57.667	7.234	58.28	5.93	55.722	10.334
Unit Social Support	40.933	10.85	41.789	11.37	38.222	10.85
General Harassment	14.293	5.7	13.719	5.26	16.111	6.74
Sex Harassment	8.64	3.89	7.772	2.06	11.389	6.42
Perceived Threat	44.28	10.81	45.281	9.06	41.111	14.98
Aftermath of Battle	6.2	4.93	6.895	4.95	4	4.22
Post-deployment social support	54.547	8.46	54.6	8.54	54.389	8.43
Post-deployment stressors	4.2	2.75	4.018	2.84	4.77	2.41
Combat Exposure Scale	14.65	6.41	15.667	6.76	11.444	3.74

Table 11
Dependent Variable by Gender (Males = 78, Females = 28)

		Sum of Squares	df	MS	F	Sig.
Difficult Living & Working Environment	Between Groups	122.706	1	122.706	2.484	.119
	Within Groups	4396.678	89	49.401		
	Total	4519.385	90			
Unit Preparedness	Between Groups	879.757	1	879.757	7.92	.006**
	Within Groups	10107.942	91	111.076		
	Total	10987.699	92			
Unit Social Support	Between Groups	544.095	1	544.095	4.476	.037*
	Within Groups	10453.803	86	121.556		
	Total	10997.898	87			
General Harassment	Between Groups	125.47	1	125.47	3.703	.058
	Within Groups	2914.121	86	33.885		
	Total	3039.591	87			
Sexual Harassment	Between Groups	173.47	1	173.47	14.846	.000***
	Within Groups	1004.848	86	11.684		
	Total	1178.318	87			
Perceived Threat	Between Groups	267.421	1	267.421	2.159	.145
	Within Groups	10528	85	123.862		
	Total	10795.678	86			
Aftermath of Battle	Between Groups	153.837	1	153.837	6.585	.012*
	Within Groups	1962.256	84	23.36		
	Total	2116.093	85			
Post-Deployment Social Support	Between Groups	5.814	1	5.814	0.077	.782
	Within Groups	5964.062	79	75.494		
	Total	5969.877	80			
Post-Deployment Stressors	Between Groups	8.454	1	8.454	1.115	.294
	Within Groups	599.052	79	7.583		
	Total	607.506	80			
PTSD Checklist-Military	Between Groups	8.067	1	8.067	0.022	.883
	Within Groups	28696.133	79	367.899		
	Total	28704.200	80			
Combat Exposure Scale	Between Groups	298.920	1	298.920	8.25	.005**
	Within Groups	2862.439	79	36.233		
	Total	3161.358	80			
Human Spirituality	Between Groups	30.489	1	30.489	0.153	.697
	Within Groups	14943.589	75	199.348		
	Total	14974.078	76			

Further analysis of these scores compared them to Keane, et al., (1989) and King, King & Vogt (2003)'s samples; which were the Vietnam warrior group and the Desert Storm / Desert Shield warrior group. Without exception, females showed no statistical difference in the current study. However, as displayed in Table 12, males showed differences on certain scales, and the overall sample showed some statistical differences as well. It was observed that males felt more prepared by their unit than did males in DS/DS ($t(326) = 2.071$, p=.039). Males also felt a stronger sense of Unit Social Support than did the normative sample ($t(326) = 2.346$, $p = .0196$), while at the same

time perceived a higher level of general harassment ($t(326) = 2.132$, $p = .034$). Somewhat unexpectedly, there was less perceived post-deployment social support by males in this sample ($t(326) = 4.408$, $p < .0001$). The CES did not have a gender breakdown, as females were not considered in Keane et al.'s study.

The overall sample also showed some differences as compared to warriors from different generations. Warriors felt more prepared by their units ($t(430) = 2.086$, $p = .0396$) and perceived stronger unit cohesion ($t(430) = 20.198$, $p < .0001$). As was observed with males, female warriors in this sample felt more harassment, both general ($t(430) = 3.229$, $p = .0013$) and sexual ($t(430) = 2.843$, $p = .0047$). There was also less perceived post-deployment social support ($t(430) = 5.166$, $p < .0001$). Lastly, warriors from this generation saw much less combat than did warriors in Vietnam ($F_{1, 362} = 24.659$, $p < .0001$).

Table 12
DRRI & CES Correlations to Comparison Group[1]

	Male v Comparison Group	Female v Comparison Group	Overall v Comparison Group
Difficult Living Environment	*p*=0.8076, *ns*	p=.3179 ns	p=.7677 ns
Unit Preparedness	*p*=.039*, *t*(326)=2.071	p=.17 ns	p=.0396*, t(430) 2.086
Unit Social Support	*p*=.0196*, t(326)=2.346	p=.9307, ns	p<.0001***, t(430) 20.19
General Harassment	*p*=.0337**, t(326)=2.132	p=.389, ns	p=.0013**, t(430) 3.2297
Sexual Harassment	*p*=.9359, ns	p=.2657, ns	p=.0047**, t(430) 2.8434
Perceived Threat	p=.25, ns	p=.1225, ns	p=.0286*, t(430) 2.196
Aftermath of Battle	p=.199, ns	p=,526, ns	p=.698, ns
Post-deployment social support	p<.0001***, t(326)=4.40	p=.559, ns	p<.0001***, t(430) 5.166
Post-deployment stressors	p=.664, ns	p=.587, ns	p=.38, ns
Combat Exposure Scale			p<.000***, F=24.659

1: Comparison group for DRRI is the Desert Storm/ Desert Shield Warrior group, comparison group for CES is Vietnam Warriors

Research Question 3: Do branch of service or military occupation serve as predictors of risk or resilience in warriors?

Null hypothesis 3.1. Branch of service will not be a predictor of risk or resilience.

When comparing warriors across branch of service, several unique differences among the four primary branches (no warriors from the Coast Guard were sampled). Warriors from the US Army were exposed to higher levels of combat than members from all other branches ($F_{1, 86} = 14.83$, $p < .001$), more aftermath of battle ($F_{1, 91} = 7.122$, $p < .01$), and more perceived threat ($F_{1, 92} = 4.311$, $p < .05$). Army warriors also scored highest on the PCL-M ($\overline{X} = 48.61$, $F_{1, 79} = 6.88$, $p < .01$). US Navy warriors, conversely, had a low exposure to combat ($\overline{X} = 11.25$, $F_{1, 86} = 4.606$, $p < .05$). While this was the only significant finding from the US Navy, there were trends toward lower spirituality ($\overline{X} = 45$, $F_{1, 82} = 2.221$, $p = .14$, *ns*) and lower post-deployment stressors ($\overline{X} = 3.08$, $F_{1, 86} = 1.962$, $p = .165$, *ns*).

As expected, the US Air Force warriors showed lower exposure to combat ($\overline{X} = 10.785$, $F_{1, 86} = 7.285$, $p < .01$) and lower exposure to the aftermath of battle ($\overline{X} = 3.53$, $F_{1, 91} = 6.521$, $p < .05$). The interesting finding with this analysis is that PCL-M scores were not significantly different from the other branches ($\overline{X} = 38.64$, $F_{1, 79} = 1.035$, $p = .312$, *ns*). Further, the Air Force also showed a trend, while not significant, toward having the lowest unit social support of any branch ($\overline{X} = 36.87$, $F_{1, 93} = 3.346$, $p = .07$, *ns*).

The last branch investigated was the USMC. True to their nature and motto (*Semper Fidelis:* Always Faithful), respondents from the Marines reported the highest levels of *espirit de corps* (Unit social support: $\overline{X} = 46.444$, $F_{1, 93} = 4.007$, $p < .05$). The Marines also showed interesting non-significant trends in two areas: lower levels of inter-unit harassment ($\overline{X} = 12.72$, $F_{1, 93} = 2.277$, $p = .135$, *ns*), and lower PCL-M scores ($\overline{X} =$

37.46, $F_{1, 79} = 1.776$, p = .187, *ns*). These findings, combined, may suggest an area that can be explored to decrease PTSD scores in the future.

Null hypothesis 3.2. Military occupation will not be a predictor of risk or resilience.

When comparing warriors across military occupational groups, the null hypothesis was rejected for two of the risk and resiliency measures, and retained for the remaining ten. An Analysis of Variance (ANOVA) was conducted to determine if MOS was a predictor of risk of resilience. The full ANOVA scores are displayed in Table 13. Military occupation was determined to be a significant predictor of both combat exposure ($r^2 = -.523$, $F_{2, 78} = 17.483$, $p < .000$) and exposure to the aftermath of battle ($r^2 = -.393$, $F_{2, 83} = 16.086$, $p < .000$). As expected, Combat Arms warriors (coded as 1) saw more combat and combat aftermath than did Combat Service Support warriors (coded as 3), which is indicated by the negative correlation. Unexpectedly, PCL-M scores were non-significant ($F_{2, 77} = 0.266$, $p = .767$, *ns*), indicating that there were not substantial differences across the three categories. This is most likely due to the fact that all warriors in this sample had substantively high levels of PTSD symptomology.

Table 13
ANOVA Dependent by Military Occupation Type

		Sum of Squares	df	MS	F	Sig.
Difficult Living & Working Environment	Between Groups	198.113	2	99.057	2.017	.139
	Within Groups	4321.271	88	49.105		
	Total	4519.385	90			
Unit Social Support	Between Groups	184.003	2	92.002	0.723	.488
	Within Groups	10813.894	85	127.222		
	Total	10997.898	87			
General Harassment	Between Groups	4.37	2	2.185	0.061	.941
	Within Groups	3035.221	85	35.708		
	Total	3039.591	87			
Sexual Harassment	Between Groups	32.018	2	16.009	1.187	.310
	Within Groups	1146.301	85	13.486		
	Total	1178.318	87			
Perceived Threat	Between Groups	551.279	2	275.64	2.260	.111
	Within Groups	10244.399	84	121.957		
	Total	10795.678	86			
Aftermath of Battle	Between Groups	591.113	2	295.556	16.086	.000***
	Within Groups	1524.98	83	18.373		
	Total	2116.093	85			
Post-Deployment Social Support	Between Groups	19.926	2	9.963	0.131	.878
	Within Groups	5969.951	78	76.281		
	Total	5969.877	80			
Post-Deployment Stressors	Between Groups	2.787	2	1.393	0.180	.836
	Within Groups	604.719	78	7.753		
	Total	607.506	80			
Unit Preparedness	Between Groups	413.147	2	206.574	1.758	.178
	Within Groups	10574;552	90	117.495		
	Total	10987.699	92			
PTSD Checklist-Military	Between Groups	197.219	2	98.61	0.266	.767
	Within Groups	28506.981	78	370.221		
	Total	28704.200	80			
Combat Exposure Scale	Between Groups	978.533	2	489.267	17.483	.000***
	Within Groups	2182.825	78	27.985		
	Total	3161.358	80			
Human Spirituality	Between Groups	581.442	2	290.721	1.495	.231
	Within Groups	14392.636	74	194.495		
	Total	14974.078	76			

Research Question 4: What role, if any, does spirituality play as a measure of resilience?

An exploratory analysis was completed to determine if spirituality played any role as a measure of resiliency. This sample scored demonstrably lower on the measure of spirituality than either group in Wheat (1992). To recall, Wheat surveyed two significantly different groups, and his results found a high spirituality average score of 82.26 (SD = 6.32) and a low spirituality average score of 73.75 (SD = 9.942). This sample had an average score of 50.892 (SD = 14.182), significantly different from both the high spirituality group ($t(120) = 13.187$, $p < .0001$) and the low spirituality group ($t(140) = 10.652$, $p < .0001$). It was determined that scores on the HSS showed a trend

toward significance, with higher PCL-M scores trending against higher HSS scores ($F_{39, 75} = 1.672$, $p = .061$, *ns*). This suggests that spirituality may factor in as a viable resiliency measure, although more participants would be needed to confirm this assertion.

SUMMARY, IMPLICATIONS, LIMITATIONS, RECOMMENDATIONS, AND CONCLUSIONS

The purpose of this chapter is to present a summary of the relevant findings, implications of the results, the limitations of the study, recommendations for future research, and conclusions.

Summary

The current study aimed at answering the following research questions: (1) Do OIF/OEF warriors who matriculate into college have higher levels of PTSD than warriors from previous military conflicts?; (2) Do differences exist in warriors who matriculate into college on measures of risk and resiliency?; (3) Do branch of service or military occupation serve as predictors of risk or resilience in warriors; and (4) Does spirituality play a role in risk or resilience?

Purposive sampling methods were employed to obtain responses from matriculated warriors in the DRRI, CES, and HSS. Monetary incentives were provided to encourage student participation. Data were obtained from one-hundred twenty (n = 120) participants. Due to missing responses, data from nine (n = 9) participants was eliminated and the final sample size consisted of one-hundred eleven (n = 111) participants. The mean age of the sample was 32.79 years (SD = 9.49) with a range from

19 to 65 years. It should be noted that 5.4% of participants (n = 6) elected not to disclose their age on the demographic questionnaire.

The sample for the current study was predominantly male (70.3%) and Caucasian (70.3%). As compared to Active Duty military demographics, this sample was generally comparable; however, this sample had higher representation of female and minority warriors.

Adequate internal consistency was demonstrated by all three instruments in the present study: The DRRI, CES, and HSS all yielded Cronbach's alpha coefficients higher than the .70 cutoff suggested by Nunally (1978). This suggests that all the instruments functioned as expected and that they serve as reliable measures of risk and resiliency.

Summary of Findings

Before discussing the research questions in this study, the demographic breakdown of this study is interesting, and worthy of focused attention. While the field of Counseling Psychology has a long history of working with warriors from previous conflicts, little research has been conducted with the current group of warriors matriculating in higher education. A fair amount of attention (Hoge, Seligman, Rudd, and others) has been paid to warriors in the combat zone, and there are several studies completed through the Veterans Administration focusing on post-combat experiences, but none have addressed warriors on campus.

The "average" participant in this study was a white (79.5%) male (70.3%), under age 30 (44%), was on Active Duty (84%), and in the Army (47%). He left the military as a Junior NCO (56.8%), and was not a front-line warrior (74%). In fact, he likely never went on a combat patrol (30.4%), nor did he ever fire his weapon while in a theatre of

combat (59%). He most likely has been deployed once (43%) or twice (27%), for a total of less than two years (82%). Since coming home, he is more likely to have experienced the death of someone close (52%), and has been unemployed for more than 3 months (49%). There is also a good likelihood that he has been divorced since returning home (34% of total participants).

While these figures appear to be non-representative, especially from the viewpoint of academic settings, it is important to note that they are more representative of non-majority groups than the military as a whole. The singular caveat is branch of service, in which the US Army was somewhat over-represented. As previously stated, 30.4% of respondents selected that they had been on "no combat patrols;" but another 27.8% stated that they had been on more than 50 combat patrols while deployed. This was, perhaps, the most stark bi-modal distribution of all questions surveyed in this study. It is interesting to note, however, that even with those individuals who reported 50+ combat patrols, their level of combat exposure still did not reach the levels seen of Vietnam warriors. This could potentially influence the lower overall levels of PTSD seen in this sample, as compared to lifetime prevalence of PTSD in Vietnam warriors, which approaches 31%.

Research question 1 was used to investigate levels of PTSD symptomology in matriculating warriors. Given the results, it is apparent that the majority of participants would meet basic criteria for PTSD treatment in most outpatient settings. This finding highlights two important points: 1) returning warriors live with their combat zone trauma at startlingly high rates; and 2) despite the high levels of symptomology, our warriors are able to function at high cognitive and social levels. They are not "disabled" by their

experiences; our warriors show resilience even through difficult circumstances after they come home. The mere fact that our warriors are matriculating, and arguably succeeding, in post-secondary education reaffirms that resilience can be viewed not as an absence of symptomology, but as perseverance despite such symptoms. An alternative explanation is that warriors who are unable to secure employment in the private sector due to PTSD severity see university matriculation as a delay to reintegration into civilian life, and thus matriculate in higher rates compared to warriors with lower levels of PTSD. These warriors may perceive college life as easier and more preferable than full-time employment in a career field for which they have already been trained.

Research question 2 was used to investigate the possibility of differential matriculation based on levels of resilience. While there has been no lines of research to support or refute this construct, it appeared possible that warriors who returned home with higher levels of PTSD symptoms and lower levels of resilience might chose less rigorous academic loads (i.e. associate's degree) in order to accommodate their internal conflicts, such as flashbacks or hypervigilance. However, the results showed otherwise. Hypotheses 2.1, 2.2, and 2.3 failed to reject the null, thus suggesting that factors other than resilience mediate which education level warriors chose to approach.

Research question 2.4, which investigated the extent to which gender played a role in risk and resilience factors, showed a multitude of interesting findings. Five of the 12 dependent variables showed significant differences between the genders, and two more dependent variables showed trends toward significance. Males felt more prepared by their units for the current conflict than did females, and the entire sample felt more prepared by their unit than did samples from Desert Storm / Desert Shield. It is unwise at

this juncture to extrapolate possible meaning for the former, while the latter lends itself to more sound explanation. The temporal component, where warriors felt more prepared than they did 20 years prior, suggests that many lessons were learned from the previous conflict. Warriors who were junior leaders in DS/DS likely became the senior leaders in OIF/OEF and were able to pass along their previous experience to better prepare for future combat.

It stands to reason that if females perceived unit preparation significantly different than males, other perceptions about their units would also differ. Females reported less unit cohesion than males, but their scores suggested no significant difference than females of the previous conflict. Plainly speaking, females felt just as disconnected from their current unit as females did 20 years prior.

Harassment, both general and sexual, showed interesting trends. While the genders were not significantly different in their experience of harassment inside the unit, females did show a trend toward perceiving more general harassment than males. Males perceived more general harassment than warriors from the prior conflict, and the sample as a whole also perceived more harassment than warriors from the prior conflict. Research on Millennials (Raines, 2002) suggests that they are more sensitive to criticism than are different generations, which has the potential to explain this finding. Perceptions of sexual harassment suggest that the military climate condones, or at least ignores, sexual harassment, which continues to be a significant concern to female warriors. Women warriors perceived significantly higher levels of sexual harassment within their unit, which contributed to this sample having an overall higher level of sexual harassment than DS/DS.

Combat exposure, both from live fire and the aftermath of battle showed expected results. Males were much more likely to be exposed to combat, as well as the aftermath of such combat. This finding supports DoD regulations that disallow women in combat roles. Interestingly enough, however, Combat Arms warriors from this sample saw less enemy contact than did warriors from Vietnam.

Once warriors returned home, there appeared to be differential effects of support and stressors for the genders. Men, who had perceived higher levels of unit support, returned from battle to perceive less support at home than men perceived post-DS/DS. These perceptions influenced the overall sample such that there was a significant difference in the total sample as compared to the warriors from the first Gulf War. Post-deployment stressors were not significantly different, suggesting that warriors from both generations faced similar struggles attempting to reintegrate into society after combat.

Research question 3 was used to investigate the unique self-selection that occurs within warriors, to see if this had an effect on risk or resilience factors. As stated previously, there have been no lines of research to support or refute the idea that individuals self-select both job (military occupation) and branch, which in turn might affect their risk exposure and innate resilience factors. However, it stands to reason that this would be the case. Comparable to an academic setting, individuals self-select different fields and majors based upon personal preferences and overall "fit".

As it relates to branch of service and occupation, many expected findings were borne out in the data. The US Army had the most combat exposure, whereas the USAF and US Navy the least. Also, the USMC had the highest reported levels of unit social

support. Further, there was a direct positive relationship between combat exposure and PTSD symptomology. Finally, CA warriors saw more combat and more aftermath.

The unexpected and non-significant findings within this research question were also worthwhile. It would make sense that if more combat exposure leads to higher levels of PTSD symptoms, significantly less exposure would reflect much lower PTSD scores. This was not the case in this sample, as neither the Air Force nor the Navy reflected lower scores on the PCL-M. Simply put, combat exposure is not necessary for a warrior to be diagnosed with PTSD. Numerous lines of research lend support to the findings that simply being in a high-stress environment such as a theatre of combat increase levels of cortisol production beyond healthy levels, and keep them in an unhealthy, high-alert range for the duration of the deployment (Sriram, Rodriguez-Fernandez, & Doyle, 2012; Golier, Schmeidler, & Yehuda, 2009). This autonomic nervous system reaction has been shown to increase PTSD symptoms in several different studies. While not directly investigated, these previous findings could explain why all branches of service had high levels of PTSD symptomology, regardless of combat exposure.

Research question 4 was used to explore what relationship, if any, spirituality had as a protective factor against PTSD. The findings were surprisingly low. Warriors in this sample scored an average of 4.96 standard deviations lower than the average High Spirituality group, and 2.3 standard deviations lower than the average Low Spirituality group. There are mitigating factors in this analysis that may help explain such disparate numbers. First, previous research has shown lower levels of spirituality in younger samples (Wink & Dillon, 2002), and this sample averaged four decades younger than

Wheat (1992)'s High Spirituality group (Wheat, 1992). As a young private in the US Army, I can personally attest that matters of a spiritual nature were rarely, if ever, focused on, even in a quick-reactionary force. Which leads to the next point, the self-selection that occurs prior to enlistment or commission into the military. It is entirely possible that individuals who are more spiritually inclined would be less motivated to join a career path that would put them directly in a position where they would reasonably have to commit an act that violates their spiritual beliefs. However, it is also possible that a contingent of highly spiritual individuals would join the military, feeling it their spiritual duty to serve their country in whatever capacity they could. This second group could explain why the standard deviation of this group was over twice the normative sample's standard deviation. Again, anecdotal personal experience supports this assertion, but more research would have to be conducted to determine the validity of such a claim.

The second finding on the HSS, while not reaching levels of significance, trended in the direction supporting higher levels of spirituality as a protective factor against PTSD symptomology. This suggests that spirituality, not necessarily religiosity, helps provide a larger context in which to view events of one's life. Horrific experiences, such as those seen in the aftermath of a large firefight, can often be seen by warriors as supporting the belief that there is no God or meaning to life. Other warriors, viewing the same experiences through a spiritual lens, may still see the horror and loss, but may frame the experience in such a way that offers them comfort and understanding, thus mitigating the trauma. One warrior may view the experience and internalize a

foreshortened sense of the future, and another may explain the experience as evidence of both sides exposing their human frailty and neither side reaching their spiritual nexus.

Implications

The results of the current study provide evidence that warriors who matriculate experience high levels of PTSD symptoms. Their combat zone experiences break from what is depicted in Hollywood movies and what is stereotypically expected. For example, the majority of warriors did not even fire their personal weapon while in a combat theatre nor went on a combat patrol. Unfortunately, this does not appear to have offered protection against symptoms of PTSD.

To understand a warrior in a college setting, given this data, colleges and universities should be aware that there is no "average" or "typical" warrior. In fact, preconceived notions such as "wounded warriors" are atypical as it relates to matriculated warriors. That being said, there is a commonality of experiences and needs that warriors need vis-à-vis traditional students. While some warriors need support navigating academic settings, others may need support in finding resources for housing or family care. And while these warriors have shown excellence in surviving the most difficult of situations (i.e. deployments to combat zones), it should not be assumed that they could just as easily navigate college life. For these reasons, Bonar and Domenici (2011) suggest that universities offer a mandatory orientation course, similar to many Freshman Seminar courses, specifically focused on warriors' needs.

As warriors have previously stated, there is no "basic training" for coming back into civilian life (Ellison, et al., pg. 212). To better assist matriculating warriors, college counseling centers should also improve their outreach programs. Ellison et al. (2012) and

others recommend expanding outreach programs to warriors and incorporating each campus' Veteran's Affairs office in order to provide warriors with adequate exposure to resources in the community. Furthermore, campuses should consider offering forums where warriors can gather and exchange information and ideas within a trusted environment.

Thirdly, faculty can use this information to reduce stigma and uncertainty when working with warriors inside the classroom. Warriors are ready-made group leaders with real-life experience that can radically improve the quality of education within the course. In general, warriors are less hesitant to speak up when information is confusing, which could help inform the instructor when students might be struggling to understand the material. Warriors are remarkably self-sufficient and highly motivated, and can perform very well when other barriers to education are removed.

Limitations

1. Although the sample for this study seemed adequate, it is only reflective of the experiences of OIF/ OEF warriors in college. It is not known if warriors from other conflicts or non-deploying warriors would produce similar results.

2. The current study utilized a correlational research design, which is unable to determine causation. Therefore, the present study was not able to establish causality.

3. This present study is based on non-longitudinal data. The current data captured a snap shot view of what warriors may be experiencing during the first half of 2012. It

is not known if similar results would be obtained if data were collected across a different time period.

4. The sample for the current study was homogenous with regard to gender, race, and ethnicity. Few females and fewer ethnic minority warriors participated in the study. It is not known if participation from more females and ethnic minority warriors would produce similar results.

5. Although participation was voluntary, incentives were offered and it is unknown how this impacted responses.

6. The current study used an internet-based survey website for data collection. It is not known if other collection methods (i.e., face-to-face, classroom solicitation, Facebook, information booths, etc.) would produce similar results. Additionally, it is not known if alternative data collection methods would impact the sample demographics (i.e., gender, race, ethnicity, student type).

7. Spirituality is a notoriously difficult construct to define and study. It is not known if a different measure of spirituality would have produced similar results.

8. The population of focus in this study has never been studied heretofore, and as such it is not known if the sample was an accurate representation.

9. It is conceivable that college matriculation is not evidence of resilience, but of warriors using college as a moratorium on vocational decisions for four or more years. As performance in college was not measured, there is no information on the extent to which warriors may be succeeding in college. Further, there was no comparison made between those warriors who matriculated, and those who did not.

10. It is unknown how many warriors were in treatment for PTSD or other mental health disorders. As such, it is unknown what effect treatment-seeking behavior may have had on this sample.

Recommendations for future research

1. It is recommended that future research concurrently investigate non-matriculating warriors from OIF/OEF as well as matriculating warriors. This would allow for comparisons to be made across multiple measures.

2. It is recommended that future research define one or more "success" measures (e.g. GPA, full-time employment post-graduation) to determine how well warriors are functioning. While the DSM-V has removed the GAF from its diagnostic repertoire, something similar may have high usefulness for academics, clinicians, and universities.

3. It is recommended that future research utilize diverse methods of data collection. Several SVA chapters noted that there might be low participation rates due to

warriors reporting being "tested to death" both while in service and just after separation.

4. It is recommended that future research investigate current use of mental health services by participants. Analysis could determine if differential functioning existed based upon diagnosis and help-seeking behavior.

5. It is recommended that future research use multiple measures of spirituality. Given the abnormally low levels of reported spirituality on the HSS, this measure may not appropriately assess warrior spirituality. As such, additional measures should be considered in future studies.

6. It is recommended that future research consider using longitudinal methodology to follow warrior's educational and vocational trajectories post-graduation. It might be beneficial to investigate the long-term impact of combat stressors on measures of positive psychology (e.g., PERMA).

7. It is recommended that future research incorporate qualitative or mixed method approaches to explore resilience among undergraduate warriors. Qualitative or mixed method approaches may provide a deeper and richer understanding of student experiences. Further, they may enhance our understanding of the variables that impact resilience among undergraduate warrior populations.

Conclusions

This research investigated a number of risk and resiliency factors associated with military experiences and how influential they are on warriors who are enrolled in college institutions across the country. This study was based on inspiration from the attacks on 9/11, extended military conflict, rising rates of PTSD and suicide, and the way positive psychology approaches can reframe interactions and interventions with matriculating warriors.

The current study provides empirical evidence about resiliency factors that warriors who matriculate do and do not possess. This study revealed that warriors who matriculate report higher levels of PTSD than those from previous generations. Finally, the study investigated the level of spirituality that warriors report after combat deployments. This study found that there was a trend toward significance that higher levels of spirituality were a protective factor against symptoms of PTSD.

The current study provides a much better understanding of the basic demographics of warriors who matriculate following a deployment to Iraq and/or Afghanistan. Unlike the popular perception that all warriors have been on combat patrols, fired their weapons, and subsequently killed insurgents, this study shows that none of these behaviors are representative of the majority of warriors who go to college after deployment. Conversely, this study found that warriors who matriculate have already been trained by the military to perform high-cognitive-load tasks, and a majority of them were considered by the military to have strong potential for leadership.

In summary, the findings of this study give a new understanding of a heretofore-unexamined population. Warriors from the OIF/OEF conflict who return to college

display many differences than warriors from other generations. Understanding the basic demographics of this population will allow administrators, researchers and clinicians vital information that will help to craft effective interventions and outreach programs.

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Appendix A – DRRI

SECTION C: TRAINING AND DEPLOYMENT PREPARATION

Below are several statements about how well prepared you were by the military for your deployment. Please describe how much you agree or disagree with each statement by circling the number that best fits your answer.

Strongly disagree Somewhat disagree Neither agree nor disagree Somewhat agree Strongly agree
1 2 3 4 5

1. I had all the supplies and equipment needed to get my job done.
2. The equipment I was given functioned the way it was supposed to.
3. I received adequate training on how to use my equipment.
4. I knew how to treat animal bites, insect stings, or allergic reactions to plants in the region.
5. I received adequate training on what to do in case of a nuclear, biological, or chemical (NBC) attack.
6. I had enough gear to protect myself in case of a nuclear, biological, or chemical (NBC) attack.
7. I received adequate training on how to perform daily life activities while wearing nuclear, biological, or chemical (NBC) protective gear.
8. I was adequately prepared to deal with the region's climate.
9. I was accurately informed about what to expect from the enemy.
10. I saw as much combat as I expected.
11. I was informed about the role my unit was expected to play in the deployment.
12. When I was deployed I had a pretty good idea of how long the mission would take to complete.
13. I was accurately informed of what daily life would be like during my deployment.
14. I was adequately trained to work the shifts required of me during my deployment.

SECTION D: DEPLOYMENT ENVIRONMENT

The next set of statements is about the conditions of day-to-day life during your deployment. Please read each statement and decide what amount of time you were exposed to each condition over the course of the entire time you were deployed. Circle the number below the appropriate response.

Almost none of the time A few times Some of the time Most of the time Almost all of the time

1 2 3 4 5

1. The climate was extremely uncomfortable.
2. I had to deal with annoying animals, insects, or plants during my deployment.
3. I had access to clean clothing when I needed it.
4. I could get a cold drink (for example, water, juice, etc.) when I wanted one.
5. The food I had to eat was of very poor quality(for example, bad or old MREs).
6. The conditions I lived in were extremely unsanitary.
7. I had access to bathrooms or showers when I needed them.

8. I got as much sleep as I needed.
9. The living space was too crowded.
10. I was able to get enough privacy.
11. The work days were too long.
12. I got the R&R (rest and relaxation) that I needed.
13. I got my mail in a timely manner.
14. I was exposed to awful smells.
15. I was subjected to loud noises.
16. I had to hassle with putting on and taking off NBC equipment.
17. I had the equipment or supplies to do what I needed to do.
18. My daily activities were restricted because of local religious or ethnic customs.
19. I felt comfortable living in the culture or cultures where I was deployed.
20. Pressure to conform to the local culture made it difficult for me to do my job.

SECTION F: UNIT SUPPORT

The statements below are about your relationships with other military personnel while you were deployed. Please read each statement and describe how much you agree or disagree by circling the number that best fits your answer.

Strongly disagree Somewhat disagree Neither agree nor disagree Somewhat agree Strongly agree
1 2 3 4 5

1. My unit was like family to me.
2. I felt a sense of camaraderie between myself and other soldiers in my unit.
3. Members of my unit understood me.
4. Most people in my unit were trustworthy.
5. I could go to most people in my unit for help when I had a personal problem.
6. My commanding officer(s) were interested in what I thought and how I felt about things.
7. I was impressed by the quality of leadership in my unit.
8. My superiors made a real attempt to treat me as a person.
9. The commanding officer(s) in my unit were supportive of my efforts.
10. I felt like my efforts really counted to the military.
11. The military appreciated my service.
12. I was supported by the military.

SECTION G: RELATIONSHIPS WITHIN UNIT

The next set of questions is also about your relationships with other military personnel while deployed. Please describe how often you experienced each circumstance by circling the number that best fits your answer.

Never Once or twice Sometimes Many times
1 2 3 4

While I was deployed, unit leaders or other unit members:

1. ...treated me in an overly critical way.

2. ...behaved in a way that was uncooperative when working with me.
3. ... treated me as if I had to work harder than others to prove myself.
4. ... questioned my abilities or commitment to perform my job effectively.
5. ... acted as though my mistakes were worse than others.
6. ...tried to make my job more difficult to do.
7. ..."put me down" or treated me in a condescending way.
8. ... gossiped about my sex life or spread rumors about my sexual activities.
9. ...made crude and offensive sexual remarks directed at me, either publicly or privately.
10. ...offered me some sort of reward or special treatment to take part in sexual behavior.
11. ...threatened me with some sort of retaliation for not being sexually cooperative (for example, the threat of a negative review, physical violence, or to ruin my reputation).
12. ...made unwanted attempts to stroke or fondle me (for example, stroking my leg or neck).
13. ...made unwanted attempts to have sex with me.
14. ...forced me to have sex.

SECTION H: DEPLOYMENT CONCERNS

The statements below are about the amount of danger you felt you were exposed to while you were deployed. Please read each statement and describe how much you agree or disagree with each statement by circling the number in the column that best fits your answer.

Strongly disagree Somewhat disagree Neither agree nor disagree Somewhat agree Strongly agree
1 2 3 4 5

1. I thought I would never survive.
2. I felt safe.
3. I was extremely concerned that the enemy would use nuclear, biological, chemical agents (NBCs) against me.
4. I felt that I was in great danger of being killed or wounded.
5. I was concerned that my unit would be attacked by the enemy.
6. I worried about the possibility of accidents (for example, friendly fire or training injuries in my unit).
7. I was afraid I would encounter a mine or booby trap.
8. I felt secure that I would be coming home after the war.
9. I thought that vaccinations I received would actually cause me to be sick.
10. I was concerned that the tablets I took to protect me would make me sick.
11. I felt that I would become sick from the pesticides or other routinely used chemicals.
12. I was concerned about the health effects of breathing bad air.
13. I thought that exposure to depleted uranium would negatively affect my health.
14. I was afraid that the equipment I was given to protect me from nuclear, biological, chemical agents (NBCs) would not work.

15. I worried about getting an infectious disease.

SECTION K: EXPOSURE TO NUCLEAR, BIOLOGICAL, CHEMICAL AGENTS

Next are some statements about nuclear, biological, and chemical agents (NBCs) that you may have been exposed to during the time you were preparing for deployment or during your deployment. For each statement, circle "yes," "no," or "I don't know."

Either in preparation for or during my deployment..

1. ...I took pyridostigmine or little white pills in foil packets, sometimes called NAPPs, which are used to protect against nerve gas.
2. ...I received preventative vaccinations by injection (for example, to prevent anthrax or botulism). [Note: for women, preventative vaccinations may include deprovera (birth control).]

While I was deployed, I was exposed to...

3. ...nerve gas agents (for example, sarin).
4. ...mustard gas or other blistering agents.
5. ...environmental pesticides (for example, from "fogger" trucks).
6. ...pesticides in uniforms.
7. ...pesticides in flea collars.
8. ...government-issued DEET-containing insect repellents.
9. ...non-government issued insect repellents (for example, Avon Skin-So- Soft, Off).
10. ...smoke or other air pollution.
11. ...diesel or other petrochemical fuel on my skin.
12. ...fumes or exhaust from heaters or generators, including heaters in tents.
13. ...depleted uranium in munitions.
14. ...burning trash or burning feces.
15. ...local food other than that provided by the Armed Forces.

While I was deployed..

16. ...I was within 1 km of an exploding artillery shell.
17. ...I was within 5 km of an exploding missile.
18. ...I entered an enemy bunker or military facility.
19. ...I climbed inside an enemy tank that had been abandoned or burned out.
20. ...I was exposed to chemical or biological weapons.

SECTION L: POST-DEPLOYMENT SUPPORT

You have completed the questions about your deployment. The next set of statements refers to social support after deployment. Please decide how much you agree or disagree with each statement and circle the number that best fits your choice.

Strongly disagree Somewhat disagree Neither agree nor disagree Somewhat agree Strongly agree

1 2 3 4 5

1. The reception I received when I returned from my deployment made me feel appreciated for my efforts.
2. The American people made me feel at home when I returned.
3. When I returned, people made me feel proud to have served my country in the Armed Forces.
4. I am carefully listened to and understood by family members or friends.
5. Among my friends or relatives, there is someone who makes me feel better when I am feeling down.
6. I have problems that I can't discuss with family or friends.
7. Among my friends or relatives, there is someone I go to when I need good advice.
8. People at home just don't understand what I have been through while in the Armed Forces.
9. There are people to whom I can talk about my deployment experiences.
10. The people I work with respect the fact that I am a veteran.
11. My supervisor understands when I need time off to take care of personal matters.
12. My friends or relatives would lend me money if I needed it.
13. My friends or relatives would help me move my belongings if I needed to.
14. When I am unable to attend to daily chores, there is someone who will help me with these tasks.
15. When I am ill, friends or family members will help out until I am well.

SECTION M: POST-DEPLOYMENT LIFE EVENTS

The next statements refer to events you may have experienced SINCE RETURNING FROM YOUR DEPLOYMENT. These questions are similar to the items you've answered previously about events before your deployment. For this page, please circle "yes" or "no" for each of the items below.

Since returning home, I have experienced...

1. ...a natural disaster (for example, a flood or hurricane), a fire, or an accident in which I was hurt or my property was damaged.
2. ...exposure to a toxic substance (such as dangerous chemicals or radiation).
3. ...combat or exposure to a war-zone (in the military or as a civilian).
4. ...a serious operation.
5. ...a mental illness (for example, clinical depression or anxiety disorder), or life-threatening physical illness (for example, cancer or heart disease) of someone close to me.
6. ...the death of someone close to me.

Since returning home, I have...

7. ...experienced stressful legal problems (for example, being sued or suing someone else).
8. ...witnessed someone being assaulted or violently killed.
9. ...been robbed or had my home broken into.
10. ...had a family member with a serious drug or alcohol problem.
11. ...been unemployed and seeking employment for at least 3 months.

12. ...been emotionally mistreated (for example, shamed, embarrassed, ignored, or repeatedly told I was no good).
13. ...experienced unwanted sexual activity as a result of force, threat of harm, or manipulation.
14. ...been physically injured by another person (for example, hit, kicked, or beaten up).
15. ...lost my job.
16. ...gone through a divorce or been left by a partner or significant other.
17. ...had problems getting access to adequate healthcare.

Appendix B – Combat Exposure Scale

Please circle the number above the answer that best describes your experience

1) Did you ever go on combat patrols or have other dangerous duty?

1	2	3	4	5
No	1-3X	4-12x	13-50x	51+times

2) Were you ever under enemy fire?

1	2	3	4	5
Never	<1 month	1-3 months	4-6 months	7 mos or more

3) Were you ever surrounded by the enemy?

1	2	3	4	5
No	1-2X	3-12x	13-25x	26+ times

4) What percentage of the soldiers in your unit were killed (KIA), wounded or missing in action (MIA)?

1	2	3	4	5
None	1-25%	26-50%	51-75%	76% or more

5) How often did you fire rounds at the enemy?

1	2	3	4	5
Never	1-2X	3-12x	13-50x	51 or more

6) How often did you see someone hit by incoming or outgoing rounds?

1	2	3	4	5
Never	1-2X	3-12x	13-50x	51 or more

7) How often were you in danger of being injured or killed (i.e., being pinned down, overrun, ambushed, near miss, etc.)?

1	2	3	4	5
Never	1-2X	3-12x	13-50x	51 or more

Appendix C - HUMAN SPIRITUALITY SCALE

INSTRUCTIONS: Your honest answer to each item is very important. There is no agreement as to what are right and wrong responses to these items, but if the scale is to be useful, you should select the one response that is most true for you.
( ) Constantly / Almost Constantly ( ) Frequently ( ) Occasionally ( ) Seldom
( ) Never /Almost Never

1. I experience a sense of the sacred in living things.
2. I experience a sense of connection with other living things
3. I set aside time for personal reflection and growth.
4. I value the relationship between all living things.
5. Being truthful is important to a successful life.
6. I find meaning in life by creating close relationships.
7. We should give to others in need.
8. It is important that we be sensitive to pain and suffering.
9. I experience a feeling of being whole and complete as a person.
10. It is important that each of us find meaning in our lives.
11. All forms of life are valuable.
12. I feel sad when I see someone else in pain.
13. I find the world of nature boring.
14. I listen closely when people tell me their problems.
15. I read articles on health and inner peace.
16. I share my private thoughts with someone else.
17. I put the interests of others before my own when making a decision.
18. I actively seek a sense of purpose in my life.
19. I feel guilty when I don't tell the truth.
20. I enjoy guiding young people.

Appendix D – PCL-M

INSTRUCTIONS: Below is a list of problems and complaints that veterans sometimes have in response to stressful military experiences. Please read each one carefully, then circle one of the numbers to the right to indicate how much you have been bothered by that problem in the past month.

Not at all	**A little bit**	**Moderately**	**Quite a bit**	**Extremely**
1	2	3	4	5

1. Repeated, disturbing *memories, thoughts,* or *images* of a stressful military experience?
2. Repeated, disturbing *dreams* of a stressful military experience?
3. Suddenly *acting* or *feeling* as if a stressful military experience *were happening again* (as if you were reliving it)?
4. Feeling *very upset* when *something reminded you* of a stressful military experience?
5. Having *physical reactions* (e.g., heart pounding, trouble breathing, sweating) when *something reminded you* of a stressful military experience?
6. Avoiding *thinking about* or *talking about* a stressful military experience or avoiding *having feelings* related to it?
7. Avoiding *activities* or *situations* because *they reminded you* of a stressful military experience?
8. Trouble *remembering important parts* of a stressful military experience?
9. *Loss of interest* in activities that you used to enjoy?
10. Feeling *distant* or *cut off* from other people?
11. Feeling *emotionally numb* or being unable to have loving feelings for those close to you?
12. Feeling as if your *future* will somehow be *cut short*?
13. Trouble *falling* or *staying asleep*?
14. Feeling *irritable* or having *angry outbursts*?
15. Having *difficulty concentrating*?
16. Being "*super-alert*" or watchful or on guard?
17. Feeling *jumpy* or easily startled?

Appendix E – Email Solicitation

Participants were given the following information about the study:

> My name is Michael Zimmermann, and I am conducting a research study under the direction of Brian Glaser, PhD that investigates the resiliency factors of veterans who return to college. I am primarily focused on those individuals who are veterans of OIF/OEF and are currently enrolled in any two- or four-year academic institution. Participation includes answering a series of questions in an online survey (www.surveymonkey.com), which should take 20-30 minutes. Participants can be entered in a drawing in which everyone has an equal chance of winning one of five $25 gift certificates to Amazon.com. Participation is not required to enter in the drawing.