

THE EFFECTS OF COMBAT RELATED STRESS ON LEARNING IN AN ACADEMIC
ENVIRONMENT: A QUALITATIVE CASE STUDY

By

KEVIN PETER SHEA

B.A., STONEHILL COLLEGE, 1971
M.A., CENTRAL MICHIGAN UNIVERSITY, 1978

AN ABSTRACT OF A DISSERTATION

Submitted in partial fulfillment of the requirements for the degree

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Department of Educational Leadership
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Abstract

This qualitative case study described the incidence of stress in the lives of Army officers, and its effect on their learning experiences at the Army's Command and General Staff College (CGSC). It described the experiences of officers who have completed multiple combat deployments and coped with the effects of combat related stress in an academic environment. The study further illuminated a number of issues surrounding combat related stress and learning, and framed them using the words of the eleven United States Army Command and General Staff College student participants.

This qualitative case study combined the interviews of the eleven students with other members of the Fort Leavenworth, Kansas Army community to include an Army psychiatrist, a Department of Army civilian psychologist, a CGSC faculty focus group, and an Army chaplain. All of the Army officers in the study are combat veterans with an average of over 23 months of combat.

This case study confirmed that being in an academic environment increased the stress levels of even combat veterans. This research further confirmed levels of anger, alcohol usage, and sleeplessness among CGSC students and its effect on their learning. It identified the impact of transitions, dual enrollment, and social functioning in family settings, as well as confirming that there is still a continued stigma associated with Soldiers seeking assistance for mental health. The stigma is exacerbated by inaccurate reporting and a culture that reflects a lack of support within certain levels of the service. This study contributes to the current body of knowledge and provides additional information and insights on the effects of combat related stress on learning.

Finally, this study is relevant, germane, and timely given the number of Soldiers who have been repeatedly exposed to combat operations. This exposure to combat exponentially increases the incidence of combat related stress in their lives.

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Lastly, this research has been both a labor of love and a continuing source of inspiration as it is an honor to be associated with those who defend us on a daily basis. If there are any mistakes, errors, or omissions they are mine and mine alone.

Dedication

This dissertation is dedicated to my parents Jack and Elizabeth Shea. They were members of the Greatest Generation. My father served as an Infantryman in the European Theater of Operations in WWII. My Mother was a WAVE in the US Navy and worked as a cryptologist breaking Japanese codes for the Pacific theater.

I now understand that my father suffered from some form of post traumatic stress and one of his defenses was to self medicate with alcohol. Both parents instilled a love of reading, learning, and education in their children, as well as a deep and abiding love of God and country. I know now what a wonderful job they did raising 6 children and affording us the opportunities we all had to achieve and succeed in life.

Finally, this study is dedicated to the 11 CGSC students and the other 510,000 Soldiers they represent.

Chapter 1 - Introduction

"They are repeatedly exposed to high-intensity combat with insufficient time at home to rest and heal before redeploying."

Bobby Muller, Veterans for America

From the earliest Greek soldier to his present-day counterpart, Soldiers have had a number of opportunities to experience combat, and then dealt with the after effects of those combat experiences later in their lives (Marlowe, 2001). There are both short and long-term effects associated with combat stress. Although stress is a part of daily life, it is also an inherent and sometimes insidious side effect of combat. Over 200,000 veterans from the current US conflicts have already applied for disability benefits through the Veterans Administration (VA) and 47% or 95,000 of those veterans have had some form of reported mental illness (Bilmes, 2007a).

Estimates of 20% of the deployed forces are thought to suffer from some form of stress and it could cost more than \$6.2 billion to treat them (Jelinek, 2008a; Morgan, 2008). A recent Rand survey estimated that the percentage of veterans who suffer from some form of stress may be higher than the 20% estimate (Tanielian et al., 2008). Combat has been continually associated with the high use of mental health services following deployment (Hoge, Auchterlonie, & Milliken, 2006). We must prepare for the very real challenges, some timeless, and some new to us, presented by these recent combat veterans of our latest wars.

This exploratory qualitative research study examined the effects of combat related stress on learning in an academic environment. It focused specifically on Army field grade officers who have returned from combat and have attended the United States Army Command and General Staff College at Fort Leavenworth, Kansas.

At the conclusion of the first Gulf War in 1991, the United States Army began a program to down-size from an active duty force of 786,000 Soldiers to an active duty force of approximately 500,000 (Fontenot, Degen, & Tobin, 2004). At the time, the United States military had no credible peer adversary in the world with the "demise of the Soviet bloc" (Boot,

2002, p. xx), the fall of the Berlin Wall, and the subsequent withdrawal of Iraqi military forces from Kuwait during the Persian Gulf War (Boot, 2002).

However, the lack of a peer military adversary did not effectively deter paramilitary forces or non-state actors from attempting to impose their will in other parts of the world. The peace the United States Army thought they had secured when the Iron Curtain fell in Eastern Europe, and when Saddam Hussein withdrew his forces from Kuwait was short lived (Kaplan, 2005b).

The Berlin Wall fell in November of 1989 and the Soviet Union began to lose power and control in Eastern Europe. Warsaw Pact countries that had kept their people and their ethnic and religious differences in check since the end of World War II could no longer maintain that level of control. Eastern Europe was in turmoil. The Balkans beckoned, and NATO needed the assistance of the United States in Europe again. The US Army and the US Air Force were both heavily involved in a part of the world where Iron Curtain countries had ruled with an iron fist for decades (Boot, 2002; Fontenot et al., 2004).

In 1995, the US Army and the US Air Force found themselves involved in religious and ethnic difficulties in Eastern Europe (Boot, 2002; Fontenot et al. 2004; Kaplan, 2005a; Priest, 2004). During this same decade, the Army also deployed to Haiti and Somalia (Boot, 2002).

A new decade began in 2000 and brought fresh challenges as non-state actors projected their influence and terror on the world stage with bombings in Bali, Madrid, and London. In the aftermath of the September 9/11 attacks in New York, Pennsylvania, and Washington, DC the US Army found itself tremendously over-committed and over-extended. Smaller by almost a third of its size a decade earlier, the Army found itself struggling to meet its world-wide commitments (Fontenot et al., 2004). These commitments eventually grew to what became a two front strategy of fighting in Afghanistan beginning in 2001, and then followed by Iraq in 2003 (Filkins, 2008; Fontenot et al., 2004).

Specifically, in 2003 the Army had 369,000 Soldiers deployed overseas in 120 different countries as well as Iraq and Afghanistan (Fontenot et al., 2004). The Army struggled to maintain the forces and the balance necessary to not only fight in two combat theatres of operations, but to re-set and re-train those forces prior to repeatedly redeploying them.

Lieutenant General Robert Durbin, US Army, spoke in Manhattan, Kansas at the Institute for the Health and Safety of Military Families located at Kansas State University and

said, “We really have no idea how the multiple, prolonged deployments are affecting the lives of our Soldiers and families” (Milburn, 2009, p. A3).

After nine years of near continuous fighting in Iraq and Afghanistan, civilian leaders have taken a closer look at the condition of their nation’s Army. Speaking on CBS’s “Face the Nation,” Colin Powell, a former Secretary of State, as well as the former Chairman of the Joint Chiefs of Staff, and a retired Army general said the “active Army is about broken” (DeYoung, 2006, para.10). Army Chaplain (Major) Roy Myers provided insight from a Soldier’s perspective when he said the following in an interview at Fort Leavenworth in 2008 for the Combat Studies Institute:

The greatest challenge is going to come back to people. If we haven’t train-wrecked yet, and this is my humble opinion, we will train-wreck personnel wise. We are not retaining people the way we should. The people we’re retaining may or may not be good at what they do. I don’t have situational awareness of that. The people we are bringing in, I’m inclined to think, because we’re lowering standards . . . I can’t think of a situation where lowering standards as much as we have is a good thing. We’re in a situation now where you could almost cut the desperation with a knife. What I’m hearing from my technical chain is that all the things we look at to tell us how healthy the Army is, they’re saying the Army is not healthy. There are disciplinary problems, family problems, AWOLs, desertions, drug problems – the list goes on. The Army has probably reached its breaking point, in my opinion. If it hasn’t reached its breaking point yet, it certainly will. (Duckworth, 2008, p. 21).

John Murtha, a Pennsylvania congressman, and a Marine veteran of Vietnam voiced similar concerns, and was quoted as saying, “The readiness of the Army ground forces is as bad as it was right after Vietnam” (Thompson, 2007, p. 30). Even if people cannot agree on the status or readiness of the Army, it is an Army that is in pain. It is suffering. It is an Army that has suffered in silence. Narcotic pain relievers have been prescribed for 50,000 Soldiers or about 10% of the active duty forces (Ricks, 2009).

The pace of the last nine years has taken its toll and increased the levels of stress within the Army. Speaking before a general session of Congress General David Petraeus acknowledged, “U.S. forces are under *considerable* stress” (Brook, 2008, p 1). This stress can be measured in both men and military materiel. Various personnel indicators signified that the Army is an institution under stress. The Army struggled to meet its annual recruiting goal. The annual enlistment goal for the Army is 80,000 recruits. In 2005, the Army missed that target by 6,627 recruits (Brook, 2007). Since then the Army has lowered enlistment standards to meet

those goals by introducing waivers for age, education, drug usage, medical issues, and criminal records according to retired general Barry McCaffrey (Brook, 2007).

On September 29, 2010 Secretary of Defense Robert Gates spoke at Duke University in North Carolina to an audience of students and faculty. He said,

First, as a result of the multiple deployments and hardships associated with Afghanistan and Iraq, large swaths of the military – especially our ground combat forces and their families– are under extraordinary stress... There are a number of consequences that stem from the pressure repeated deployments – especially when a service member returns home sometimes permanently changed by their experience. These consequences include more anxiety and disruption inflicted on children, increased domestic strife and a corresponding rising divorce rate, which in the case of Army enlisted has nearly doubled since the wars began. And, most tragically, a growing number of suicides. (Gates, 2010, p. 3).

Suicides have increased in each of the last four years with 141 confirmed suicides in 2008 (King, 2009), and the Army now has the highest incidence of suicides in the last 28 years (Jelinek, 2009; Thompson, 2007). This number of suicides put the Army above the national average for suicides according to the Center for Disease Control and Prevention (King, 2009). Army suicides in 2008 set a record, and LTG Robert Durbin commented on this statistic at Kansas State University when he said, “Unfortunately 2009 may set another record” (Milburn, p. A3). Fort Leavenworth was not immune from this unfortunate statistic. In the past four academic years there have been three suicides among active duty Army majors attending CGSC.

According to the Pentagon enlistment waivers climbed, “from 4,918 in 2003 to 8,129” in 2006 (Thompson, 2007, p.33). In 2007 the Army enlisted 511 convicted felons (Ricks, 2009). Other negative personnel indicators are increases in DUIs, domestic abuse, divorces, bad conduct discharges, and suicides.

The Army is also short officers. Specifically, the Army is short majors in some career fields. Since 2001 there has been a corresponding decrease in the number of officers, remaining on active duty after their initial commitment is over (Brown, 2008). Most officers serve an initial tour of four to five years depending on their commissioning source. Army officers commissioned through a civilian university’s Reserve Officer Training Corps (ROTC) program normally have a three or four year service obligation after graduation depending on their scholarship status as an undergraduate.

Traditionally, officers commissioned through the United States Military Academy, at West Point, New York have a five-year service obligation to compensate the government for

their education. At the conclusion of the five years, they are usually free to leave the service, although in past years many have remained on active duty. Recently many junior officers or Captains have been leaving the Army shortly after their initial commitment is completed.

This shortage of officers is beginning to have an impact. Evidence of the severity of this is offered by using an excerpt of an e-mail from Colonel George T. Lockwood, Director, Officer Personnel Management, and United States Army Human Resources Command. In May 2007 Colonel Lockwood sent an official e-mail addressed to all Army Fellow Officer Leaders that articulated the issues and the problems the Army faced with respect to officer manning. He said,

The Army is facing significant challenges in officer manning, now and in the immediate future. Transformation and GWOT OPTEMPO has forced HRC, in concert with the Army G1 and G3, to re-examine manning priorities and associated fill levels, and you may be aware of the recently published Manning Guidance and revised priorities. Managing priorities, however, will not be enough. Force structure growth of nearly 6,000 captains and majors, coupled with lower officer accessions throughout the 90's, has significantly reduced the availability of field grade officers, especially logisticians, signal and MI officers. Promotion of two year groups to MAJ in FY06 increases our MAJ fill rate to 90% but decreases CPTs fill to 82%, and availability of senior CPTs, who traditionally serve in the Generating Force, falls to 51%.

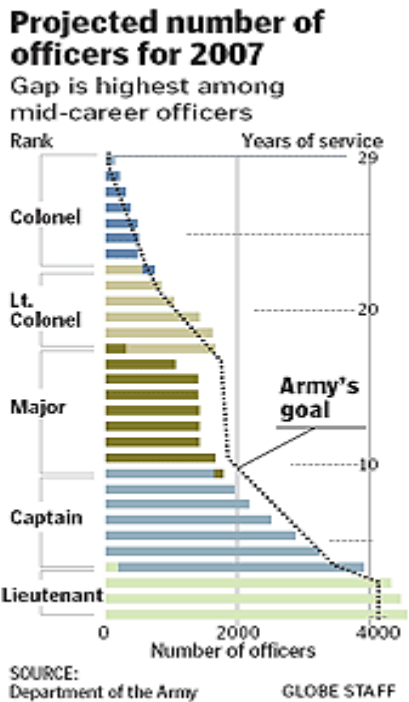
Read that last line again, please. Our inventory of senior Captains is only 51% of (*our*) requirements. (G. T. Lockwood, personal communication, May 14, 2007).

Captain Liz McNally, a West Point graduate, and an aide to General David Petraeus when asked about what types of captains are getting out replied, "Almost all of them" (Ricks, 2009, p. 305) including herself. This has created a shortage of majors in the Army (Brown, 2008). The Army is currently short 3000 majors at the field grade or the mid-career level (Brown, 2008; Thompson, 2007). Majors are mid-career officers, who in effect run much of the day-to-day activities of units and organizations at the tactical level of operations for the US Army.

Bryan Bender and Renee Dudley collaborated on research about officer retention and wrote the following, "To offset the current shortage, the Army has broken some of its own guidelines for promotion. In 2006, the Army had to promote more officers ahead of its own timetables, according to the most recent statistics. For example, the Army had a goal of promoting about 70 percent of eligible majors to the next rank of lieutenant colonel; instead, it promoted 90 percent of them to fill the vacuum. The same year, the Army advanced nearly all of

its captains to majors, roughly 20 percent more than its guidelines call for” (Bender & Dudley, 2007, p.1).

Figure 1.1 Projected Number of Officers for 2007



Speaking before a group of Soldiers at Fort Stewart, Admiral Michael Mullen, Chairman of the Joint Chiefs of Staff, expressed his concern about the multiple combat tours faced by Soldiers. He said, “We can’t afford to lose you. There’s a finite amount of gas left in this tank. And we’ve used at least half the tank” (Brook, 2008, p. A1).

The stress of multiple combat tours has created a combat tested, but combat weary Army. General Richard Cody, Vice Chief of Staff of the Army, said the deployment schedule is creating “incredible stress” on Soldiers and their families (Ricks, 2009, p. 305). Since October 2001, more than 1.9 million US service members have deployed to either Iraq or Afghanistan (Buckholtz, 2009). Current projections from the Rand Corporation indicate that 26% of returning veterans may have mental health conditions (Tanielian et al., 2008).

The new GI bill or the Yellow Ribbon program will soon allow many recent veterans back into the classrooms where they bring their experiences from combat, both positive and negative, with them. Approximately 354,000 veterans attended various academic institutions in

2008. That number is expected to reach 460,000 under the new Yellow Ribbon program (Williams, M. R., 2009). This exploratory research study will investigate the effects of stress from combat in a learning environment. This first chapter provides an introduction, background, purpose of the study and the problem statement, research questions, methodology, the significance of the study, as well as limitations, assumptions, definitions of terms, and a chapter summary.

Background

“There are individuals who are afraid to come in and get help despite needing it, because of fear that they'll be stigmatized.”

Dr. Charles Hoge

A certain amount of stress occurs in everyone's life. No one lives his or her life without some degree of stress. Hans Selye, a pioneer in the field of stress research, called stress “the salt of life” (Carmichael, 2009, p. 47). Sometimes small things in our lives become hassles or stressors like forgetting an appointment, or failing to pick up your suit at the cleaners before a business trip. Other times stress comes in the form of a significant emotional event like the injury or death of a family member, a divorce, or the loss of a job (Holmes & Rahe, 1967; Selye, 1976). Stress in small doses can often be useful and can have both powerful and positive effects in helping the body cope with the current stressful situation it faces. When working under a deadline or preparing for a test, the body releases small amounts of adrenaline that has the effect of sharpening the memory and heightening mental alertness (Carmichael, 2009; Mapes, 2008; Medina, 2008b; Selye, 1976; Wolfe, 2001).

Another form of stress is the classic fight or flight reaction. This stress is triggered by fear or an actual event where the brain senses an affront to our physical safety and reacts accordingly (Medina, 2008a; Panzarino, 2008). When there is a confrontation to our physical safety or security, the body reacts immediately and moves into high gear with the brain leading the way. The body's stress response system automatically initiates the biological adjustments that prepare us for the next level of response (Jaffe-Gill, Smith, Larson, & Segal, 2007).

When the body is in fight or flight mode the brain reacts to that danger by igniting chemical alarms through the nervous system. The nervous system responds by releasing

hormones like adrenaline and cortisol (McEwen and Lasley, 2002; Medina, 2008a; Panzarino, 2008). These hormones move throughout the body helping us to either prepare for the battle, or flee the battle (Jaffe-Gill et al., 2007).

The issue with the brain's response to physical danger or fear is complex and often has long-term deleterious effects (McEwen & Lasley, 2002). In combat, the fight or flight reflex floods the Soldier's body with adrenaline to support the body's autonomic response, but after spending extended periods in this biologically altered state, some Soldiers have issues adjusting to peaceful conditions (Shane, 2004).

This adjustment back into either civilian life or life in non-combat situations involves a transition. Transitions have both a personal and a professional component. On the personal side, it is the reunion of families separated by a military deployment. On the professional level, it is the opportunity to return to a unit and begin additional training, or attend military schooling in preparation for a promotion or new job. All these situations involve some form of a transition. Nancy Schlossberg wrote about transitions to include military transitions in her work as an educator, writer, and life coach. "Moms away from their children, new dads who have never seen their babies--these are some of the stresses experienced by both those waiting at home and those on foreign soil. While initially there is tremendous joy at being reunited, there is much adjusting that needs to be done by both parties" (Schlossberg, 2009, para 4).

Combat Stress

"This is a war of disability not a war of deaths"

Ronald Glasser, M.D.

Combat stress is the normal human response to the extraordinary challenges faced by Soldiers in combat. When Soldiers are faced daily with intense life threatening experiences there are consequences. Their psychological responses which are immediate and automatic based on the combat situation are powerful and cannot consciously be controlled by the Soldier. Their experiences and responses to combat are not only powerful they can deeply affect the brain and the mind.

American Soldiers have now been in the longest sustained ground combat since the Revolutionary War (Bender, 2007). In his book, *Wounded: Vietnam to Iraq*, Dr. Ronald Glasser

said the war's legacy is in the orthopedic and neurology wards, not the cemetery as reported by Barry Yeoman (2008). Soldiers are surviving these wars in Iraq and Afghanistan both physically and mentally in greater numbers than previous conflicts. Advances in battlefield (trauma) medicine and evacuation procedures continue to save lives at an amazing rate (Regan, 2004; Young, Gillan, Dingman, Casinelli, & Taylor, 2008). There were 38 deaths for every 100 wounded in the Second World War. During Vietnam the ratio dropped to 28 (deaths) per 100 wounded. The current ratio is 6 deaths for every 100 Soldiers wounded, according to Linda Bilmes, of the Kennedy School of Government at Harvard University (Bilmes, 2007b). Dr. Michael E. Kilpatrick, the deputy director of deployment health support at the Pentagon, places the percentage even higher, at the 98% survival rate after being wounded (Shane, 2004).

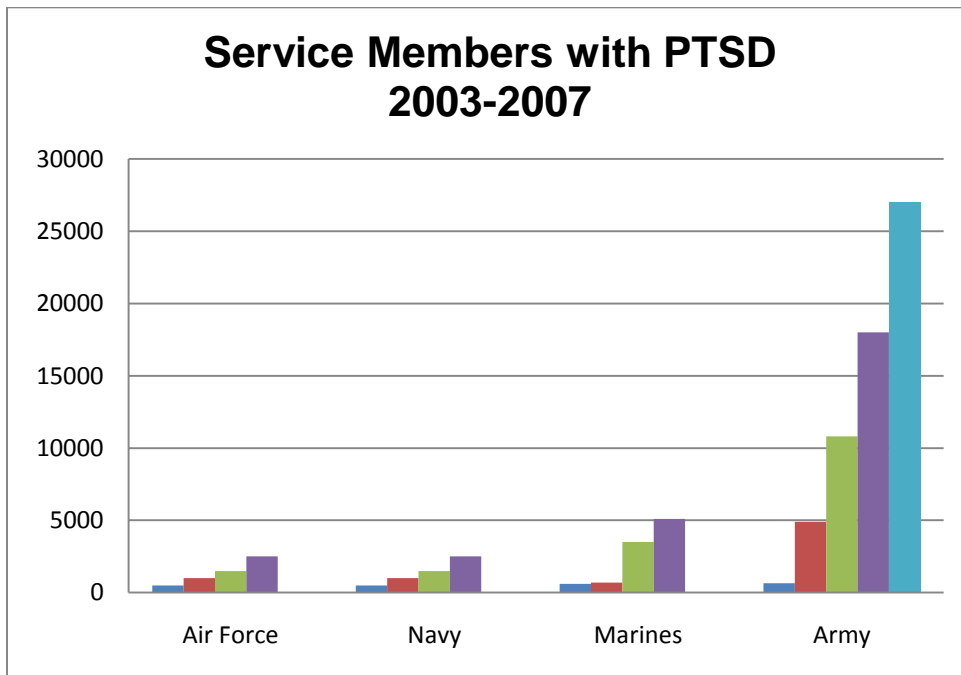
Increasingly then Soldiers survive one battlefield only to face another. They are surviving the physical attacks on both their bodies and their minds. A physically injured Soldier requires time to heal and move on with his or her life, whether it is a return to active duty, if deemed medically fit, or a transition back to civilian life (Morgan, 2008). Soldiers who have combat related stress injuries face similar challenges in a related healing process. Their stress injuries are just as real and debilitating as any physical injuries. A stress or mental injury does not diminish the effect or impact it has on the Soldier. In fact it is often easier to fix a broken bone than it is to repair a damaged brain or psyche (Grieger, Kolkow, Spira, & Morse, 2007; Tanielian et al., 2008). Some stresses may not manifest themselves immediately (Shane, 2004).

Some stresses, like Post Traumatic Stress Disorder may have a delayed on-set reaction (APA, 1994; Shane, 2004; Tanielian et al., 2008)). The incidence of stress related illness is on a continual rise as more and more Soldiers are repeatedly exposed to the affects of combat operations (Young, 2004). More than 245,000 Soldiers have been deployed twice to either Iraq or Afghanistan (Buckholtz, 2009) and that carries with it a better than 50% increase in the incidence of combat stress according to former Army Chief of Staff, General Peter J. Schoomaker (Thompson, 2007). Over 91,000 Soldiers have now been deployed three times and an amazing 48,000 have deployed four times (Buckholtz, 2009). Dr. Charles Hoge co-authored an article for the New England Journal of Medicine and said, "Research conducted after other military conflicts has shown that deployment stressors and exposure to combat result in considerable risks of mental health problems" (Hoge, Castro, Messer, McGurk, Cotting, & Koffman, 2004, p. 14).

Since 2001 over 31,848 service members have been physically wounded (Yeoman, 2008) in Iraq or Afghanistan. However, the number of combat related stress injuries is far greater than the 31,848 physically wounded. Military officials from both the Department of Defense (DOD) and the Office of the Surgeon General indicate that there have been 40,000 reported cases of Post-Traumatic Stress Disorder (PTSD) by service-members since 2003 (Jelinek, 2008b). The Army reported 38,000 PTSD cases in 2007 alone, an increase of over 46% among US troops deployed to Afghanistan and Iraq (Morgan, 2008).

Army officials reported an increased number of PTSD cases in both 2006 and 2007. Lieutenant General Eric Schoomaker, the Army’s surgeon general said “But we’re also exposing more people to combat” (Morgan, 2008, para 8). General Schoomaker continued with, “I don’t think right now we...have good numbers” (Jelinek, 2008a, p. A7). This increase is attributed to the additional troops sent to Iraq as well as the increased 15-month tours (Bender, 2007; Jelinek, 2008a). Bobby Muller, president of Veterans for America in addressing this situation said, “They are repeatedly exposed to high-intensity combat with insufficient time at home to rest and heal before redeploying” (Zoroya, 2008, para 3).

Figure 1.2 Service Members with PTSD 2003-2007



Note: The colors in the box correlate to the corresponding years of 2003 through 2007. The bar graphs for the Air Force, Navy and Marines run from 2003 to 2006 (purple) and do not depict

stress statistics for 2007(blue). The Army bar graph is they only one that shows statistics for 2007 as evidenced by the last (blue) graph line, which clearly indicates a spike in the number of reported stress injuries. Source: Office of the Surgeon General (Jelinek, 2008a, p. A7).

DOD officials estimate that of the current 1.64 million service members with combat experience that 20% or 328,000 have the potential to experience depression, anxiety, or stress (Shane, 2004). The Rand study not only corroborates this estimate, but postulates that the percentage may be even higher at 26% (Tanielian et al., 2008).

Post deployment surveys indicated that 31% of Marines, 38% of Soldiers, and 49% of Army National Guardsmen suffer from some form of stress related illness (Yeoman, 2008). Army Reserve and Army National Guardsmen suffer a disproportionately higher rate of stress and mental health issues in comparison to active duty Soldiers primarily due to access to health care professionals in their communities after post deployment (Friedman, 2005; Young, 2008).

Other studies or surveys have shown that more than 50% of Soldiers who needed treatment are not willing, or are afraid to seek help for their illness (MHAT, 2006; Morgan, 2008). In an interview with David Martin of CBS News, Dr. Charles Hoge of the Walter Reed Army Institute of Research said, "There are individuals who are afraid to come in and get help despite needing it, because of fear that they'll be stigmatized" (CBS, 2006).

Brian P. Marx's article in the Clinical Psychology Review said, "Importantly, it has been speculated that these estimates may actually minimize the real numbers of military personnel and veterans suffering from PTSD and other disorders due to the fact that disclosing mental health difficulties may lead to removal from military duties, ruin the prospects for a military career, or delay a return to home" (p.671).

A war that is now in its ninth year and "is longer than we were in World Wars I and II combined" (Williams, I., 2009, p. A5) will certainly have multiple impacts. Many of these impacts will be long term, but may not be very visible to the average citizen. Dr. Evan Kanter of the Puget Sound VA hospital in Seattle said, "And almost never do they hear anything at all about the psychiatric casualties" (Shane, 2004, p.2).

The Veterans Affairs Secretary, GEN (Ret.) Eric Shinseki spoke at a mental health conference in Washington and said, "Who's vulnerable? Everyone, warriors suffer emotional injuries as much as they do physical ones." He continued with, "Veterans from the recent wars

are coming home with invisible wounds that are just as debilitating as physical trauma sustained on the battlefield” (Hefling, 2009, p.A3).

The military has discharged over 720,000 service members who were in the service on September 11, 2001. More than 200,000 of these service members have already applied for disability benefits from the VA. Earlier figures estimated that 95,000 veterans have been seen at VA hospitals for mental health issues (Bilmes, 2007a).

New data from the VA indicated 120,000 Iraq and Afghanistan veterans have been seen for mental health issues at VA facilities with almost 60,000 veterans receiving a preliminary diagnosis of PTSD (Jelinek, 2008b). Secretary of Veterans Affairs Anthony Principi indicated that the violent tactics used by the terrorists in Iraq is taking a considerable toll on the mental health of troops. He said it would result in a lifetime of disability payments for many of those who return from the war (Young, 2004). The VA will spend \$2.8 billion this year on mental health (Priest & Hull, 2007), while the long term taxpayer costs for veteran payments will be close to \$400 billion (Bilmes, 2007a).

Statement of the Problem

The problem this qualitative case study addressed is that Soldiers affected by combat related stress are returning to academic environments, and it is having an impact on their learning. Quantitative surveys conducted by both the VA and DOD documented increased levels of combat related stress among returning veterans. These quantitative surveys did not address the substantive qualitative concerns of the impact of stress on learning. While there is a great deal of information about stress and learning there is very little information about the impact combat related stress creates on Soldiers in a learning environment. This qualitative research study provides additional information in this area.

The new GI Bill took effect on August 1, 2009 and will add to the number of Soldiers afforded the opportunity to return to school. The original GI Bill signed into law over 65 years ago “changed the face of university campuses across the country,” said Pat Bosco, Kansas State University vice president for student life (Williams, M. R., 2009, p. A10). In 1947, veterans represented almost 50 percent of the college enrollment population. Their presence changed the face, the facilities, and atmosphere on campuses. Bosco added, “At K-State it produced more residence halls, more family housing to accommodate students attending on the GI Bill.”

(Williams, M. R., 2009, p. A10). The GI Bill created “the largest middle class in the world” when many veterans went on to become “doctors, lawyers, engineers” (Williams, M. R., 2009, p. A10).

This new GI Bill program called the Yellow Ribbon program pays the full cost of in-state tuition, as well as other fees and expenses (Lankford, 2009). Over 1,100 colleges, universities and schools entered into Yellow Ribbon program agreements with the Department of Veterans Affairs to provide financial aid for veterans participating in the Post-9/11 GI Bill (Army News Service, 2009).

Soldiers will bring their combat experiences into the classrooms and academic institutions need to be cognizant of this as well as being prepared to address the learning issues of veterans who may suffer from stress related illnesses. These recent veterans will bring new learning skills and life experiences with them. The academic community needs to be prepared for this influx of new students, as well as their academic perceptions and their academic needs as recent combat veterans. Finally, this research study sought to identify common themes among the participants. These themes identified supplementary research topics for further academic research surrounding both stress and stress in a learning environment.

Purpose

The ultimate purpose of this qualitative case study was to understand, describe, and to explain the influence of combat related stress, and its effects on the learning environment for Army officers attending the US Army’s Command and General Staff College (CGSC) at Fort Leavenworth, Kansas.

This qualitative case study described the incidence of stress among Army officers with combat experience, and its effect on their learning experiences. Case studies present multiple perspectives of the phenomenon being studied. This case study was no exception, as it involved multiple participants. In addition to interviewing CGSC students, interviews were also conducted with the following individuals: an Army chaplain who counsels CGSC students, a psychologist, and a psychiatrist from two separate organizations at Fort Leavenworth, Kansas, and a CGSC faculty focus group. The interviews with both staff and faculty obtained their intuitive thoughts, background information, and additional material from the perspective of individuals invested in the successful educational experience of CGSC students. Their

perspectives helped inform this research and provided both balance and insights into aspects of data collection and data analysis. This case study provided information from the perspective of all the participants based on their experiences in an academic environment. Finally, this study documented those levels of stress, in the actual words of the participants, and sought to understand what accommodations academic institutions can make on their behalf.

Research Questions

This exploratory qualitative research study attempted to answer the following research questions by using the participant's subjective point of view.

1. How did the influence of combat related stress affect the learning of CGSC students?
2. What were the common themes in how each participant dealt with stress?
3. What were the common outcomes, from the perspectives of the participants with respect to combat related stress in the classroom and if so, what were they?
4. What were the teaching and learning episodes for the staff and faculty?

The research questions listed above are supported by a series of interview questions tailored for each specific group of participants. The interview questions followed a semi-structured interview format. The questions were a guide and were asked in random order based on the responses from previous participants. They were designed to help uncover and describe the participant's point of view (Marshall, & Rossman, 1999). The interview questions are located in Appendix D.

Methodology

This research study used a qualitative case study methodology. Purposive sampling was used to identify appropriate study participants who met the selection criteria for the research study (Frankel & Wallen, 2006). Study participants came from a representative sample of CGSC officers with two or more tours in a combat theater of operation. This research methodology used semi-structured interviews with open-ended questions during data collection to capture the experiences of the study participants in their own words (Creswell, 1994; Merriam, 1998).

A semi-structured interview process allowed the researcher the flexibility to modify questions or ask follow-up questions that added depth, breadth, and substance to the on-going research (Merriam, 1998). The researcher used the research questions as the primary data

collection vehicle. The primary researcher conducted interviews until saturation was achieved. Typically, this occurs in approximately 10 interviews (Creswell, 1994).

Interviews of selected CGSC officers took place privately and individually and continued until no new information was forthcoming. Females were under-represented in this case study in comparison to their representation in the general overall US population based on US Army officer percentages, and their individual selection, and attendance at CGSC. Chapter 3 provides additional data and information about the CGSC student sample population from a gender and Army branch perspective.

Additional interviews took place with a faculty focus group, and an Army chaplain at Fort Leavenworth to confirm observations and add knowledge and understanding to the heart of the research (Frankel & Wallen, 2006). Anecdotal evidence suggested that some students sought out the CGSC chaplain as opposed to, or in lieu of speaking with mental health professionals. Finally, two health care professionals who service the military community at Fort Leavenworth participated in the data collection process by submitting to lengthy interviews.

The participation of all of these staff and faculty members provided substantial background information about stress, trends, and themes that they have observed or documented among Army majors at CGSC. This information further informed the primary researcher and introduced new information or areas of examination for additional research. The primary researcher conducted all the interviews.

Interviews were taped recorded and professionally transcribed. The interview transcripts were member checked for accuracy and precision. Later, they were peer reviewed during the data analysis phase of the research. Interviews and field notes will be maintained for five years following the completion of this research.

Significance of the Study

This research case study of the effects of stress on Soldier's learning in an academic environment was significant for the following reasons. Stress affects both learning and our cognitive functions (Kim & Diamond, 2002; Medina, 2008a; Ratey, 2002; Sandi et al., 2005; Selye, 1976). There is evidence to suggest that the psychological impact of multiple deployments often involving repeated exposure to combat stress will be disproportionately high

in comparison to the number of physical injuries from the war (Shane, 2004; Tanielian et al., 2008; Thompson, 2007; Young, 2004).

This study is relevant, germane, and timely given the number of Soldiers who have been repeatedly exposed to combat operations. Exposure to combat exponentially increased the incidence of combat related stress in their lives.

Second, it contributed to the body of knowledge. It helped to explain the effects of stress on learning in an academic environment.

Third, it added to the base of information concerning stress and its impact on learning for combat veterans. Previous research conducted by both the VA and DOD has centered primarily on surveys that statistically address the incidence of stress among Soldiers and veterans. These surveys measured stress from a quantitative standpoint. This qualitative research case study differs both in its focus and research methodology.

Fourth, this research provided understanding and knowledge about the effects of stress using the words of the study participants. It provided information and context from their perspective. Furthermore, the qualitative tradition employed by this study permits the participants to speak for themselves.

Fifth, this study provided insights about the effects of stress in other areas of the participants' lives. It may provide some considerate understanding with respect to family relationships, productivity, health, and social functioning.

Sixth, with the approval of the new GI bill, the Yellow Ribbon Program, more veterans will attend various schools and academic institutions throughout the country to receive additional training or education. The VA estimates that 460,000 veterans (Williams, M. R., 2009, A1) will participate in this new program offered at over 1,100 schools in the coming year (Army News Service, 2009). Information from this study may assist those institutions in learning strategies for veterans.

Seventh, of all the armed services, Army officers in general spend a great deal of time in school. Every couple of years they find themselves in academic environments. Early in their Army career, they attended the Officer Basic Course for their specific branch (Infantry, Armor, Signal, etc...) followed some five years later with the Captains Career Course. Shortly after their promotion to major, they come to Fort Leavenworth for ten months to attend CGSC. The Army invests a tremendous amount of time, effort, and money in educating officers at all levels

of their careers. Education and learning go hand-in-hand with promotion as Army officers proceed up through the officer ranks. Selection for attendance at CGSC was once a key indicator for continued success and promotions within the Army. Currently many officers are coming directly out of combat rotations to attend CGSC. They find themselves in a very rapid transition from combat to both academic and domestic environments.

Finally, this study concentrated on Army officers who are combat veterans. As a whole, Army officers, especially mid-grade officers, have been under-represented (Hoge et al., 2004) in the current mix of research studies focusing on stress.

The Secretary of Defense Robert Gates eloquently summed up the significance of this study when he said in his speech at Duke University in North Carolina,

While we often speak generally of a force under stress, in reality, it is certain parts of the military that have borne the brunt of repeat deployments and exposure to fire – above all, junior and mid-level officers and sergeants in ground combat and support specialties. These young men and women have seen the complex, grueling, maddening face of asymmetric war in the 21st century up close. They've lost friends and comrades. Some are struggling psychologically with what they've seen, and heard and felt on the battlefield (Gates, 2010, pp.3-4).

Limitations of the Study

The following limitations apply to this research:

1. The results of this research study were dependent on the ability of the interviewer to remain focused, unbiased, and objective.
2. The perspectives, personal experiences, and military backgrounds of the participants affected factors outside the researcher's control and may have limited the study results.
3. Purposive sampling is the method for selecting participants. The selection of material rich study participants was of overriding concern over any attempts to have equal representation with respect to age, gender, ethnicity, or branch of (Army) service.
4. Study participants all came from Fort Leavenworth, Kansas, effectively limiting any study findings to any other geographical locations or military posts.
5. The results of the study were limited by the accuracy and truthfulness of the participants' interview responses.
6. Because the combat arms of the United States Army are primarily male only career fields this study did not have equal gender representation.

7. The results of this study were supported by semi-structured interviews with 11 combat veterans. Other wider-ranging forms of qualitative research may produce different findings.
8. Readers should be aware that internet sites used as citations may have changed or disappeared between the initial research and when this dissertation is read.
9. Specific results of the study cannot be generalized beyond this sample.

Assumptions

The following assumptions were made for the purpose of this research study:

1. The study participants provided honest responses to the interview questions and truthfully represented their experiences with respect to combat related stress and its effects on their learning in an academic environment.
2. The gender, military background, and experiences of the primary researcher were positive issues with respect to establishing credibility and trust with the individual study participants.
3. The admission or the reporting of feeling or being stressed is an emotional subject in the Army, and in the past has been perceived as a sign of weakness in the military culture and has negatively influenced future assignments and promotions.

Definitions of Terms

The following definitions were used for the purposes of this study.

Active Duty. Service members whose military capacity is full time. Members of a Reserve Component are not generally considered active duty, unless they have been activated (Tanielian et al., 2008).

Command and General Staff College (CGSC). The Army's mid-career educational experience for Army majors. The college offers a 10-month course on tactics, leadership, history, logistics and joint multi-national operations. The college is located at Fort Leavenworth, KS (Combined Arms Command Brief, 2007).

DOD. The U.S. Department of Defense, the federal agency charged with coordinating the activities directly relating to the military (Tanielian et al., 2008).

Dual Enrollment. Some students will simultaneously attend a civilian graduate school to obtain a masters degree while enrolled as a CGSC student. (CGSS, 2005).

Early Release. Due to the operational demands of the Army some students graduate early from CGSC. They are early release students. (CGSS, 2007).

OEF. Operation Enduring Freedom, the military operation that began in 2001 in Afghanistan (Department of Defense, 2009; Tanielian et al., 2008).

OIF. Operation Iraqi Freedom, the military operation in Iraq. Although the troop buildup began in 2002, the invasion of Iraq occurred in March 2003 (Department of Defense, 2009; Tanielian et al., 2008).

ORB. Officer Record Brief, a one page personnel summary of an officer's personal and professional data that includes information about assignments, promotions and professional skills or qualifications (Shea, 2006).

PTSD. Post Traumatic Stress Disorder is an anxiety disorder that occurs after a traumatic event in which a threat of serious injury or death was experienced or witnessed, and to which the individual responds with intense fear, helplessness, or horror (Tanielian et al., 2008).

Reserve Components. Military organizations with members who generally perform a minimum of 39 days of military duty per year (Tanielian et al., 2008).

Service Members. Members of the military services in both the Active and Reserve Components (Tanielian et al., 2008).

VA. The US Department of Veterans Affairs, which provides patient care and federal benefits to military veterans (Tanielian et al., 2008).

Summary

“Not all combat wounds are caused by bullets and shrapnel.”

James Nicholson, VA Secretary (Kaplan, A. 2006, p.5).

This exploratory qualitative case study described the experiences of Soldiers who have completed multiple combat deployments and have coped with the effects of combat related stress in an academic environment. Using semi-structured interviews, information was collected from 11 Army officers who attended CGSC while stationed at Fort Leavenworth, Kansas. Additional interviews were obtained from mental health personnel at Fort Leavenworth, a CGSC faculty

focus group, and an Army chaplain assigned to CGSC. The results of these interviews and discussions as well as the subsequent analysis identified common themes, ideas, similarities, outcomes, and recommendations from the study participants.

This qualitative study described the incidence of stress in the lives of Army officers, and its effect on their learning experiences. This study provided information from the perspective of the participants based on their learning experiences in an academic environment. This study also identified common themes for related research topics and recommendations for additional research surrounding both stress and stress related learning. Lastly, Sharan B. Merriam (1998) indicated that qualitative research was “focused on discovery, insight, and understanding from the perspectives of those being studied offers the greatest promise of making significant contributions to the knowledge base and practice of education” (p.1).

Chapter 2 - Literature Review

Marshall and Rossman (1989) suggested that the literature review afforded the researcher the opportunity to become thoroughly familiar with the research topic. Stress and PTSD have been the focus of a number of articles, especially since PTSD was documented by the American Psychiatric Association (American Psychiatric Association, 1980; Marlowe, 2001). The topic of stress has been researched, written about, studied, and investigated in various formats, while using a variety of diverse sample populations. These various sample populations have been exposed to assorted types of stresses, and they have ranged from victims of violent crimes, to nurses, to other care providers, to abused or neglected children, and lastly to Soldiers and Marines involved in combat operations to name just a few (Marlowe, 2001). Chapter 2 reviewed relevant theories about, the brain, stress, and learning. It likewise examined studies and surveys that were germane to the proposed research.

The Human Brain

The purpose of fighting is to win

There is no possible victory in defense.

The sword is more important than the shield, and skill is more important than either.

The final weapon is the brain. All else is supplemental.

John Steinbeck

The most complex organ in our body weighs less than 3 pounds (Wolfe, 2001). This organ is usually less than 2% of our total body weight, but uses 20% of our blood supply and about 20% of our oxygen; and this organ will begin to die within 3 minutes without oxygen. It is the command center for the body (The Brain, 2009; Wolfe, 2001). It is the brain.

The brain is a complex survival organ. It has evolved over time. The evolution of the brain produced an organ that initially concerned itself with four things to ensure its survival. Dr. John Medina (2008a) calls those things the 4-Fs, “fighting, fleeing, feeding, and... reproductive behaviors” (p.40). As man continued to survive, the brain continued to evolve and become more complex and sophisticated. An example of that sophistication and survival involves the very simple daily process of breathing. It is so simple that most people have no conscious thought

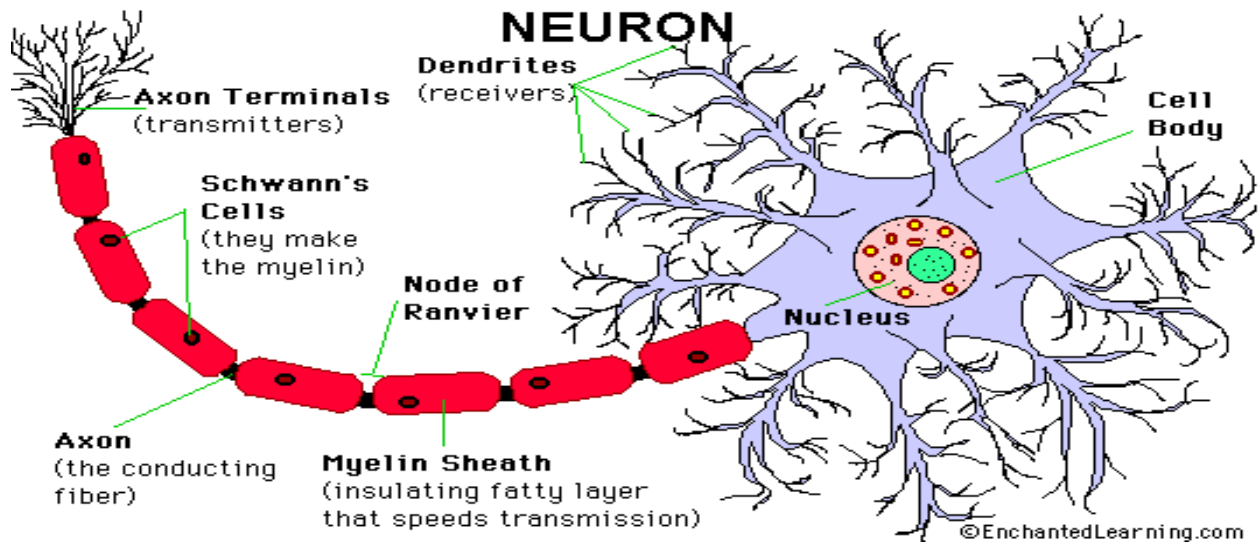
associated with breathing. The brain controls respiration without any conscious actions on our part. The brain does that automatically. Breathing is not a function that we need to consciously think about, or force our brain to do for us. In a healthy body, the brain ensures this takes place automatically and sub-consciously every day, twenty-four hours a day without any mental or physical input from us. Specifically, the brain stem controls the respiratory activities of the body. The neurons of the brain control respiration, heart rate, and sleeping, as well as the waking functions for our bodies (Medina, 2008a).

Brain Anatomy

The cerebral cortex covers the cerebrum, which contains the four major sub-divisions of the brain. The cortex is considered the ‘grey matter’ of the brain, and it is where those four functions that allow us to understand; be consciously aware of thinking, and feeling, experience emotions and operate at the conscious level are contained (Wolfe, 2001).

Contained within the cortex are six layers of cells through which neurons move to exchange information. Neurons are the telephone lines of the brain. Neurons transmit messages at speeds of over 200 miles an hour (Wolfe, 2001). Each neuron is composed of a body or cell from which an arm or axon extends away from the cell body. At this end of the axon are axon terminals which transmit messages through electrical impulses. The axon is protected by a layer of insulation comprised of a fatty substance. This layer of protection is called the myelin sheath. The cell body of the neuron culminates in a mass of dendrites; which is a tree like extension of the neuron. The dendrites are the primary source for receiving information from other neurons. There are 100 billion neurons in a mature adult brain (The Brain 2009; Wolfe 2001). Each neuron has 1 axon and as many as 100,000 dendrites extending from the cell body and interacting with the dendrites of other neurons creating an interconnected tangle of up to 100 trillion dendrites (Fishback, 2008a).

Figure 2.1 Neuron



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The frontal lobe is one of four major sub-divisions of the cerebrum. It is located on the front side of the brain and is the largest part of the cortex. The frontal lobe plays a role in coordinating behavior, executive functions, problem solving, and decision-making as well as controlling movement, and engaging in conversation. The frontal lobes allow us to be consciously aware of all actions and thoughts. The frontal lobes examine any information being accessed from long-term memory (Society for Neuroscience, 2009; Wolfe, 2001). The prefrontal cortex where the temporal lobes are located “is highly activated when people maintain and manipulate memories” (Society for Neuroscience, 2009, p. 22).

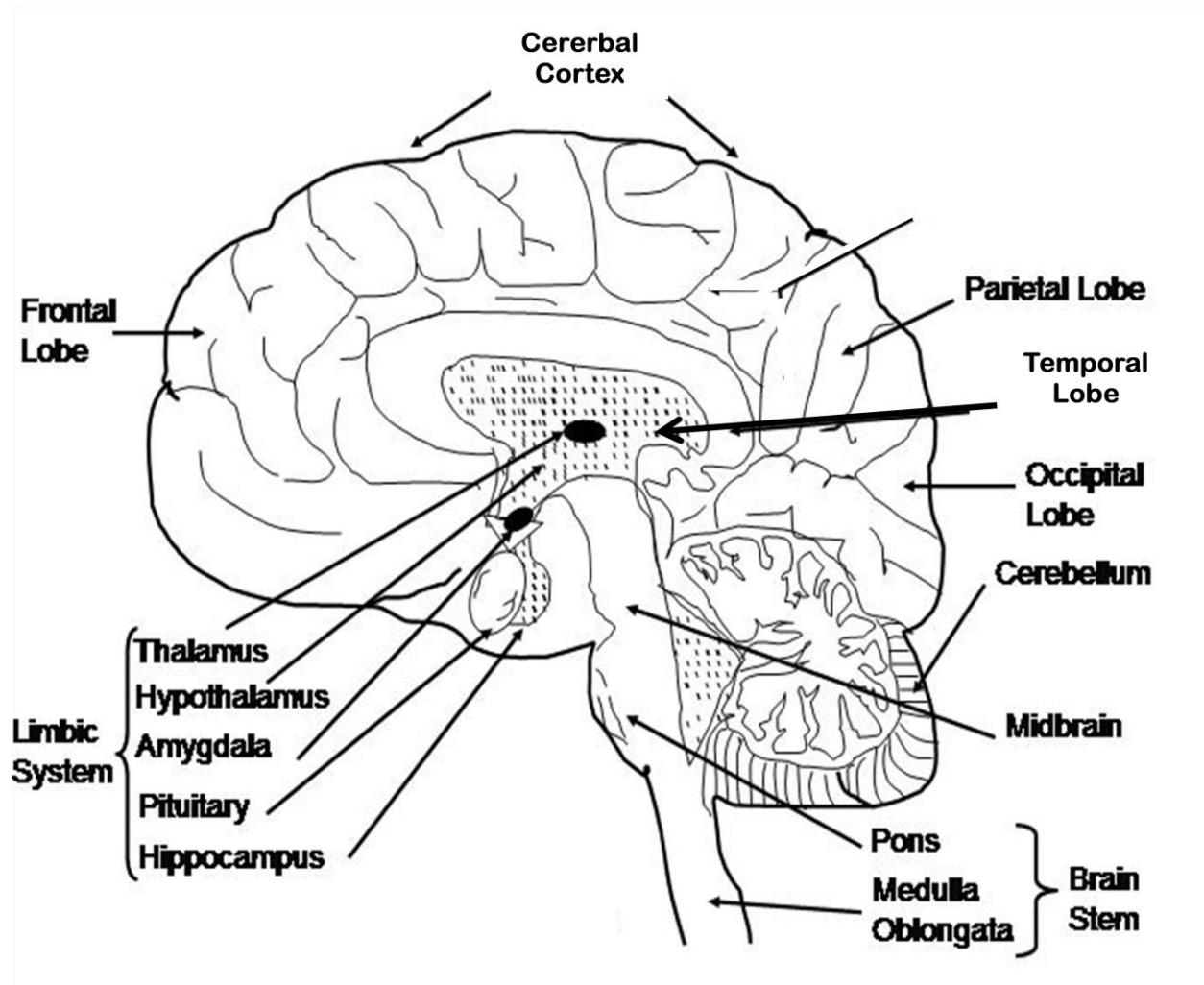
The temporal lobes are located on both side of the brain just above the ears. Their main function is to process auditory signals or stimuli. The temporal lobes are also involved with speech patterns and language, and have a role in memory functions that are associated with visual or auditory stimuli (The Brain, 2009; Society for Neuroscience, 2009; Wolfe, 2001).

The parietal lobes handle spatial awareness and orientation. They are located at the top rear of the brain. The lobes are further subdivided into an anterior and posterior part that complement each other, but play different roles. These two plate-like areas on either side of the brain play a role in sensory processes, language, and spatial attention. Damage to the parietal lobes will result in clumsiness or balance issues (Society for Neuroscience, 2009; Wolfe, 2001).

The occipital lobes are the last of the four major sub-divisions of the brain and are located at the lower central back of the brain just above the cerebellum. The occipital lobes play a key role in processing visual information. Visual stimuli must be sorted based on previous visual experiences. Two people may look at the same thing and perceive it or “see” it differently based on their stored cognitive associations or memories (Wolfe, 2001).

The limbic system located in the center of the brain consists of the thalamus, hypothalamus, amygdala, pituitary gland, and the hippocampus. These brain structures are all involved in the creation and expression of emotions and emotional memories (Society for Neuroscience, 2009). Memories usually have an emotional component associated with them, and the stronger the emotion usually means that the memory will be long lasting within the brain. Dr. John Medina (2008a) connected memories, emotions, and learning when he said, “Emotional arousal helps the brain learn” (p.94). Memories are stored in brain cells in various parts of the brain or lobes depending on whether the memory has a visual or auditory component. Studies have shown that “each part of the brain most likely contributes differently to permanent memory storage” (Society for Neuroscience, 2009, p. 24).

Figure 2.2 The Human Brain



Stress and the Brain

"Stress is the result of unexpected crisis," said Dr. Robert Sapolsky, Professor of Neuroscience at Stanford University (News Blaze, 2008). One out of four American adults has high blood pressure, a condition that is normally caused by stress (Eliot, 1984). The American Psychological Association (APA) provided the following statistics from its 2004-health assessment survey: two thirds of Americans feel stressed, fifty-four percent of Americans have concerns about stress in their daily lives, with the same percentage being concerned about health problems caused by stress (Leach, 2009). According to the APA, stress is one of the six leading causes of death, and up to 90% of visits to physicians are due to stress-related illnesses (Gibson,

Kolkow, Donnelly, & Konopaske, 2006). American businesses lost \$300 billion dollars this year based on absenteeism or other productivity issues directly related to stress (Gibson et al., 2006; News Blaze, 2008). Dr. Robert S. Eliot writes, “Stress may be the greatest single contributor to illness in the industrialized world” (1984, p. 14).

In The Stress of Life, Dr. Hans Selye (1976), an endocrinologist, generally acknowledged as one of the first researchers to recognize the existence of and the impact of stress wrote the following,

No one can live without stress all the time. You may think that only serious disease or intensive physical or mental injury can cause stress. This is false. Crossing a busy intersection, exposure to a draft, or even sheer joy are enough to activate the body’s stress mechanism to some extent (p. xv).

Soldiers are faced with the potential for stress on a daily basis in a combat zone. They are often faced with a fight or flight situation that may affect their very survival or that of their battle buddies. In a fight or flight situation the brain directs the body to begin shutting down some systems, while increasing activities for other parts of the body. Blood flow and increased heart rate are two prime examples of how the brain tells the body to prepare for the fight or flight. Blood flow is increased to the larger muscles so they can work harder; reaction time speeds up, pupils dilate to focus eyesight, and blood vessels contract to prevent blood loss if there is an injury (Jaffe-Gill et al., 2007).

This type of fight or flight stress is still considered good stress, because it is only temporary (Medina, 2008a). It is the body’s immediate reaction to the imminent threat of danger. It both prepares and protects the body. Since this reaction is usually temporary, there are no long-term effects associated with either the release of the stress hormones or the stressful incident itself. The body’s biological response is designed to both defend and support the body (Panzarino, 2008; Sapolsky, 1998). There are, however, two issues associated with fight or flight stress. The body’s reaction is always automatic, as the body cannot make the immediate distinction between a physical and a psychological threat, and secondly, it is difficult to turn off. Our brain automatically responds to physical or psychological threats. In the modern world, our stress is either self-induced, or driven by external stimuli such as receiving a traffic ticket for speeding (Panzarino, 2008; Sapolsky, 1998).

The brain responds to these psychological threats by introducing stress hormones into the body, which makes the pulse quicken, the mouth goes dry, and pupils dilate while the brain

prepares the body for either fight or flight. Therefore, although receiving a traffic ticket may be stressful, it does not call for an involuntary response that will drive the body into an adrenaline producing automatic overdrive reaction. If, however, the response is a physical threat or danger, such as a car crash, then this stress reaction may be more suitable. In situations like this, the hormones will normally be used appropriately without a lasting effect (Jaffe-Gill et al., 2007).

Stress and Soldiers

Stress has been a known, but misunderstood dynamic of combat since man first began fighting other men. From the early Greeks to the present time, whenever men fought, they faced various forms of stress. Homer recognized there were changes characterized as behavioral in soldiers who fought in the Trojan Wars (Shay, 1994). The first modern war that reported on the stresses that soldiers faced in any detail was the American Civil War (Marlowe, 2001). It involved men who were drawn from society and faced the dangers of combat as well as separation from friends and family, the risk of death or injury, as well as privation, and the hardships of living the life of a soldier. Accounts from the Civil War indicated that combat stress-induced disorder did exist, and during that time, it was known as soldier's heart, or soldier's melancholy. Soldiers who suffered from soldier's heart were overwhelmed by fatigue and incapable of performing their job (Division of Psychiatry and Neuroscience, 2005; Le Fanu 2003; Marlowe, 2001).

Military leaders and medical personnel first recognized the effects of combat stress during World War I. In World War I the preferred name for combat stress that was characterized as malingering or cowardice was shell shock (Division of Psychiatry and Neuroscience, 2005; Marlowe, 2001). David Marlowe provided further amplification about combat stress experienced in World War I in the Rand publication of Psychological and Psychosocial Consequences of Combat and Deployment, Marlowe provided this statement from a British NCO, Sergeant Gordon Fisher:

I went further along into the next dug-out and there was a guardsman in there. They talk about the psychology of fear. He was a perfect example. I can see that Guardsman now! His face was yellow, he was shaking all over and I said to him, "What the hell are you doing here?" He said, "I can't go, I can't do it. I daren't go!" Now, I was pretty ruthless in those days and I said to him. "Look, I'm going up the line and when I come back if you're still here I'll bloody well shoot you!"...when I came back, thank God, he'd gone. He was a Coldstream. A big chap six foot tall. He'd got genuine shell shock. Poor chap, he couldn't help it. It could happen to anybody (Marlowe, 2001, p.32).

During World War II combat stress was called battle or combat fatigue (Marlowe, 2001), although it encompassed a wider range of symptoms during that time. Postwar research continued to center on the psychiatric casualties of combat. Soldiers who suffered from “combat fatigue” also experienced apprehension, apathy, aversion to noise, confusion, and impaired attentive abilities (Ruskin, 2005). It is also common for Soldiers or veterans to experience some form of anxiety, guilt or sadness when remembering their experiences in combat (Dean, 1997).

Further contact with combat veterans in the aftermath of World War II continued to support evidence of chronic impairment. Two supporting research studies confirmed this (Archibald, Long, Miller, & Tuddenham, 1962; Archibald & Tuddenham, 1965). In one study conducted in 1962, researchers chronicled the following disorders among combat veterans; blackouts, sleep difficulties, startle reaction, and avoidance of anything that might relate or be similar to combat operations. Three years later in 1965 researchers reported that combat veterans were still having family and work related difficulties (Archibald et al., 1965; Ruskin, 2005). An observation from 1965 would point out that many of the World War II combat veterans were firmly into mid-life with respect to age, careers, and families. Some were in a mid-life crisis. As the progenitors of the baby-boomers, their children were heading off to college, while they were poised for the next promotion, or maybe not, at work. In short, they were again under stress in both their personal and professional lives and removed from combat by 20 years.

Colonel Steve Robinette, the chief of staff at Fort Leavenworth, noted a similar phenomenon in 1997, when he commented for an article in The Washington Post saying,

We're getting to the point that a lot of soldiers are looking at family sacrifices they've had to make and saying they can't stay in the Army. It is a national security issue. The two places we're losing officers are the very talented young lieutenants and captains and some of the best and brightest lieutenant colonels. And family stress is a common thread (Russakoff, 1997, p. A01).

More recently Captain Scovill Currin, USAF, from Charleston, South Carolina said, “The airplanes may not be able to take it, and more importantly the people may not. At some point you’ve got to say, I love my country, but can’t stay away from my family for eight years” (Ricks, 2007, p. 45).

Army commanders are beginning to look closely at the strain the current deployment cycle places on the force as well as the implications for the future. General Richard Cody, the

Army's vice chief of staff, said earlier this year, "I worry about the soldiers on their second and third tour by 2007, as well as how well we can take care of the families" (Jaffe, G, 2005, p.1).

A final retrospective study conducted in 1970 of over 300 combat veterans from World War II indicated that more than 50% of these veterans were still significantly traumatized by their wartime experiences (Ruskin, 2005). These studies seem to confirm that stress syndromes produced from combat experiences are prevalent among veterans, that they are persistent over a long term, and that they have an impact on normal daily activities (Marlowe 2001). The 1970 study indicates that 25 years after the conclusion of World War II veterans still suffered the effects of their combat experiences based on their reporting and the consistent symptomatology (Ruskin 2005).

Stress and PTSD

In the 1970s research on combat stress began to switch away from the World War II veterans to the more recent veterans of Vietnam. Initially, medical personnel in Vietnam defined that stress as Vietnam combat reaction. The syndrome we called "Vietnam combat reaction should be classified as a neurosis by virtue of being precipitated by repeated psychic trauma and developing over a relatively prolonged period of time" (Pettera, Johnson, & Zimmer, 1969, p. 674).

This description of a combat stress reaction was later called Post Traumatic Stress Disorder (PTSD), and it is worth noting that this definition was a result of an individual's exposure to combat or combat related conditions. A trait associated with this disorder or syndrome is the nearly identical case histories of men from separate units whose only universal denominator was participation in combat in Vietnam (Pettera et al., 1969). David Marlowe (2001) has identified almost 3000 journal articles on the subject of PTSD alone since 1969. Major General Michael L. Oates, the commander of the Army's 10th Mountain Division based at Fort Drum, New York acknowledged that Soldiers today are "under a degree of stress not seen since the Vietnam War" (Foderaro, 2008, para 17).

Penny Coleman (2006) is a Vietnam War widow. She wrote about the stress and trauma of war in Flashback, Posttraumatic Stress, Disorder, Suicide, and the Lessons of War. She was widowed long after the actual fighting in Vietnam ended. Her husband did not die in Vietnam, but he did die because of Vietnam. He died because of wounds suffered in Vietnam. They were

not physical wounds, like being shot in the arm or leg, or even losing a limb. However, he was “wounded” in Vietnam. He suffered from the mental trauma of war; of what he saw, of what he did in Vietnam, and he could not mentally cope with the consequences of those actions (Kaplan, A., 2006). Daniel Coleman suffered for years, as did Penny and anyone else close to her husband. Eventually Daniel achieved peace. He killed himself! He killed himself as traumatically as the war he participated in as a Soldier. He put a gun to his head and killed himself, bringing peace to himself, Penny, the VA counselors, and everyone else who had tried to heal his mental wounds.

Maryallyn Fisher is another Vietnam War widow who lost her husband, Dennis, to suicide after twenty-two years of stress and misery. “This isn’t over, this isn’t over. It’s 1999, and my husband just died from the Vietnam War” (Coleman, 2006, p. 41).

In 1980, the American Psychiatric Association’s (APA) *Diagnostic and Statistical Manual* (DSM) in a discussion of anxiety disorders recognized PTSD as sharing symptoms with an assortment of other disorders (Marlowe, 2001). It further defined the anxiety as a “recognizable stressor that would evoke significant symptoms of distress in almost everyone” (American Psychiatric Association, 1980, p.247).

Over the intervening years, the American Psychiatric Association continued its work with PTSD and continued to refine its research, data, and the connection of this anxiety disorder to an etiology. The APA did not confine it strictly to military veterans, as evidenced by the study of PTSD as it related to other trauma victims such as rape or robbery. In 1994, they made changes to the 4th edition of their DSM that specifically addressed PTSD. The criteria for PTSD was further refined in the 4th edition and important changes were made in a person’s exposure to a traumatic event. The APA determined that for the etiology of PTSD to be present and to be a correct diagnosis two conditions must be present (American Psychiatric Association, 1994):

1. The person experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of others.
2. The person’s response involved intense fear, helplessness or horror (American Psychiatric Association, 1994, p.427).

In 2007 the Joint Center for Operational Analysis Journal, defined PTSD as having the following etiology:

- Symptoms that have persisted for more than 1 month and result in a clinically significant impairment in social or occupational functions.
- Specify if:
 - Acute PTSD: symptoms lasting <3 months
 - Chronic PTSD: symptoms lasting >3 months
 - Delayed-onset PTSD: initial symptoms manifesting >6 months after the traumatic event (Kettel, Moiser, Orthner, & Schymanski, 2007, p. 30).

Combat Stress and Soldiers

Dr. Loma K. Flowers said, “Combat Stress is a normal human reaction to combat experience, but it is unpredictable and invisible. It is difficult to identify in yourself and others, but you can learn to recognize it” (Myatt, Guenther, Lethin, & Lloyd, 2009, cover page). Previous studies documented the incidence of combat stress or combat related PTSD among veterans. There is a disparity in the present conflicts among the percentages presented to the public. Some of this has to do with Soldiers conducting multiple tours and how they are counted, as well as the associated increase in stress from those multiple deployments (Morgan, D., 2008; Thompson, 2007). Dr. Charles Hoge (2004) placed the incidence of stress at 16-17%, while Dixon (2008) who surveyed his CGSC classmates places it much higher at 41%. The Rand study (Tanielian et al., 2008) indicates that 26% of returning troops may be suffering from some form of a mental disorder. Other surveys say 20% or more of our deployed forces are suffering from the consequences of combat induced stress (Morgan, D., 2008). The reality is that although we do not have exact figures, we can say that there is a significant amount of stress within the force, and that it is likely to have long term lasting consequences on both individuals and society as we deal with its impact in the out years.

The Army’s Mental Health Advisory Team (MHAT) conducted post combat surveys and interviews with over 650 Soldiers and Marines of Operation Iraqi Freedom (2005-2007). Over 75% reported being in situations where their personal safety was at risk, and there was a likelihood of personal injury or death. Both groups reported that they had personal knowledge of fellow Soldiers or Marines being seriously injured or killed. They all indicated in the survey that they experienced an, “intense fear, helplessness, or horror” (MHAT, 2006, p. 14). This intense “fear or helplessness” are the exact terms used by the APA in their determination of the etiology

that must be present for PTSD or some form of combat-related stress to be diagnosed by medical professionals (APA, 1994).

The MHAT team included a number of comments in its final report as being typical and representative of the helplessness experienced by the survey respondents. A sample of those comments follows:

- “Friends burned to death, one killed in blast.”
- “A Bradley blew up. We got two guys out, three were still inside. I was the medic.”
- “Finding out two of my buddies died and knowing I could do nothing about it.”
- “I had to police up my friends off the ground because they got blown up.”
- “Fear that I might not see my wife again like my fallen comrades.”
- “My sergeant’s leg getting blown off.”
- “My best friend lost his legs in an IED incident.” (MHAT, 2006, pp. 14-15)

Warfare in Iraq has produced fundamental changes in how the US Army operates, and especially with changes in the health-care provided for Soldiers on the battlefield. Improved evacuation procedures have streamlined the movement of the wounded soldier from the battlefield to medical units in theater, exponentially increasing survival rates. Individual body armor has decreased the number of U.S. troops killed, while proportionally increasing the number of wounded soldiers who survived the battlefield (Bilmes, 2007b). Multiple deployments while fighting an unseen enemy has produced a marked increase in acute stress disorder, and PTSD (Jelinek, 2008b, Morgan, D., 2008, Young et al., 2008).

A study of 2,863 Soldiers conducted one year after their return from Iraq drew a correlation between physical health problems and combat-related PTSD. A standardized, self-administered, screening instrument provided the basis for the collected data. Of the 2,863 Soldiers surveyed there were 475 Soldiers who met the screening criteria for combat-related PTSD. This group represented almost 17% of the Soldiers surveyed and had significantly higher health risks. These 475 Soldiers reported more instances of sick call visits, more physical ailments; they missed work more often, and they had a higher incidence of somatic symptoms than their non-PTSD peers (Hoge, Terhakopian, Castro, Messer, & Engel, 2007).

Stress and Other Professions

There are others outside the military that are also subjected to stress. Stress is a part of everyday life (Selye, 1976) and it impacts a number of professions. Professions that deal with stress in the work place on a daily basis are air traffic controllers, and emergency room doctors and nurses to name but a few. A profession that is similar to the military in terms of stress and trauma is public safety; firefighters and EMTs, but more specifically police work. "Police work is highly stressful and one of the few occupations where an individual continually faces the inherent danger of physical violence and the potential of sudden death," (Training, 2008, p. 3C), says Mark Singer, a professor of social work at Case Western Reserve University (Chapin, Brannen, Singer, & Walker, 2008).

An article in Police Quarterly titled *Training Police Leadership to Recognize and Address Operational Stress*, described a program designed to recognize the warning signs associated with operational stress among uniformed members of the police. The program was jointly designed by four men, two of whom have a military background. Police officers routinely suppress their personal emotions to accomplish the job, and later are hesitant to discuss the trauma associated with their experiences (Chapin et al., 2008). Michael Walker, who helped develop this program that used military techniques from the US Army to combat job-related stress, said, "The early identification of operational stress increases the likelihood of positive outcomes in police-citizens interactions" (Training, 2008, p. 3C).

In examining the specifics of police work US Army Lieutenant Colonel, Mark Chapin, one of the program developers said, "Although police work may not generate the same intensity of stress as military combat, the cumulative effects of numerous traumatic exposures layered on top of the routine bureaucratic stressors and administrative stressors can have a powerful effect on police officers" (Chapin et al., 2008, p.3). The statistical results of police officers involved in a shooting incident provided the following data, "that 77% of respondents reported sleeping difficulties, 55% reported increased anxiety, 50% reported flashbacks, 35% reported nightmares" (Chapin et al., 2008, p.4).

Chapin went on to say, "Police officers face job stress in the line of duty 24 hours a day. Even the toughest officer can eventually feel it. We want to change the operational climate of silence about problems and the stigma toward seeking help" (Training, 2008, p. 3C). Chapin currently serves as a clinical social worker at Walter Reed Army Medical Center in Washington,

DC, where he works with military personnel with stress related issues who are returning from operational service overseas.

Combat-related stress also returns home with some Soldiers and they have a difficult time dealing with the onslaught of delayed stress reactions. This has manifested itself in dangerous activities or behaviors, as well as increases in alcohol consumption, domestic violence and abuse. There have been four women killed by military spouses in the last year in Fort Bragg, North Carolina (Brooks & Woolverton, 2008). Barbara Thompson, the director of the Department of Defense Office of Family Policy, indicated that more service men and women, and their families are taking advantage of the counseling services provided to reduce some of the stresses associated with family separations (Miles, 2006).

Navy Captain William Nash coordinates the Marines combat-stress program. In the past four years, 1,109 Marines have been dismissed from the Corps for misconducts committed after returning from overseas deployments. Marine records indicated that at least 326 of those Marines exhibited mental health problems, possibly stemming from combat stress. Captain Nash said, "If a Marine who was previously a good solid Marine-never got in trouble-commits misconduct and turns out to have PTSD, and because of justice lose their benefits, that may not be justice" (Zoroya, 2007, p. A5).

Holmes-Rahe Stressful Life Events

The Holmes-Rahe Life Stress Inventory lists 43 events that are all considered stressful occurrences in daily life. In 1967 Thomas Holmes and Richard Rahe surveyed over 5000 people to determine if they had experienced any of the 43 stressful events in the previous two years (Holmes & Rahe, 1967). Their findings indicated a correlation between those events and the potential for illness. This inventory is also called the Top Ten Stressful Life Events (Holmes & Rahe, 1967). Most people may experience many of these events in their lives. Few experience four to five of these stressful events within the span of a year or two. A careful examination of the inventory list and some general knowledge and understanding of a Soldier's life indicates that some Soldiers experienced four or more of these events within their normal deployment cycle of 15-18 months.

Soldiers operate in a stressful environment every day, in effect running on stress full time. By forcing their bodies to remain in an automatic stress reaction mode, it becomes harder

for them to shut off their stress reactors after the stressful situation has passed, (i.e. the combat patrol has ended, and the Soldiers have returned to their Forward Operating Base). Instead of slowing down, stress reactions like heightened blood pressure and hormonal levels remain elevated after the patrol has ended. Instead of leveling off after a stressful event the blood levels and other bodily reactions continue to remain high exposing the body to increased risks with other medical problems (Jaffe–Gill et al., 2007; McEwen & Lasley, 2002; Medina, 2008a)

Stressful events take place every day in a combat theater. These stress-inducing events affect Soldiers cognitively and psychologically before they physically walk out the gate of a Forward Operating Base (FOB) on a combat patrol. If the Holmes-Rahe Stressful Life Events is a baseline, then what Soldiers deal with on a daily basis places them under a great deal of stress (Foderaro, 2008; Holmes & Rahe, 1967; Tanielian et al., 2008; Young, 2004).

Figure 2.3 Holmes-Rahe Life Stress Inventory



The major life events on the Holmes-Rahe inventory are well defined and documented stress inducers. Even a positive and a happy event like a marriage has the potential for stress, as two people begin a new life and relationship together, in addition to the new roles that other people will now play in their lives such as in-laws. These events all add stress to daily lives.

Soldiers routinely deal with separations from their families. The Army's 101st Airborne Division at Fort Campbell, Kentucky has now deployed four times in the last six years

(McCollum, Shea, Broaddus, & Thomas, 2009). Each deployment was for one year with one deployment lasting 15 months. They are currently preparing to send another Brigade Combat Team (BCT) on its fifth combat rotation beginning in March, 2010 (McCollum et al., 2009). Soldiers continually face stress on a daily basis. They face the potential injury of themselves or a battle buddy; the specter of a death of a fellow service member or even themselves, both the separation of family and spouse, followed by the reconciliation of family and friends, a change in duty station or assignment location, and a job change all within a year or two. In short, they face many of the Holmes-Rahe Top Ten stressful events in a 15 month deployment cycle.

Stress and Clinical Studies

The co-author of The End of Stress as We Know It (2002), the neuroendocrinologist, Bruce McEwen, has worked with stress issues for a number of years. Working at Rockefeller University he had the following to say about stress, “Acutely stress helps us remember some things better.” In addressing chronic stress he stated, “Chronically, it makes us worse at remembering other things, and it impairs our mental ability” (Carmichael, 2009, p.48). Prolonged exposure to stress or chronic stress increases the risk to cognitive, emotional, or physical illness. It could range from memory problems at the cognitive end, to depression on the emotional side, and to obesity or heart disease as a physical illness (Jaffe-Gill et al., 2007; Medina, 2008a).

John D. Baldeschwieler, a member of the Presidential Advisory Committee on Gulf War illnesses dismisses exposure to sandstorms, heat, thick smoke or diesel fumes, and parasites as causes for many of the ailments associated with veterans of the Persian Gulf War. As a member of the committee, he adds that there is a “growing body of evidence that stress causes measurable changes in the immune and circulatory systems” (Ember, 1996, p.38).

There have been a number of clinical studies and surveys that measured stress and cognition. There are fewer studies involving Soldiers that have attempted to combine stress and cognition with an attempt to measure the impact of combat related stress on learning. Clinical studies about stress have provided some insights and it would be prudent to leverage that information for a greater understanding about stress and learning.

A clinical study measured the effects of stress on cognition of 184 Special Operations Soldiers attending survival school. These Soldiers were exposed to trauma or stress, and

completed pre-stress measures of dissociation. In this study, the 184 Soldiers were randomized into one of three assessment groups. The ability of the stress group to copy and recall was significantly impaired in comparison to the pre-stress and control group. Copy performance was piecemeal and recall ability was impaired for the stressed group. This clinical study concluded that the stress exposure of these Soldiers impaired their visual-spatial ability and working memory (Morgan, Doran, Steffian, Hazlett & Southwick, 2006).

Stress studies have been conducted with both animals and humans. Animal studies that concentrated on the hippocampus, the area of the brain involved in both memory and learning, have confirmed that this area is sensitive to stress (Kitayama, Vaccarino, Kutner, Weiss & Bremner, 2005). The studies with human subjects also confirmed the impact stress has on normal cognitive functions. Stress is a biologically significant factor in our daily lives and it disrupts our cognitive processes (Kim & Diamond, 2002; Medina, 2008a; Sandi et al., 2005; Selye, 1976). In the past decade neuroscientists have conducted several studies that have documented memory discrepancies in patients with stress disorders.

Research points to the limbic system as being the key to understanding more about stress, memory, and learning. Memory and memory functions are, “generally thought to be the process by which we bring back to mind some earlier conscious experience” (LeDoux, 2001, p.116). Dr. Jane Fishback defines memory as “the ability to use or retrieve information that was previously encoded or processed” (Fishback, 2008a). The areas of the limbic system continually mentioned in this research were the hippocampus and the amygdala. In both human and rodent research, the hippocampus was not only extensively involved in the formations of memories and learning, but it was also extremely susceptible to stress (Fishback, 2008a; Kim & Diamond, 2002; Kitayama et al., 2005; Werner et al., 2009).

Dr. Jennifer J. Vasterling tested 654 Soldiers who were combat veterans. She and her team administered a battery of mental tests that were administered both before and after deployment to Iraq. The mental tasks measured both verbal and spatial memory. The 654 Soldiers performed significantly poorer in all the mental tasks when compared to 307 Soldiers who had not been deployed to Iraq (Carey, 2006).

In a clinical study about the effects of stress, researchers measured the volume of the hippocampus both before and after exposure to combat-related trauma over a three-day period. Two separate groups of 15 were then exposed to this trauma. The first group (of 15) was a

normal case-matched control group. The second group was composed of combat veterans with chronic PTSD. After the trauma exposure, the right hippocampus was significantly smaller in the PTSD group (Pavic et al., 2007).

Stress and MRI

Several studies focused on measuring hippocampal volume with Magnetic Resonance Imaging (MRI), and used control groups to assess various methods of memory, recall, or attention. Researchers measured hippocampal volume in both a control group and a group that tested positive for PTSD. They found the hippocampus was smaller in both hemispheres for those who had previously screened positive for PTSD. Their findings indicated that chronic stress could putatively damage the hippocampus and impair cognitive functions in humans (Pavic et al., 2007).

Magnetic Resonance Imaging measured both hippocampal volume on subjects who had already screened positive for PTSD, but also measured memory function as part of cognitive attention and recall using standard neuropsychological tests. The results suggested that PTSD had a measurable impact on memory related brain function. Additionally, the PTSD subjects displayed weaker prefrontal activation functions in comparison to the healthy control participants (Werner et al., 2009).

An earlier study that used MRI, but with a larger sample, did a meta-analysis of hippocampal volume spread out over nine studies. There were 334 total subjects in this study. The researchers used three groups to conduct the research, subjects with chronic PTSD, healthy controls, and traumatized controls. The findings of this research indicated that the hippocampal volume was smaller in both left and right hippocampi in those subjects with chronic PTSD (Kitayama et al., 2005).

Work and Reasoning

In a related study that correlated long hours of work combined with the ability to recall specific items, and make decisions there is a direct relationship to stress and the opportunity to rest, relax, and recover (mentally). The Whitehall II study from 1997-1999 (baseline study) and 2002-2004 (follow-on study) documented the effects of working more than 55 hours per week on over 2,200 middle aged civil servants. The study participants were administered a series of

cognitive tests on vocabulary, reasoning, and short-term memory. Civil servants who worked longer than 55 hours per week received lower scores on both vocabulary and reasoning tests. The Whitehall study demonstrated that cognitive performance declines in middle age when people work extended hours on a daily or weekly basis (Virtanen, Singh-manoux, Ferrie, & Gimeno, 2009). This study was significant based on the hours that Soldiers work when deployed. They are on call 24 hours a day, 7 days a week for the entire year they are deployed in theater. They do not work a normal 40 hour work week. They work long hours averaging 12-14 hour work days much of their time deployed. There is very little down time in many units. Being deployed means being fully focused on the mission and working hard all the time in what essentially is a myriad of tasks time constrained sleep deprived environment. Thomas Balkin, of the Walter Reed Army Institute of Research, and the chief of its Behavioral Biology Department said, "With sleep loss there is a deactivation in those areas of the brain that mediate some of the highest order of mental processes" (Tan, 2007, p. 10).

Clinical Tests of Stress with Non-Human Subjects

Rodent studies concentrated on the use of fear to see how it stressed the animals. A variety of tests, and conditioning programs were used to confirm that the amygdala was the area of the brain where rats learned about fear. The rodent's response to fear were similar to those that humans experienced when both cortisol and adrenaline were released into the bodies system during a fight or flight situation (Jaffe-Gill, et al, 2008; McEwen & Lasley, 2002).

The other interesting thing researchers were able to measure in the animals was the production of new nerve cells, as well as hormonal levels based on pre-stress levels, stressed levels and post stress levels. In a six-week laboratory study of rats exposed to prolonged daily stress Kara Pham noted a marked decrease in the number of hippocampal neurons. Stress repressed the production of new nerve cells in the hippocampus. However, this suppression reversed itself when the rats were returned to their own cages (McEwen & Lasley, 2002).

Randall Sakai conducted his research on rats using Blanchard's visible burrow system. Rats are generally social animals when segregated by sex. Female rats were introduced into a burrow that previously contained all male rats. Eventually a dominant rat emerged, preventing access to the female rats, and caused the remaining males to seek refuge in other portions of the burrow. The subordinated males became stressed over their confinement and in some cases

within 14 days passed away because of disruptions to their nervous system (McEwen & Lasley, 2002).

Of the subordinated rats that survived another interesting phenomenon occurred when they were removed from the burrow system. Initially, the neurons in their hippocampus were shorter. It was also noted that although not atrophied their hippocampus were smaller in volume than when they were originally placed in the burrow system. Further observations and studies determined that these neurons and dendrite changes were reversible. The hormonal levels of the rats returned to normal after they were placed back into their original cages (McEwen & Lasley, 2002).

The molecular changes in a rodent's body chemistry when exposed to fear were confirmed in a clinical study conducted in 2005. Carmen Sandi and her colleagues conducted a stress test to measure the potential impairment of spatial memory that is associated with decreased expression of neural cells adhesion molecules (NCAM) in both the prefrontal cortex and the hippocampus of the rats. The results showed that rats exposed to a fear inducing stimuli, or predator stress (cats) displayed an intensive loss of memory. There was a marked suppression of NCAMs normally found in the hippocampi of non-fear exposed rats. Sandi's findings point to a marked decrease of NCAM when the subjects (rats) were exposed to predator stress (Sandi et al., 2005).

In the above examples, researchers used rodents and measured a decrease in both neurons and hormones based upon the introduction of fear as the stimuli to produce stress. The stress the subject (rodent) experienced was generated by stimuli or factors that were not considered normal within their daily activities. They were abnormal circumstances. *Stedman's* (2008) official medical dictionary defines stress as: Reaction of the body to forces of a deleterious nature, infectious, and various abnormal states that tend to disturb its normal psychologic equilibrium (homeostasis).

Fear and Stress

The use of fear to understand stress and its application had a great deal of success in a number of clinical trials with both animals and humans. Researchers understand the neural pathways and the general anatomy of the brain, and the primary functions of the various portions of the brain with respect to memory and perception. They understand less about the brain's role

in emotions (LeDoux, 2001). What is it about the emotion-fear, and perhaps the brain's inability to control that fear that leads to mental disorders that include anxiety, PTSD, and other irrational fears or phobias? Emotions are generated by the amygdala, and as all memories have an emotional component, the amygdala is the centerpiece of emotional adjudication (Fishback, 2008a).

In conducting research on stress for Bruce McEwen at Rockefeller University, Robert Sapolsky made a number of discoveries that contributed greatly to our knowledge and understanding of stress. He discovered that high levels of cortisol (corticosterone) actually accelerate the aging of the hippocampus in young rats. Additional stress studies on both monkeys and rats showed the roles of hormones and the hippocampus with respect to both protection and damage. Sapolsky clearly discovered that the stress hormones that interacted within the hippocampus make it possible to etch memorable experiences into our declarative memory. More importantly, he also discovered that, "chronically elevated levels of these same hormones can damage the very part of the brain that shuts them off" (McEwen & Lasley, 2002, p.112). In humans, higher levels of cortisol often lead to hypertension, diabetes, and a weakened immune system in older adults (McEwen & Lasley, 2002).

The human body reacts in other ways that over the long term contribute to a deleterious effect on general health. Stress hormones are designed for a specific purpose. They are designed to protect the body. In fight of flight situations, they do exactly that. Some professions like the military or police work may cause fight or flight reactions numerous times in a day. Over an extended period of time, this will have a harmful effect on most bodies. We know that stress is a major contributor to a variety of illnesses. Some of the illnesses or medical conditions that are caused by or exacerbated by stress are atherosclerosis, obesity, heart attack, heart disease, high blood pressure, autoimmune diseases, stroke, and diabetes (Eliot, 1984; Ember, 1996; Jaffe-Gill et al, 2007; McEwen & Lasley, 2002; Medina, 2008a).

Professions that involve a sense of fear as part of their environment have the potential to generate stress on a regular basis. These stress inducing moments have the distinct possibility of creating an overload of hormones in the brain that eventually lead to poor health; whether it is a mental health issue or rather a physical health issue like a heart attack.

Memory and the Brain

There is no single location in the brain where memories are stored. Memories are stored in the various lobes based on how and through what lobe the memory originated. Visual images are primarily stored within the occipital lobes. Auditory memories have primacy in the temporal lobes. When we experience something and it forms a memory it comes into the brain and is disassembled and dispensed throughout the cortex. The emotional component of that memory is stored within the amygdala in the limbic system (The Brain, 2009; Wolfe, 2003).

When a memory is disassembled or deconstructed as it enters the brain, it must then be reconstructed when that particular memory is required for learning, or accessing that experience so additional learning or understanding can be built upon that foundational experience (Wolfe, 2003). Experience is a major contributor to adult education within the traditions of humanism (Lindeman 1989; Merriam & Caffarella, 1999; Zinn, 1998).

When a memory is reconstructed, the brain pulls those collective pieces together from the various lobes within the cortex. Memories are not static, and can be added to, or even decay over time. Therefore the brain is constantly working to change and adapt to new experiences or stimuli. The brain itself is continually changing. Associations occur between memories and the sensory data that is generated by the initial stimuli (Fishback, 2008a). As Pat Wolfe said in her article on Brain Research and Education, “The brain is the only organ in the body that sculpts itself from outside experience...learning experiences change and reorganize the brain’s structure and physiology” (Wolfe, 2003 p.1).

In addition to experience, emotion plays a key role in the making of memories and learning, especially if the memory is either very vivid or threatening and causes fear in an individual. The learning process is fueled by the primary combustion of our emotions. The amygdala located within both hemispheres of the brain regulates our emotional responses. For survival purposes, the brain pays attention to and remembers those significant experiences that have an emotional component, whether it was the death of JFK, the Challenger explosion, or 9/11. People can usually tell you where they were, and what they were doing when they first heard about any of the three above events. The brain also pays particular attention to those experiences that contain an emotional component associated with fear such as a physical fight, a house fire, or a car crash. In situations that are life threatening, “the amygdala starts a chain of

physiological responses (commonly called fight or flight response) to ready the body for action” (Wolfe, 2003 p.1).

Speaking before a group of students, staff and faculty at CGSC in March 2009, Rosemary S. Caffarella, PhD said we must understand “the impact emotions have on memories” (Caffarella, 2009). We know through neuroscience that the brain creates stronger memories when there is an emotional arousal associated with that memory inducing event. This is an important consideration because most memories ‘disappear’ shortly after their creation, but those that endure essentially strengthen over time.

Finally, it is important to note again the impact that cortisol can have on the brain and memory, and that it can be severe in some individuals. Monica Starkman studied a condition called Cushing’s syndrome, while serving as a researcher at the University of Michigan. Individuals who have Cushing’s syndrome produce excessive amounts of cortisol. “Though not related to external stressors of life, the condition (Cushing’s syndrome) leads to hypertension, diabetes, immune system troubles, and many other conditions associated with chronic stress. These patients also have memory problems” (McEwen & Lasley, 2002, p.117).

Stress Hormones and Learning

The brain is designed to handle stress that only lasts a short time. It is not designed to handle stress for prolonged periods without a way to dissipate it. The learning environment “must be physically and psychologically safe for learning to occur” (Wolfe, 2003 p. 1). Stress damages every kind of cognition. It also negatively influences or limits our memory and executive function. Over time, it can disrupt the immune system. It can also disrupt and impair motor skills (Medina, 2008a). Dr. John Medina (2008a) wrote, “Stressed brains don’t learn the same way” (p. 169). Just as bodies do not react the same under stress, so too do brains react to the environmental stress stimuli (signals) they receive. How the brain receives this information, decodes it, and stores it has an impact on how it later retrieves it from memory (Wolfe, 2001). The memory mapping that occurs at this level also begins to affect learning (McEwen & Lasley, 2002).

In the 1990s, stress hormones proved their worth in the laboratory. Neuroscience researchers were able to leverage the imaging technology of MRI, and Positron Emission Tomography (PET) to take pictures of a human brain in action (Fishback, 2008b). This

technology allowed researchers to begin with humans and work back through rodents. Joe LeDoux was among the first of the researchers to show where emotions could be located within the brain (McEwen & Lasley, 2002).

The easiest human emotion to work with is fear. PET allowed researchers to see inside the brain where areas of activity were measured based on films or pictures being used to depict grisly or disturbing images. In a study using a control group that was shown two films, and received a beta-blocker to slow the release of adrenaline into the blood stream, their later recall of the disturbing film was poor. By contrast, the group without the beta-blocker had much better recall and memory of the grisly film (McEwen & Lasley, 2002).

Research began to confirm the role of adrenaline and cortisol. Adrenaline works in the blood stream. It helps the body react and protect itself in stressful situations. It is released in fight or flight situations. Based on the works of Bruce McEwen, Joe LeDoux, Robert Sapolsky, and others like Jim McGaugh and Larry Cahill we know it carries blood to the brain, and helps develop memories of things both pleasant and unpleasant. Neuroscientists are still unsure exactly how adrenaline enriched blood transmits signals from the blood vessels that traverse the brain to specific parts of the brain (McEwen & Lasley, 2002).

Cortisol is a hormone that enters the brain and enhances memory. The brain, specifically the hippocampus, is studded with cortisol receptors. So what is the role of cortisol? It appears to be memory formation. It also appears to be evolutionary or survival based (Medina 2008a). As Bruce McEwen (2002) says, “there’s limited benefit in escaping from danger if you can’t remember how to avoid it,” (p. 117).

Stress and Allostatic Load

When released in small amounts both cortisol and adrenaline help protect the body. They provide the body a boost when physically it needs that boost from these hormones. They help the brain learn by enhancing formations of memories. The release of these hormones in a true fight or flight situation is exactly the conditions they were developed for to support the body’s very survival. Conversely, when the body is under constant or chronic stress these hormones can become too much of a good thing. Stress damages every type of cognition. Dr. John Medina (2008a) said, “Under chronic stress, adrenaline creates scars in your blood vessels that can cause

a heart attack or stroke, and cortisol damages the cells in the hippocampus, crippling your ability to learn and remember” (195).

The body’s stress response system is the very system that leaves it vulnerable if activated too frequently. Bruce McEwen’s (1999) research on balance within the body led him to coin the term Allostatic load. Stedman’s medical dictionary definition of balance is defined by the term homeostasis (Stedman, 2008). Dr. Robert Sapolsky said, “Stress is anything in the external world that knocks you out of homeostatic balance. Let’s say you’re a zebra, and a lion has leaped out, ripped your stomach out...this counts as being out of homeostatic balance” (Ruenzel, 2000). As Sapolsky says, the body’s response system is superbly conditioned for dealing with short term emergencies. These short-term emergencies are primarily physical in nature, like the zebra trying to out- run the lion. The body is not conditioned for long-term stress. Long-term stress requires the same physiological responses, but they can be disastrous when they become chronic or long-term.

Allostasis is the response of the body to outside factors as it tries to maintain a balance or equilibrium within the body (McEwen, 1998; McEwen & Seeman, 1999; Schulkin, 2004). Allostatic load refers to the chronic exposure or prolonged exposure to stress without a timely de-activation of the body’s stress response system (McEwen & Seeman, 1999). It is the physiological impact to chronic stress. One of McEwen’s earlier research collaborators, Dr. Teresa Seeman, participated as a co-sponsor of a workshop on Allostatic load in Washington, DC in 2007. One of the outcomes of the workshop was Allostatic load being referred to as the, “cumulative biological wear and tear that can result from excessive cycle of response (i.e. too frequent and/or of inappropriate duration or scope) in these systems as they seek to maintain allostasis in the face of environmental challenge” (Nielsen, Seeman, & Hahn, 2007, p.3).

The brain is the organ that is the control center for the challenges associated with both allostasis and Allostatic load. It is both a sender and a receiver in all neurological transmissions throughout the body. As the body’s decision-center, it is also a receptor for hormones released during periods of stress. It is both an analyst and a target for the challenges associated with the release of those hormones (McEwen, 2000). The principal hormonal moderators for the body’s stress response system have both protecting and damaging effects on the body (McEwen, 2000). The hormones connected with stress protect the body in the short term, but in the long term, Allostatic load imbalance can cause deleterious effects in the body that can lead to disease or

mental health problems (McEwen & Seeman, 1999). Chronic stress arises when there are frequent occurrences of Allostatic load on the body that the brain is unable to control in a timely manner and excess hormones remain in the body without dissipating.

The key word here is chronic, according to Dr Robert Sapolsky. Sapolsky said stress hormones can in the short term assist in memory and help people think more clearly, but over an extended period of time the neurons do not work as clearly, and memory functions begins to fade (Ruenzel, 2000). Dr. Sapolsky said, "Over the course of days to weeks of sustained stress, we now know that these neuronal processes, these things neurons use to talk to each other, are beginning to atrophy and retract in the hippocampus" (Ruenzel, 2000).

Figure 2.4 Stress & Allostatic Load

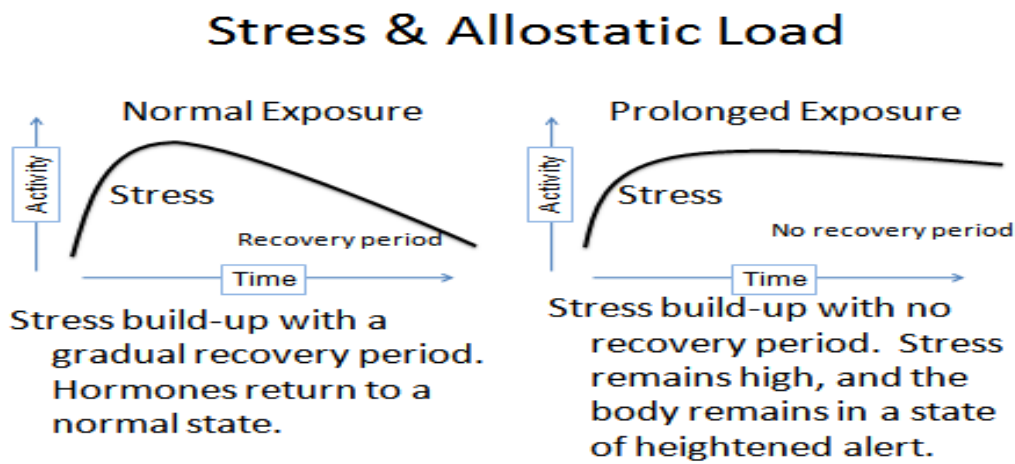


Figure 2.4 illustrates how allostasis works in the body. This is the concept that Bruce McEwen has studied and written about for a number of years now. The figure on the left indicates what happens in a 'normal' fight or flight situation. The body finds itself in a stressful situation. As the brain recognizes danger, it immediately signals the body to respond accordingly. The body reacts by increasing all those functions designed to ensure its very survival. The various systems work together to protect the body and keep it in an allostasis state. Under stress the brain signals the release of hormones that increase our decision-making and memory functions as the body begins to function in a high state of readiness. There is a rapid build-up of hormones followed by a gradual decline as the brain realizes that the life-threatening

event has passed. After this situation or crisis resolves itself, as Sapolsky says the body can now return to normal. There is a short recovery period, hormone levels are gradually reduced and returned to normal levels while the brain helps the body return to pre-crisis or homeostasis condition. This is called acute stress.

In the figure on the right, there is no recovery period. This figure depicts a situation where stress occurs and the stress then continues to remain high or takes a much longer time to subside. For whatever reason the brain is unable to convince the body that the dangerous situation has passed and the threat is no longer an issue. The body remains in a heightened state of alert. In this situation, cortisol continues to remain in the brain, while adrenaline maintains a presence in the bloodstream. This is exactly the situation that puts a body at risk for disease or mental health issues. The presence of elevated levels of both cortisol and adrenaline as previously discussed can have a harmful effect on the body when they do not dissipate in a timely manner. The figure on the right illustrates a body where allostatic load occurred and the body is experiencing chronic stress (McEwen, 1998; McEwen & Seeman, 1999; Sapolsky, 1998). “Under chronic stress adrenaline creates scars in your blood vessels that can cause a heart attack or stroke, and cortisol damages the cells of the hippocampus, crippling your ability to learn and remember” (Medina, 2008a, p.195). This reaction of the body is a double-edged sword. The very biological system designed to protect the body in stressful situations is the same system that when forced to function at a high level for extended periods of time may actually deleteriously affect the overall general health of an individual.

Experience, Transitions, Transformation, and Cohorts

“War is Hell” a phrase attributed to General William T. Sherman in a 1879 speech to members of the Michigan Military Academy is a true statement for all combat veterans, from the Greeks to present day Soldiers (Shapiro & Epstein, 2006). What is true also is that war is a life altering experience. It transforms not only what we think about some things, but how we forever view things in our daily lives. War is a significant emotional event that can have a transformational effect on one’s life. In the case of Soldiers returning from combat, it is having an enormous effect on their lives. The Rand Corporation and their Center for Military Health Policy Research believe that over 300,000 Soldiers are suffering from PTSD, or major depression (Tanielian et al., 2008). Using the Rand Corporation’s earlier percentage estimate of

26% against the 1.64 million Service members deployed that figure would could rise to 426,400 who may suffer from some form of mental illness. Soldiers who have experienced combat and then return repeatedly on subsequent deployments cannot help but be transformed by the impact of those experiences.

In the field of education, and especially adult education we know that experience is a key contributor to learning (Brookfield, 1986; Lindeman, 1989; Merriam & Caffarella, 1999). So how do adults, or in this case, Soldiers learn from their experiences? Eduard Lindeman says we should look to the value of experience in education. Lindeman says, “The resource of highest value in adult education is the *learner’s experience*. If education is life, then life is also education” (Lindeman, 1989, p.6).

Nancy Schlossberg has been involved with counseling and personnel services since she began her career in education. She has worked both alone and with others to advance her field of counseling, and counseling services to adults in transition. A transition, broadly defined is any type of event that results in a change. These changes might be things like “relationships, routines, assumptions, and roles” (Schlossberg et al., 1995, p. 27). Transitions usually revolve around significant life events and as Schlossberg said, “A transition is not so much a matter of change as the individual’s own perception of the change” (p.28). Another way to express this is to assess the impact of the actual transition. Individuals who experienced a transition must now define the impact that transition had on them, and how in the future it will impact their lives and the roles they play. “It is not the event, or non-event that is most important but its impact, that is the degree to which the transition alters one’s daily life” (Schlossberg et al, p.33).

A key point in understanding transitions is that some life events may occur in a time constrained or accelerated time frame. That often made this struggle complicated for some individuals. In support of this concept Schlossberg said, “Often people in the midst of one transition experience other transitions, which makes coping especially difficult” (p. 35).

Jack Mezirow is the educator responsible for the introduction and study of transformational theory. Mezirow believed that we take our experiences and re-evaluate them in the illumination of new insights, based on the context of when and where we presently find ourselves. This process requires self-reflection and the need to examine original experiences in the light of new meanings, or new interpretations. As Mezirow said “Transformational learning

refers to the process by which we transform our taken for granted frames of reference” (Mezirow, 2000, p.7).

Mezirow also believed that adults have to be willing to accept these new frames of reference if they are to be transformed. The use of self-reflection, or in his words critical reflection, is the key to adult learners examining the validity of their assumptions. The use of Jack Mezirow’s transformational learning theory has the potential for adults to critically examine their experiences and then assess whether the original sense or meaning is still valid (Mezirow, 2000).

Participating in combat can significantly alter one’s perception or their original sense of what combat would actually be like in real life. Combat can have life altering impacts. If these mental impacts provide a new frame of reference, Mezirow would then characterize it as transformational (Mezirow, 2000).

In addition to Jack Mezirow, another educator whose theory may be valuable in the examination of this research is Howard McClusky. In 1963, McClusky introduced his Theory of Margin. By observing people over the years, McClusky determined that as people age pressures on them increased. He also thought they only had so much energy available for meeting their responsibilities, even as pressures continued to increase. This led him to conclude that people only had so much control over their own lives. People had less than perfect control, and that in many ways increased the pressure or stress people were feeling in their daily lives (McClusky, 1963). One of the questions that seem to drive his study was how people found ways to deal with problems that were unpredictable, or out of the ordinary in their lives. Soldiers in combat deal with a daily routine that is often unpredictable, stressful, and out of the ordinary.

McClusky’s theory appears to correlate with the later work of Bruce McEwen (1999, 2000). McEwen’s findings on Allostatic load indicated what happened biologically when people lose control. This lack of control is exactly what the APA (1994) examined when they wrote about a sense of “helplessness” (p.427) that people who have PTSD or were under some form of stress experience as the criteria for that particular etiology.

Finally, a brief mention of cohorts and cohort theory is appropriate given the nature of the Staff Group (SG) system at CGSC. For the majority of the year students are grouped in sixteen person classrooms, effectively forming a cohort. The Command and General Staff College used the SGs to create a microcosm of the Army by mixing and matching Army operational career

fields to effectively create ‘mini-staffs’. This grouping effectively encouraged the CGSC students; “to develop a much higher level of cohesiveness and stronger supportive atmosphere” (Saltiel & Russo, 2001, p. 4).

A cohort group brought with it a sense not only of membership but also a sense of community for those in the cohort. Saltiel and Russo (2001) defined membership in a cohort, “as though they are members of a specific group where one only interacts with those who are members of the club” (p.3). Cohort programs are developed to build camaraderie, cohesion, peer support and interaction, as well as opportunities to communicate and coordinate effectively within the cohort.

Summary

A preliminary review of the research began with published books on the brain, and journal articles about stress. Research then included a graduate level class on the brain and neuroscience, and participating in workshops on the same. Research further included document searches for journal articles and dissertations related to stress and learning. Research then moved to attending conferences, workshops, Army training sessions on stress, and suicides; as well as in depth discussions with Army commanders returning from Iraq that might provide insights into stress, and learning; and finally interviews with selected combat veterans both in, and outside of an academic environment. This qualitative research culminated with first person interviews with Soldiers who had multiple combat deployments and were currently CGSC students. Primary interviews were also conducted with the CGSC Army chaplain, staff, and faculty within CGSC, as well as medical personnel assigned to Fort Leavenworth, Kansas. Finally, the words of Dr. John Medina (2008a) are worth repeating, “Under chronic stress... cortisol damages the cells in the hippocampus, crippling your ability to learn and remember” (p. 195).

Chapter 3 - Methodology

The qualitative research methodology used in this case study is described in this chapter. The reasons for selecting a qualitative research model, as well as the characteristics of qualitative research are discussed below. Additionally, the following topics are also covered; case study methodology, data collection and data analysis, student and sample population, the role of the researcher, standards of quality and verification, as well as the practices for the protection of the confidentiality of the participants, and a summary.

Basis for Choosing a Qualitative Research Methodology

A qualitative research design was selected to gain a greater appreciation of the personal experiences of Army officers who experienced combat related stress in a learning environment. This qualitative study was an exploratory study that attempted to understand the phenomenon being researched (Creswell, 1998). Michael Patton (1987) said, “Using qualitative methods is simply an interest in observing and asking questions” (p. 21). Sharan B. Merriam (1998) spoke of qualitative research as, “an umbrella concept covering several forms of inquiry that help us understand and explain the meaning of social phenomena,” (p.5). Merriam (1998) also stated that this type of research was, “focused on discovery, insight, and understanding from the perspectives of those being studied,” and that consequently it, “offers the greatest promise of making significant contributions to the knowledge base and practice of education” (p.1).

Researchers used qualitative research when they were interested in exploring and understanding societal issues in their research. John Creswell (2002) said, “This exploration is needed because little existing research exists on the topic or because the issue is complex and its complexity needs to be better understood” (p. 62). This study was grounded in the experiences of the people on which this qualitative research was based (Marshall & Rossman, 1999). Qualitative research was seen and analyzed through their eyes, their words, and their experiences (Creswell, 1998; Marshall & Rossman 1999; Merriam, 1998).

The study participants were the essence of this research. They responded to semi-structured interview questions based on reflections of their lived experiences. As Marshall and Rossman (1999) said, “The participant’s perspective on the phenomenon of interest should

unfold as the participant views it, not as the researcher views it” (p. 108). A key philosophical assumption is that all qualitative research was based on “the view that reality is constructed by individuals interacting with their social worlds” (Merriam, 1998, p.6). Denzin and Lincoln (1994) said that qualitative research was “guided by a set of beliefs and feelings about the world and how it should be understood and studied,” as cited by Marshall and Rossman (1999, p. 3).

Conceptualizing qualitative research is often difficult, hard, and just plain messy. The process was not neat and clean. It was an ambiguous process that took time for the research and concepts to coalesce. The literature review helped shape the study, and began to define concepts and theoretical frameworks that eventually emerged or evolved as the data expanded into the research. As this process continued both the framework and the research design expanded and it assisted readers who were accustomed to traditional approaches and proposals. A qualitative approach “retains the flexibility needed to allow the precise focus of the research to evolve during the research process itself” (Marshall & Rossman, 1999, p. 53). This qualitative approach was an on-going interpretive process that was both iterative and “grounded in the lived experiences of people” (Marshall & Rossman, 1999, p. 2).

Creswell (1998) defined qualitative research as, “an inquiry process of understanding based on distinct methodological traditions of inquiry that explore a social or human problem” (p. 15). He further posits that the subjects, which we write about “are emotion laden, close to the people, and practical” (p. 19). Marshall and Rossman (1999) said that qualitative research is both “pragmatic and interpretive” (p. 2). Finally, qualitative research allowed for a multi-dimensional, multi-faceted, interpretive, and flexible approach to its subject matter (Creswell 1998; Rossman & Rallis, 1998). The accent on experience and interpretation owed its emphasis to the philosophy of phenomenology within the field of qualitative research.

Case Study Methodology

This qualitative research study was further categorized and qualified as a descriptive case study. Sharan Merriam (1988) defined qualitative case study methodology as “an intensive, holistic description and analysis of a single instance, phenomenon, or social unit” (p.21). Stake (1995) defined it as “an integrated system” (p.2). The use of the words integrated system was an appropriate description because this research study was multi faceted and interpretative, and it integrated all the perspectives of the various participants on the effects of combat related stress in

a learning environment. Case study methodology was particularly applicable as it allowed an understanding of the process of events, and discovered characteristics that illuminated an issue or a phenomenon. Finally, perhaps Merriam (1998) said it best when she wrote,

The case study offers a means of investigating complex social units consisting of multiple variables of potential importance in understanding the phenomenon. Anchored in real life situations the case study results in a rich and holistic account of the phenomenon. It offers insights and illuminates meanings that expand the reader's experience (p.41).

Characteristics of Qualitative Research

A number of researchers defined qualitative research in a variety of ways. However, even within the variety there were many similarities in the descriptions offered by numerous researchers, educators, and theorists. There were differences of opinions about the characteristics of qualitative research.

Sharan Merriam (1998) used an umbrella as an analogy when she said a number of qualitative research concepts could be found under that covering. Among them are "naturalistic inquiry, interpretive research, field study, participant observation, inductive research, and ethnography" (Merriam, 1998, p.5). Holloway (1997) said, "Qualitative research is not static, but developmental and dynamic in character; the focus is on process as well as outcomes" (p.6). Although researchers differ in their selection of some of the characteristics, they seem to agree on a central group of four characteristics.

The four characteristics that researchers like Rossman and Rallis (1998), Merriam (1998), and Bogdan and Biklen (1992) agreed on were:

1. Qualitative research takes place in the natural world
2. The researcher is the primary instrument for both data collection and data analysis
3. Inductive research is used to analyze the data
4. Qualitative research is richly descriptive

Rossman and Rallis (1998) provided an additional four characteristics that dealt specifically with the qualitative researcher. They said a qualitative researcher:

1. Views social phenomenon holistically
2. Systematically reflects on who she is in the inquiry
3. Is sensitive to her personal biography and how it shapes the study
4. Uses complex reasoning that is multifaceted and iterative (p. 9)

Holloway (1997) focused on the researcher by saying the researcher must respect the context of the research. Like Rossman and Rallis (1998), Holloway (1997) asserted that the researcher must be sensitive to the research being conducted and their own personal background, as well as those being researched, and therefore must be “context-bound” (p.5). Catherine Marshall and Gretchen Rossman (1999) were inclusive of the following characteristics in their description of this type of research. They viewed “inquiry as an interactive process between researcher and the participants, is both descriptive and analytic, and relies on people’s words and observable behavior as the primary data” (pp.7-8).

All of the researchers were firm in their convictions that qualitative researchers needed to be respectful of the context of the research, and that they needed to be mindful of their relationships with those being researched. It was important that the research be conducted in as naturalistic a setting as possible, that the researcher not overly identify with the study participants, and that the participants answer any questions as fully, and as truthfully as possible (Creswell,1998; Holloway, 1997; Marshall & Rossman 1999; Merriam, 1998). Rossman and Rallis (1998) said this more eloquently when they spoke about “our own personal biography, power and status, interactions with the participants, and written word” (p. 67). Lastly, Marshall and Rossman (1999) indicated that the characteristics or hallmarks of qualitative research produce in the end a product that emphasized “quality, depth, and richness in its findings” (p.16).

Data Collection

There are four primary methods for data collection in qualitative research, although some researchers differ on the four methods. Different researchers have preferences for each of the four and some types of qualitative research lend themselves to one rather than another as a primary source for data collection. The four generally accepted methods for gathering data when conducting qualitative research are:

1. Direct Observation
2. Interviewing
3. Involvement in the setting
4. Analyzing documents or materials (Marshall, 1999).

The primary method of data collection for this particular qualitative research study on combat related stress was interviews. Dexter said, “Interviewing is the preferred tactic of data

collection” (1970, p.11). Sharan Merriam (1998) said that the reason “to use interviewing as the primary mode of data collection should be based on the information needed and whether interviewing is the best way to get it” (p.72). She added “that interviewing is sometimes the *only* way to get it” (p. 72). Ritchie and Lewis (2003) indicated that the advantage of interviewing in general is the “ability to provide an undiluted focus on the individual” (p. 36). Semi-structured interviews were the primary means of data collection for this qualitative research case study. In 2003, Anderson and Kanuka (2003) said “semi-structured interviews are usually conducted with specific topics in mind, from which questions are generated based on a theoretical framework” (p. 87).

Interviews

Other researchers echoed the importance of interviewing as a foundational cornerstone of qualitative research. It was important for the participant to know that the interviewer valued his participation and information. Marshall and Rossman (1989) convey this thought when they said, “the idea that the participant’s information is acceptable and valuable” (p.82). They continued with, “The participant’s perspective on the phenomenon of interest should unfold as the participant views it, not as the researcher views it” (Marshall & Rossman, 1999, p.108). Michael Quinn Patton (1987) wrote, “The purpose of interviewing then was to allow us to enter into the other person’s perspective” (p.196).

Semi-structured interviews have a number of structured questions that allow the researcher to ask additional questions to obtain a greater understanding and add depth to the subject being researched. Semi-structured interviews also have the advantage of allowing for thicker, richer, and more detailed and descriptive responses from the participants. Semi-structured interviews can be adapted both during the actual interview, as well as during subsequent interviews. Questions can be added, deleted, or modified based on a previous participant’s responses. Interviews with the study participants allowed the researcher the flexibility to search for common themes and factors, rather than concentrating on acquiring data for trend research or statistical analysis (Creswell, 2002).

Interviews were conducted with four primary groups or individuals for the purposes of this research. The initial focus was on Army majors assigned to CGSC as students. The second group was a focus group of instructors assigned as faculty members at CGSC. The third group

came from the community mental health department of Munson Army Health Center (MACH), and a psychologist assigned to an Army support activity at Fort Leavenworth. The last interview was with an Army chaplain assigned to CGSC.

A semi-structured interview process allowed the researcher the flexibility to modify questions or ask follow-up questions that added depth, breadth, and substance to the on-going research (Merriam, 1998). The researcher used the research questions as the primary data collection vehicle. The primary researcher conducted interviews until saturation was achieved. Typically, this occurred in approximately 10 interviews (Creswell, 1998).

Interviews took place at a convenient time for all participants. In the case of the students, the interviews took place in the primary researcher's office. The faculty focus group met in one of the conference rooms in the Lewis and Clark center, which is the primary facility for CGSC instruction. In the case of the health care providers, the interviews took place in their offices in their buildings. No attempt was made to limit the time for the interviews. Interviews lasted as long as the participants were willing to talk, and provide information from their particular viewpoint. The interviews were conducted to present the perspective of all the participants and to gather data that would prove to be reliable, accurate, and valid during the data analysis stage of the research process. Interviews and data collection could go on forever. Lincoln and Guba (1985) have a good way of determining when enough is enough in data collection. They said it occurs when "the sense that new information being unearthed is very far removed from the core of any viable categories that have emerged" (p.350).

Data collection continued until patterns or themes began to emerge, and it felt that saturation had been achieved. A more practical approach for data collection occurred when the information being received was redundant, and the same information seemed to be showing up in many of the transcripts.

Data Analysis

Analysis is about bringing order to chaos. It is an opportunity for the researcher to look at all the disparate pieces of data and attempt to make sense of them and to see if any patterns emerge. The word *analysis* is defined by Webster's dictionary with the following words: *Separation of an intellectual or substantial whole into its constituent parts for individual study.*

That was an apt description of what occurred during data analysis. Marshall and Rossman (1989) indicated that data analysis was messy and perhaps chaotic when they said it was, “the process of bringing order, structure, and meaning to the mass of collected data. It was a messy, ambiguous, time-consuming, creative, and fascinating process. It does not proceed in a linear fashion; it is not neat” (p. 112).

As indicated earlier the primary method of data collection for this research was interviews. Interviews allowed for the voice of the participants to be heard in the final product associated with this research. All interviews for this case study were recorded and then professionally transcribed. Interviews were member checked after transcription, as well as peer examined or peer audited. According to Lincoln and Guba (1985), member checking was “the most crucial technique for establishing credibility” (p. 314) in qualitative research.

Data analysis actually began with the first interview, as field notes were taken to document observations about mood, manner, tone, speech, and body language of the participants (Merriam, 1998). Sharan Merriam (1998) further said “Data collection and analysis is a *simultaneous* activity in qualitative research” (p. 151). As the data collection began, some of the suggestions that Bogdan and Biklen (1992) advocated were followed to improve both collection and analysis as this research began to evolve. Among their ten suggestions that informed this study, the following six were adopted:

1. Force yourself to make decisions that narrow the study (p.155).
2. Develop analytic questions (p.155).
3. Plan data collection sessions according to what you find in previous observations (p.157).
4. Write “observer’s comments” as you go (p. 157).
5. Write memos to yourself about what you are learning (p. 159).
6. Begin exploring literature while you are in the field (p. 162).

Sharan Merriam (1998) confirmed some of these suggestions from Bogdan and Biklen (1992) when she wrote about “keeping track of your thoughts, musings, speculations and hunches as you engage in analysis” (p.165). She specifically addressed data analysis in case studies in *Qualitative Research and Case Study Applications in Education* when she said, “a case study is an intensive, holistic description and analysis of a single bounded unit. Conveying an understanding of the case is the paramount consideration in analyzing the data” (1998, p.193).

She also cautioned about the concept of coding in this phase of data analysis. Her concerns involved the structure and rules associated with categorizing the data being coded.

It was during this portion of the research when peer reviewers examined the transcripts to assist in the identification of themes, and eliminated biases from forming prior to coding. The identification and confirmation of themes from independent peer examiners validated the major themes as the data analysis entered the coding phase. The peer reviewers who participated in this process were CGSC staff or faculty members, while some were also fellow KSU doctoral cohort students. Depending on the length of the transcripts they reviewed and their available time some provided detailed written feedback, while others verbally debriefed the primary researcher.

Coding

Coding occurs when researchers break the data into chunks so they can begin to categorize it. “Breaking down the data and searching for codes and categories which are then reassembled to form themes” (p. 43) is the way Holloway described data analysis. In quoting from Deys 1993 work in *Qualitative Data Analysis*, Sharan Merriam (1998) said, “Qualitative analysis, in contrast, requires the analyst to create or adapt concepts relevant to the data rather than to apply a set of pre-established rules” (p.165). As a check in this phase of data analysis after all transcribed interviews had been member checked and coded by the primary researcher they were reviewed by other researchers or peer examiners to confirm the emergence of themes, data, and categories for final coding.

As the interviews were completed during the data collection process they were immediately analyzed and evaluated to assist in the collection of further data as advocated by Merriam (1998), and Holloway (1997). The idea was that the researcher would take a specific interview and compared it against a new interview. The intent was to determine if there were similarities between the two separate pieces of data. The researcher attempted to find similarities, themes or patterns that can be categorized (Merriam, 1998) and used in the body of the research. Coding emphasized the emergent, evolving nature of this type of research. Possible themes emerged that were not originally considered. Some of these were not further developed because they did not meet the criteria for saturation or triangulation. One such theme was the difference in the perception of stress among the participants. The student’s perception

and approach to stress was in a few cases different than the manner which it is perceived by some faculty. It also appeared that the levels of stress among individual students were higher than originally projected by both the Rand Study and this researcher. This theme was later developed based on student responses.

The researcher, as the primary investigator, was responsible during this time when collection and analysis were still occurring to simultaneously review all interview transcripts looking for common themes in the data. The researcher looked for patterns and themes that emerged and were consistently confirmed by multiple participants (Marshall & Rossman, 1989; Merriam 1998). This confirmation also meant triangulation was being achieved within the analysis of the data.

Student Population

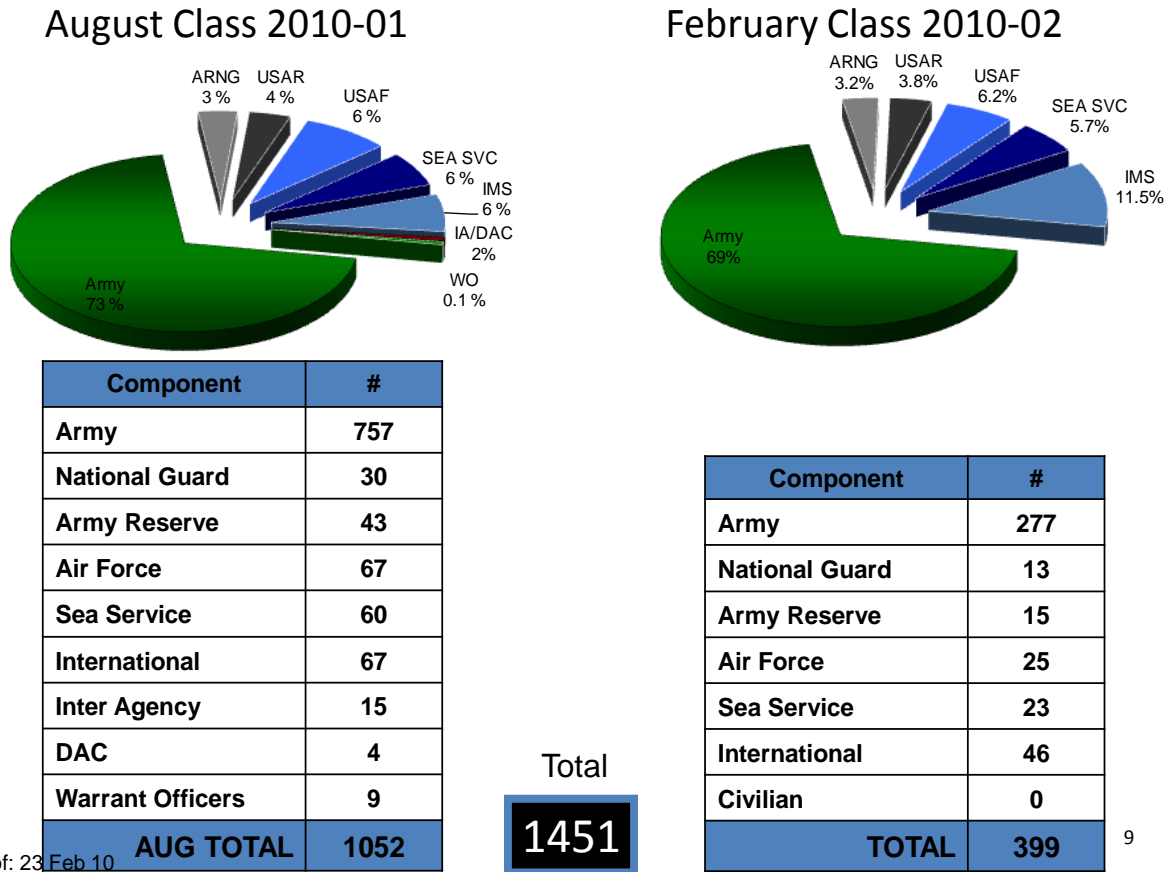
The student sample population for this research was purposefully selected (Fraenkel & Wallen, 2006) from the general US Army Command and General Staff College student population. The Army's Command and General Staff College has a mission to "educate and develop leaders for full spectrum operations and to advance the art and science of the profession of arms to support the operational requirements of the US Army" (Command Brief, Combined Arms Center, 2007). The student population was drawn from active duty Army officers in the rank of major who are generally in their 12th year of commissioned service. There are, however, students from the Army Reserve, and the Army National Guard, as well as the sister services, and international officers within the CGSC class or overall student sample population. With respect to their educational background, all attending US students have a minimum of an undergraduate degree, while a significant percentage of the class will already have a master's degree. Many students pursue additional educational opportunities while attending CGSC. The educational statistics for most classes reflect those of the current CGSC class:

- 33% Masters Degree
- 26% Masters Degree in progress
- 3% Professional Degree
- 8 PhD
- 7 PhD in progress (Combined Arms Command Brief, 2007).

The Army runs two CGSC class sessions a year. The larger of the two sessions begins in August and follows a normal academic year with a graduation in June of the following year. The second session accommodates a smaller class population, beginning in early February with a graduation date of mid December. The chart below details the specific student breakdown by service-members. The acronym ILE on the title of the chart stands for Intermediate Level Education. For most Army officers this is the third level of schooling they have attended in their career and the Army refers to it as an 'Intermediate' level of education. Selected officers may in the future attend one more level of schooling within the Army school system. The bulk of the CGSC- ILE students, as one would expect for an Army school come from the Army. In the academic year represented by the figure below they totaled 1034 active duty Soldiers. When this number is combined with Army National Guard majors and Army Reserve majors the total population for US Army majors attending CGSC is 1135.

Figure 3.1 CGSC-ILE Class Composition

CGSS- ILE Class Composition



(Command Brief, Combined Arms Center, 2010)

Sample Population

The sample student population for this research was drawn from Army majors within CGSC. First, there was the purposeful selection of CGSC students, specifically Army majors with two or more combat tours. Statistically speaking 93% of all US Army officers have combat experience. Of that number, 84% are veterans of OEF/OIF. The selected students came from a variety of branches, or as the Army now defines them war fighting functions. The war fighting functions are: Maneuver, Fires and Effects (MFE), Operational Support (OS), and Force Sustainment (FS). Those branches of the Army found in MFE are Infantry, Armor, Artillery, Aviation, Special Forces, and Engineers. Military Police, Military Intelligence, and Signal are the branches associated with Operational Support, while Transportation, Quartermaster, and

Ordnance are the force sustainers (Command Brief, Combined Arms Center, 2010). Of note is the representation of gender within the US Army and this study. Females represent about 12% of the officers in the US Army. Female officers attend CGSC in approximately the same percentage. Most CGSC staff groups (student cohorts of 16 students) will have at least one female in the group. Female officers serve primarily in the operational support and force sustainment branches of the Army. There are some exceptions because females do serve as aviators and can serve in the military police, engineer, and some field artillery units. Assignment in these units can involve close combat given the nature of a non-linear, non-contiguous battle space.

In academic year 2009-2010 with both classes (August and February) in session, and a combined student population of 1451 there were a total of 101 female officers attending CGSC (Wills, 2010). Purposive sampling was the method for selecting participants. The selection of material rich study participants was of overriding concern over any attempts to have equal representation with respect to gender, or branch of (Army) service. Since the combat arms of the United States Army are career fields staffed primarily with male officers this study did not have equal gender representation.

The student participants were purposefully selected (Fraenkel & Wallen, 2006) based upon combat tours, Army branches, gender, and minority status. The specifics of the selection process follows. The college provided the Officer Record Briefs (ORBs) from a Staff Section which consisted of 64 Army majors and sister service majors. All non-Army personnel were removed from that list which reduced this population to 50 Army majors. After the National Guard and Army Reserve majors were removed the population totaled 47 Army majors. This initial screening produced a number of potential student participants.

The initial selection criterion for the study was Army majors with two or more combat tours. That criterion was of paramount importance and was not negotiable. This reduced the available population from 47 to 41 majors. The next criterion was branch specific. The case study needed a balance of combat arms and combat support branch officers. Next, an attempt was made to include and replicate both female and minority representation to the same level within a given CGSC class. The ORBs were then reviewed a second time and the students with three combat tours were then placed forward over those with two combat tours. Letters requesting their participation were sent to 15 students. All 15 selected students agreed to

participate. Ten students were then scheduled for interviews based on John Creswell's guidance concerning interviewing and saturation (1998). Later in the interview process one of the five remaining students was added to the interview list.

Figure 3.2 Service Summary for CGSC class 10-01 and 10-02 details some of the specifics associated with the class as a whole. It indicates the numbers and percentages connected to the combat experiences of the Army officers and their operational deployments. Additionally, it also provided the specifics of marital status and the affiliations of sister service enrollments as well as enrollment status of international students and interagency (non-DOD) students.

Figure 3.2 Service Summary 2010-01 & 2010-02

CGSS 10-01 / 10-02

SERVICES SUMMARY 2010-01		SERVICES SUMMARY 2010-02	
Army Active Duty	766 (73%)	Army Active Duty	277 (69%)
ACC-706 / SP Branches -51 / WO-9		ACC 257 / SP Branches 20	
Reserve Components	73 (7%)	Reserve Components	28 (7%)
ARNG 30		ARNG 13	
USAR 43		USAR 15	
US Air Force	67 (8%)	US Air Force	25 (6%)
US Marine Corps	23 (2%)	US Marine Corps	2 (.5%)
US Navy	37 (4%)	US Navy	21 (5%)
US Coast Guard	0 (0%)	US Coast Guard	0 (0%)
Inter Agency (15) / DAC (4)	19 (1%)	Inter Agency (NGA)	0 (0%)
International Military Students	67 (7%)	International Military Students	46 (11%)
Total Population	1052	Total Population	399
Marital Status (except IMS)		Marital Status (except IMS)	
Married–Accompanied	694 (70%)	Married–Accompanied	208 (59%)
Married-Geo Bachelors	143 (15%)	Married-Geo Bachelors	47 (13%)
Single	148 (15%)	Single	98 (28%)
Operational Deployments 2010-01		Operational Deployments 2010-02	
COMBAT OPERATIONS	844 (78%)	COMBAT OPERATIONS	322 (91%)
HOMELAND SECURITY	30 (4%)	HOMELAND SECURITY	20 (6%)
PEACE TIME MIL ENGAGEMENTS	113 (13%)	PEACE TIME MIL ENGAGEMENTS	43 (12%)
PEACE OPERATIONS	278 (29%)	PEACE OPERATIONS	95 (27%)
Combat Experience ARMY only		Combat Experience ARMY only	
Combat Experience	793 (95%)	Combat Experience	279 (91%)
Single Combat Tour	339 (43%)	Single Combat Tour	99 (32%)
Multiple Combat Tours – Two	316 (40%)	Multiple Combat Tours – Two	99 (32%)
Multiple Combat Tours -->Three	138 (17%)	Multiple Combat Tours --> Three +	81 (27%)

10

As of: 23 Feb 10

The second major group in this study was selected staff and faculty members. The faculty members constituted a focus group and presented their perspective of the incidence of combat related stress in the classroom and its impact on learning. A focus group usually consists of four to eight people (Fraenkel & Wallen, 2006, p. 461). The interview session with the faculty was taped recorded. The taped interviews provided the researcher the requisite data necessary to determine the validity of these faculty observations.

Among the faculty there was anecdotal evidence to support the assertion of combat related stress in the classroom. The CSGC faculty members were purposefully selected for this

focus group from the various teaching departments within the college. The five faculty members selected for this interview session are student centered and have a strong background of previous academic or professional success. One faculty member was a former instructor of the year within the college, while others have been recognized by their individual departments as being among the best instructors in their cohort. Four of the five were former Army battalion commanders; while two had recent operational experience in combat operations in Iraq or Afghanistan. One of the five faculty members was an active duty lieutenant colonel. His presence in the focus group was a deliberate attempt to include both uniformed members of the CGSC faculty along with the civilian members in approximately the same percentage of military to civilian faculty ratio within the college. Among the five faculty members one had his Ed D, and two were working on obtaining their doctorate. Three have sons who have served or are currently serving in the military, and one son has now been deployed five times to either Afghanistan or Iraq.

All of the selected faculty members served as student advisers or in the vernacular of the Army and CGSC they are Staff Group Advisers (SGAs). SGAs serve as advisers, mentors, counselors, and information conduits to the students for the academic leadership within the college. Each SGA is responsible for the 16 students assigned to his/her staff group for the academic year. The faculty members who served as SGAs are truly dedicated professionals who serve selflessly and give of their time unstintingly. SGAs are student centric in their academic focus. In short, this selected faculty focus group was a distinguished collection of scholars and warriors with over 100 years of combined experience in the Army and continued service to the Nation.

The formation of a faculty focus group was designed specifically to discuss this potential phenomenon and help determine the credibility and confirmability of this research. The participation of the faculty and their comments provided another perspective and assisted in the triangulation of the research (Creswell, 1998; Merriam 1998).

The final population sample consisted of staff professionals within either the college or medical personnel who support the Fort Leavenworth community. An Army chaplain was interviewed to provide background and confirm the levels of stress among Army majors, and the impacts he has seen in his counseling of Army majors attending CGSC. Additionally, a psychologist and a psychiatrist from two separate organizations at Fort Leavenworth were

interviewed to provide impressions, additional background, and substantive comments with respect to stress, social functioning, and relational adequacy. All of these interviews, as well as the eleven students (interviews) were tape recorded, transcribed, and will be maintained as part of the audit trail. The audit trail guarantees and ensures the confidentiality of all participants by using pseudonyms to protect their identity as well as storing the interviews in a secure location. The audit trail was established to provide for dependability and integrity of the research. The integrity of this audit dictated that the data associated with this research to include the researcher's field notes, the researcher's journal, the interview notes, and the transcripts will be maintained for a period of five years.

This study used purposeful sampling. It is also referred to as purposive in some research. Fraenkel and Wallen (2006) described purposive sampling as follows, "A nonrandom sample selected because prior knowledge suggests it is representative, or because those selected have the needed information" (G-6). Sharan Merriam (1998) referred to it as purposeful sampling and said, "Purposeful sampling is based on the assumption that the investigator wants to discover, understand, and gain insight and therefore must select a sample from which the most can be learned" (p. 61). Finally, Patton (1990) said, "Qualitative inquiry typically focuses in depth on relatively small samples...selected *purposefully*" (p.169).

Research Questions

This exploratory qualitative research study attempted to answer the following research questions by using the participant's subjective viewpoint.

1. How did the influence of combat related stress affect the learning of CGSC students?
2. What were the common themes in how each participant dealt with stress?
3. What were the common outcomes, from the perspectives of the participants with respect to combat related stress in the classroom and if so, what were they?
4. What were the teaching and learning episodes for the staff and faculty?

Role of the Researcher

Sharan Merriam (1998) addressed the characteristics she felt researchers needed to possess to be effective. Among those essential characteristics or qualities, she deemed necessary were a high tolerance for ambiguity, being sensitive, and being a good listener. A concern or

caution about the researcher's relationship with the participants came from Marshall and Rossman (1999). Their concern was that "qualitative researchers pay close attention to their participants," reactions to the research and to the *voice* used in writing up their work, as a representation of the relationship between researcher and participants" (Marshall & Rossman, 1999, p.5).

A key aspect of the relationship between the researcher and the respondents was trust. Both parties need to trust one another. The researcher needs to trust that the respondents were being truthful, credible, and forthcoming with the information they provided. The respondents need to trust that the researcher remained sensitive to their requirements and did not exploit their participation.

Kathleen Rager's dissertation from Kansas State University on the self-directed learning of women with breast cancer followed the experiences of 13 women in Wichita, Kansas who had been diagnosed with the disease. Kathleen enhanced her personal integrity and credibility in earning the trust of the 13 women by investing time and building relationships with the Wichita cancer network, breast cancer groups, and the Komen Foundation (Rager, 2000). She earned the trust of the 13 women in her research study through her own self-directed study about breast cancer as well as her active participation in cancer support groups and emotional support to breast cancer survivors. Her gender played a significant issue in earning the trust of the 13 women in her research study (Rager, 2000; Rager, 2003). Rager's gender as well as her investment of time and effort was a significant factor in the success of her research. Lincoln and Guba (1985) indicated that, "prolonged engagement is the investment of sufficient time to achieve certain purposes" (p. 301).

It is unlikely that a male researcher would have earned the complete trust of these women. He doubtless would not have been allowed into the women's confidence. In all probability, there were questions he could never have asked as a male researcher, and there would have been answers he never would have heard during the conduct of an interview.

The primary researcher for this case study experienced the issue of trust while discussing potential dissertation topics with several CGSC students assigned to his teaching section from an earlier academic year group. As potential topics arose, and the efficacy of their relevancy was debated students inquired about interviewing and data collection. Potential questions were also discussed and debated. The primary researcher indicated that without his military background he

might not be sensitive to the strains imposed by service to one's country. Additionally, he opined that his professional insights might prompt him to pose questions differently than a civilian graduate student pursuing similar research. The following response, although not a direct quote, captured the essence of a comment from one of the Army majors in attendance, "Sir, if you were a (civilian) graduate student from some university we probably wouldn't be talking to you" (Shea, 2006). This is a clear example of trust and the relationship building that often occurs between study participants and the interviewer. Sharan Merriam (1998) said a researcher will have a better interview "in an atmosphere of trust" (p.23).

Standards of Quality and Verification

Data for this study was collected from multiple sources. A variety of quality control measures were instituted to not only protect the data but also insure the integrity of the data and the research process itself. An earlier reference to member checking deserves additional clarification as it allowed the study participants a later opportunity to verify their participation and make any corrections by reviewing the written transcript of their interview. Stake (1995) confirmed the importance of member checking and said that the participants should have an opportunity to confirm their actions or words. All interviews were professionally transcribed and then stored at another location to ensure confidentiality as well as the security and integrity of the research by maintaining a high level of quality assurance and protection. The taped interviews provided a "benchmark against which later data analysis and interpretations could be tested for adequacy" (Lincoln & Guba, 1985, p. 313).

Triangulation is the process of confirming emerging themes among various participants or sources. This process occurred when information from different sources can be confirmed as shedding "light on a theme or perspective" (Merriam, 1998, p, 202). Sharan Merriam (1998) quoted Michael Patton when she said, "Multiple sources of information are sought and used because no single source of information can be trusted to provide a comprehensive perspective" (p.137). Triangulation was used to establish the credibility and validity of the data. Merriam (1998) indicated, "Triangulation strengthens reliability as well as internal validity" (p.207). Stake (1995) also confirmed the importance of triangulation when he spoke about the triangulation of information. When more than one source confirmed that certain patterns and themes were consistently present, triangulation was achieved. The patterns or themes that

surfaced from this process were then considered valid and reliable (Creswell, 1998; Holloway, 1997; Lincoln & Guba, 1985; Merriam 1998; Stake 1995).

The third practice used in qualitative research to assist in quality assurance and verification is the use of peer examiners. A peer examiner was a disinterested third party or an objective peer who reviewed the taped interviews to look for themes or patterns that might be over-looked by the primary researcher. This objective peer was used “for the purpose of exploring aspects of the inquiry that might otherwise remain only implicit within the inquirer’s mind.” (Lincoln & Guba, 1995, p. 308)

Most researchers acknowledged that due to the emerging nature, complex social issues, and emotion-laden topics usually associated with qualitative research that validity and reliability were not adequately addressed. This point of view indicated a misunderstanding of the role and nature of qualitative research. Lincoln and Guba (1985) said dependability and confirmability are difficult to achieve in qualitative research, because of its evolving and emergent nature. This point of view is exacerbated by the inclusion of people in many qualitative research projects. People bring a different dynamic to research, some of which is addressed in the limitations and assumptions for this study. The participants in this case study brought their personal biases or points of view to a particular question. They also brought diversity, and varying perspectives as well as depth and understanding to the research. They brought richness to the research through their lived experiences. It was the researcher’s responsibility to examine, collate, code, and interpret their information and make it relevant for the reader.

That said Lincoln and Guba view qualitative research as valid and appropriate; they just believe that it must be evaluated in a different way. They said that there is a degree of rigor in qualitative research. They used terms that substitute for the more commonly used terms like validity and reliability found in quantitative research. “The four terms ‘credibility’, ‘transferability’, ‘dependability’, and ‘confirmability’ are, then, the naturalist’s equivalents for the conventional terms” (p .300) for the previously stated, validity and reliability. Marshall and Rossman (1999) offered Lincoln and Guba examples and exact definitions in *Designing Qualitative Research* (pp. 192-193.) Again, the three strategies used in this study to ensure the integrity of the process, and to confirm the credibility of the research were member checking, triangulation, and peer examiners.

Confidentiality of Participants

All study participants signed the Informed Consent Form prior to conducting any interviews (Appendix C). The Kansas State University Institutional Review Board (IRB) gave their permission to conduct this research on August 17, 2009 (Appendix A). The researcher had to comply with the IRB for the Command and General Staff College and to obtain their permission to conduct interviews with CGSC students. Potential study participants were briefed about the background of the study, their involvement, procedures for their voluntary termination at any time, and the types of questions on the interview protocol, prior to being asked to sign the consent form.

All participants were personally invited by the primary researcher to participate based on their background, experience, and qualifications. All CGSC students who were asked ended up as participants. Upon their verbal consent the primary researcher individually e-mailed a copy of the Informed Consent Form to them so they could privately read and assess the intent of the research prior to the interview. This technique was employed to ensure not only understanding and compliance, but also their personal commitment to the study. It further allowed them the opportunity to privately review the portion about their voluntary participation and the opportunity to stop the interview if at any time they became uncomfortable in the process.

As part of the interview process, but before the actual interview the primary researcher reviewed the informed consent form with all participants. Integral to the process was the participants understanding their role and the impact of their participation in the research. Participants were then asked to sign a confidentiality form that indicated their willingness to participate in this research study. Participants were informed that the interviews would be tape-recorded and professionally transcribed.

Leedy and Ormrod (2001) suggested the use of pseudonyms to assist in keeping personal data confidential. The participants included in this study remained anonymous. The researcher created a pseudonym for each participant. No surnames were used in conjunction with given names thereby further decreasing any likelihood of any participant being recognized as a participant. The pseudonyms were used during data collection and data analysis and carried over into the report.

Care was also taken to either obscure or eliminate specific references to branches of service or Army posts that might also allow an informed individual to correlate someone's true

identity. Quotations from the participants referenced within the research study are attributed using pseudonyms. Any quotations or comments attributed to a female spouse used the name Mary as a generic pseudonym.

Summary

A qualitative study was selected for this research because it allowed for in-depth research as well as a comprehensive understanding of the issue. Additionally it provided insight not only from the participants' point of view but also offered the perspective of others who possessed knowledge and information about the phenomenon. The participants spoke for themselves in this study, and their voices were heard in the final product. A qualitative study made allowances for the interpretive, developing nature of the research. It allowed the research to be conducted in a natural setting as well as placing the words and lived experiences of the participants into the analysis and recommendation of the study.

Purposeful sampling was the method selected for this study. The selection criteria for student participants included being an Army major with two or more combat tours. Sampling continued until saturation was achieved or no new information was forthcoming. This point was achieved after 10 in-depth interviews with students.

Data was collected through semi-structured interviews that were recorded and then professionally transcribed. Purposeful sampling was the method used to select study participants. Student participants were selected on the basis of at least two combat tours, as well as representing various branches of the Army, such as combat arms, combat support, or service support. Data analysis began with the first interview (Holloway, 1997; Marshall & Rossman, 1999; Merriam, 1998) while the researcher was the primary collection instrument.

Due to not only the dynamic nature of the research, but also the emerging qualities of the study, the original research design was not rigidly structured. As many qualitative researchers have noted this allowed the study to develop and evolve as data emerged. This study was emergent, flexible, and adaptive based on the composition of the data as it was collected. This allowed the interpretive nature of the case study to develop as the research progressed. As Marshall and Rossman (1999) said, qualitative research "retains the flexibility needed to allow the precise focus of the research to evolve during the research process itself" (p. 53)

This methodology was guided by the thoughts and words of Marshall and Rossman (1999) when they said, "Qualitative research then is a broad approach to the study of social

phenomena” (p.2). Sharan Merriam (1998) concluded with, “Qualitative research can reveal how all the parts work together to form a whole” (p. 6).

Chapter 4 - Findings

Overview of the Study

Data collected as a result of this qualitative research is presented in this chapter. Chapter IV of this qualitative case study introduced the students and faculty members who participated in this research. It presented experiences and perspectives from their particular point of view. This chapter made an effort to understand the effects of combat related stress on learning.

Demographics

Demographic data was provided through a brief introduction of each of the CGSC student participants. These short biographical profiles on each of the 11 student participants were offered to provide a glimpse of their age, background, civilian schooling, and military service. The student profiles communicated their experiences with combat related stress and also represented the background and the context for the impact of stress on their learning. Table 4.1 provided general group information or data about the eleven CGSC students who participated in this case study

Professional information about the other participants; CGSC faculty members, an Army psychiatrist, a civilian psychologist, and an Army chaplain was offered as appropriate and to offer insights and analysis for their points of view. The findings with respect to the research questions were presented by using quotations from all the interviews to further illustrate and illuminate issues germane to this case study.

Qualitative Methodology

This research study used the qualitative case study methodology. This approach allowed for greater depth and understanding of the participants perspective and points of view. A semi-structured interview process allowed the researcher the flexibility to modify questions or ask follow-up questions that added depth, breadth, and substance to the on-going research (Merriam, 1998). The questions were open-ended to allow the participants the freedom to develop their answers and allow for additional probes or questions of clarification from the researcher.

Interviews were conducted until saturation was achieved, or as Bogdan and Bilken (2003) said, it is the point “where the information the researcher gets becomes redundant” (p. 258).

Participant Profiles

Profiles of the student participants were offered because the core piece of this qualitative case study revolved around their common experiences. It is important to acknowledge the student’s role in this research and to comprehend the context of their experiences, and how that impacted their learning. It was also important to understand the context of how stress impacted their approach to learning. It gave a sense of who they are and how they individually dealt with the stresses in their personal and professional lives. Each individual was different and unique, and their stories and approaches to learning were just as individual, different and unique. All of the student participants were purposively selected based on their identification as a multi-tour combat veteran. Eleven Army majors were selected from a pool of student volunteers based on their identification as subjects who had potentially information-rich experiences.

Fictitious names or pseudonyms were assigned to all the participants to protect their identity and to maintain their anonymity. The student profiles are presented in chronological order, or sequenced in the order in which the students were interviewed. No profiles were offered for the faculty, chaplain, or medical professionals as even given that protection they may be distinguishable given their position or other identifying information.

Barry

Major Barry graduated from the United States Military Academy at West Point, New York. He is a combat arms officer, married, with two children. He attended graduate school in the evening while simultaneously attending CGSC. He has been deployed four times to a combat theater, although some of those times were shortened due to his assignment to a special operations unit. He has seen Soldiers die both in combat and in training exercises. He has flown in the cargo compartment of a C-17 with the flag covered coffins of his fellow Soldiers. When asked about stresses in his life on the pre-interview student survey form (Appendix C) he listed mental, physical, emotional, and academic stresses as contributing to an overall malaise in his physical condition. He has been in the Army for over 15 years now. An Army mandated career move to a secondary support field has soured his outlook on the Army and his future retention.

He was looking forward to continuing to serve with combat arms Soldiers in the future and that will not occur now. Currently, Barry is not planning on staying in the Army beyond 20 years.

Tom

Major Tom is a ROTC graduate. He is married with two children under the age of five. He is a combat service provider or a logistician within the Army. He has been deployed three times. Tom had previous enlisted experience, prior to attending college and joining Army ROTC. He is a geographical bachelor this year. A late notification to attend CGSC, coupled with insufficient time to market and sell their home forced Tom and his wife to make the difficult decision for him to come to Fort Leavenworth alone. He is part of an increasingly rising number of geographical bachelors at CGSC. Due to a recently diagnosed medical condition, one of his children is now in the Exceptional Family Member Program (EFMP). After CGSC Tom expects to be assigned to a post that is an hour and a half from his house, and the expectation is he will deploy from there within a year. Tom's student survey form completed prior to the semi-structured interview indicated he was experiencing both academic stress and marital stress from the family separation. This stress is exacerbated by his attendance at a civilian university where he is completing work on a master's degree. Currently Major Tom is not planning on staying in the Army beyond 20 years, and with his four years of enlisted service he is rapidly approaching that milestone.

Neal

Major Neal is an ROTC graduate, a member of the medical service branch, and been in the Army for over fourteen years. He is currently at work on a graduate degree. He is married to an Army major who is in the same CGSC class. They have recently experienced the birth of their first child, albeit late in life for both, due to conflicting schedules and deployments. He is 36 and his wife is 38 years old. Major Neal has been deployed three times. On his last deployment his wife was also deployed, although they were at different locations in Iraq. That deployment caused him to seek professional counseling in theater for stress. The stress he experienced was initially and partially exacerbated by his wife's deployment to a different Forward Operating Base (FOB) in Iraq. As he said even though they were apart he accepted the counseling because he was experiencing marital stress. This counseling was provided confidentially as a professional courtesy by a psychologist assigned to Neal's medical service

unit and so no record of this support has ever been entered into Neal's medical file. Major Neal has indicated that both he and his wife plan to leave the Army after 20 years, "I will retire as soon as eligible because it just isn't fun to serve anymore."

Elizabeth

Major Elizabeth is an ROTC graduate and a combat arms officer. The functional category for combat arms within the Army is called Maneuver Fire and Effects. The Fires and Effects is correct in her case as she has been combat wounded and wears both the Purple Heart and a Combat Action badge from an IED incident that cost the life of one of her Soldiers. Elizabeth is single, and has been deployed 3 times for over 38 months. Major Elizabeth attended a prestigious civilian university where she double majored as an undergraduate while also participating in ROTC. She currently has one master's degree and is working on another while attending CGSC. She will be returning to Iraq in October 2010 and the impending deployment is beginning to cause her anticipatory stress (Sapolsky, 1998). She wants to stay in the Army, because as she said, "There's nothing like it, you know Soldiers are great. There is immediacy about the Army that I don't see anywhere else."

Colin

Major Colin is a ROTC graduate, and is married with two children. He has three combat tours and two other deployments, including one to Kosovo. All of his combat deployments have been to Iraq. He is currently working on a master's degree through an on-line civilian university. His career had two personnel changes. He started his career in the Army National Guard as an enlisted Soldier. He later changed career fields as an officer moving from a combat arms branch into a support branch in the Force Sustainment field. He spent much of his deployed time working with EOD Soldiers who defuse or disarm bombs or IEDs. Currently ambivalent about career possibilities in the Army past 20 years, he indicated he would like to make Lieutenant Colonel, serve the requisite time in that rank, and then in concert with his wife and other family members make a time appropriate decision about staying in the Army past that point.

Ryan

Major Ryan graduated from the United States Military Academy at West Point, New York. He is married to a fellow service member. Due to the needs of their specific branches

they were unable to be jointly assigned to Fort Leavenworth, and as a result of that he is a geographical bachelor this academic year. His wife is living with their son at another Army base while her unit is preparing for deployment, perhaps prior to Ryan's graduation from CGSC. Major Ryan is a special operations officer with a Middle Eastern language capability and has completed two combat tours. Major Ryan is still debating the idea of staying in the Army beyond 20 years. He currently has a 3 year commitment for attendance at a civilian graduate school, but as he says, "It waivers from day to day, and experience to experience. When it stops being fun I'll get out." He is very conflicted over this. He looks both wistful and concerned when he says 5 of the 7 Captains he served with as Operational Detachment Alpha (ODAs) commanders have left the service.

John

Major John graduated from the United States Military Academy at West Point, New York. He is an aviator, qualified to fly the UH-60 Blackhawk helicopter, but based on attendance at technical schools is now primarily focused on aviation maintenance. He was unable to sell his house at his last duty station, and he's currently experiencing the financial stress of maintaining two homes. He is married with 3 children at home. He has deployed 3 times for a total of 33 months. He has over 14 years of service as an Army officer and his response to staying in the Army beyond 20 years was, "No, no."

Jack

Major Jack is a ROTC graduate and a combat arms officer. He commanded Infantry platoons and companies both in the Ranger Regiment and conventional Infantry units. He is married with one child at home. He is the recipient of both the Purple Heart and the Silver Star (award for valor). He said his greatest stressor was his wife worrying about his next deployment (Sapolsky, 1998). He has been deployed for 45 months (almost 4 years), and has seen service in both Afghanistan and Iraq. He was part of the Army's initial response in Afghanistan, jumping into combat in the fall of 2001. One his Soldiers died in his arms. When asked about the possibility of staying in the Army beyond 20 years his response was, "No...that's my decision for right now; I've bled for my country. I'd like to have the opportunity to do other things."

Newton

Major Newton is a ROTC graduate. He currently serves in a Functional Area (FA) to provide support to other Army combat units. He is married with one child. He has been in the Army for over 11 years and has been deployed 4 times for a total of 38 months. He is enrolled in a graduate degree program at XX University, while simultaneously attending CGSC. His pre-interview student survey form indicated that school or academics had been his major stressor this year. When asked about staying in the Army, Major Newton's response was to laugh, and then say, "I'm surprised I'm in this long, actually. I don't know what I'm doing here."

Timothy

Major Timothy is a ROTC graduate and an Army aviator. He is an attack pilot and flies the AH-64 Apache helicopter. He is a geographical bachelor this year, due to his wife's post graduate academic commitments. Although married now for 5 years, he has only been able to live with his wife for approximately 18 of those 60 months. His father who also serves in the Army said he is surprised that Timothy is still married and is amazed that they can make this marriage work. Timothy has two combat tours, one each to Iraq and Afghanistan and will be returning to a unit that is on the deployment list again. He should deploy again with 4-6 months of graduation from CGSC. He does not plan on staying in the Army beyond 20 years and he includes many of his peers when he says, "Ninety percent of my colleagues are kind of like, you know, not a day past 20 years." He says by then it will be time for him to support his wife in her life choices and career. As Timothy says, his wife needs geographical stability for her profession which will not support the peripatetic life style of an Army officer.

Bruce

Major Bruce is a ROTC graduate, and is in the Force Sustainment Field where he serves primarily as a maintenance officer within an Army brigade. He has previous enlisted time and now has 15 years of total service. He is married with two pre-school age children at home. Both of his combat tours have been to Iraq. He has been accepted to attend SAMS, a selective and competitive second year of study at Fort Leavenworth for specifically chosen CGSC students. One of his primary reasons to compete for this second year of school was to provide an additional year of stability at Fort Leavenworth for his family as well as some predictability for his career on completion of the SAMS course. Graduates of SAMS are routinely assigned as

operational planners at Corps or Division level for 12-18 months before returning to battalion or brigade level assignment. The importance of his family and the future education of his children have him securely locked into retirement at the 20 year mark like many of his peers. Bruce indicated on his survey form that he receives medical support for a “slight form of PTSD from his first deployment.”

In addition to the brief biographical sketches provided about each of the eleven students the table below provides a snap-shot demographic perspective of some of the key ‘averages’ associated with their Army service.

Table 4.1 CGSC Demographics of Interviewed Students

Average Age	35.9 years old
Average Time in Service	12.3 years of service as a commissioned officer
Average Number of Combat Deployments	3 / with 4 combat deployments being the most
Average Number of Months Deployed to a Combat Theatre	23 / with 38 months being the longest length of deployed combat service
Married	10 of 11 Army Majors
Children	16 children from 10 married couples (1.6 children)
Geographical Bachelor at CGSC	3 of 11 Army Majors
Minorities	2 of 11 Army Majors
Wounded in Combat	3 of 11 Army Majors
Graduate Degree	7 are working on their master’s degree (2 already possess a master’s degree)
Previous service as an enlisted Soldier	3 of 11 with an average of 4 years enlisted service
Number of Majors who will deploy again within 6 months of graduation from CGSC	6 of 11 Army Majors
Number of Majors who come from a military background or family	4 of 11 Army Majors had fathers who served in US military forces

Table 4.1 provides general background information about the interviewed students as a whole, allowing the reader to draw their own conclusions. There was no attempt made to analyze the information in the table. There were however some observations that might merit a comment. These observations offer insights into the personnel dynamics the Army is experiencing in this era of persistent conflict. The first observation was the number of geographical bachelors attending CGSC. Three of the eleven students were geographical bachelors, meaning their family is at another location. This number (3) correlates with the current percentage of geographical bachelors overall within the college. Currently, between the two combined classes at CGSC slightly under 30% of the students were geographical bachelors. Two of the geographical bachelors were part of the six students who will deploy again within 6 months of graduation from CGSC. The already elongated military separations necessitated by protracted deployments is now further exacerbated by individual decisions to arbitrarily enforce another separation for academic purposes (CGSC attendance) based on service needs (dual-military), financial (sale of a house) family considerations (stability/school for dependents) or other reasons.

This leads to the last observation that there appeared to be fewer children among CGSC students than in previous academic years. Families may want to have more children, but when one partner is not available for up to 33 months or more procreation becomes problematic. These observations might be better examined by psychologists conducting a longitudinal study surrounding this information.

The following table provides another data point for a typical CGSC class. The data represented a five year average for a number of things that occur to CGSC students and their families while stationed at Fort Leavenworth. These things occur in every class. Some can be attributed to stress, while others may be a lack of control or lack of character in certain situations. Many were significant emotional events that have a carry-over effect in an academic environment.

Figure 4.1 CGSC Year in Review



Year in Review

A Typical Class - 5 Year Average

- 1200 + students begin the year....most actually graduate
 - 3 dismissals/non-graduates for academic misconduct
 - 2 medical & 1 non-medical withdrawal
 - 25-65 early release
- 2 DUIs resulting in GOMORs
- 1 child abuse / 4 spouse abuse
- 2 misconduct
- 5 Divorces
- 3 Government Travel Card Abuse
- 70 births (68 spouses & 2 students) & 4 adoptions
- 65 deaths (14 parents, 2 children, 11 in-laws, 25 grandparents, 10 uncle/aunts, 1 niece, 2 siblings)
- 19 students hospitalized (>1 day) at VA, BAMC, KC hospital
- 5 loss of driving privileges due to excessive tickets or DUI
- CFC - \$85K; AER - \$12K



• Food, clothing, blood, and bone marrow drives

Data based on Class of 03, 04, 05, 06, 07

US ARMY COMBINED ARMS CENTER

Data provided by CGSC, United States Student Detachment (USSD), August 25, 2010.

Analysis and Findings in Regard to the Research Questions

In contrast to the student participant profiles and their experiences with stress and learning, the research questions for this case study focused on the common elements for all participants in their understanding of the effects of combat related stress in a learning environment. The findings were presented using quotations from the 423 pages of interview transcripts not including the primary researcher's field notes, observations, pilot study annotations and additional papers from students. This has been done to accurately represent the

experiences and perspectives of all the participants. Quotations from some of the participants have been edited for brevity, clarity, and readability. Most quotations, however, have been copied verbatim. The intent of this was to provide the reader an idea and a sense of not only the interview, but the state of the student's mind as they responded to certain questions. The accuracy of the transcripts was verified through member checking and peer reviews.

The primary researcher worked with KSU cohort peer members to confirm questions, and improve personal interviewing techniques, as well as receiving final guidance from Kansas State University committee members prior to conducting data collection and beginning the actual research. Although these early sessions with peers were not professionally transcribed some ideas from this assisted the primary researcher in refining techniques used in qualitative research data collection.

The primary researcher did have the assistance of active duty officers from the Department of Command and Leadership (DCL) within the college and Major Richard Dixon, a CGSC student from an earlier academic year. Dixon's MMAS was used to help develop questions and practice interviewing techniques again prior to the actual data collection. The Army chaplain and the psychologist and psychiatrist are introduced in Question One (below). The faculty focus group is not prominent in this chapter, but needs to be introduced so their voices can be heard as necessary. The faculty focus group consisted of five teaching faculty from various departments within the college. Their representation was consistent with the current balance in the college between military and civilian instructors. The active duty Army Lieutenant Colonel is LTC Grant, and the four retired Army officers serving as civilian faculty members are; Dr. Jim, Jerry, Eldon, and Bill.

Research Question One

How did the influence of combat related stress affect the learning of CGSC students?

Combat related stress affects learning in a number of different ways. The three staff professionals all indicated that they are seeing more and more students directly as a result of stress. Chaplain Steele said, "I think stress is the underlying problem of probably 95% of everyone I see." The staff psychiatrist, Dr Ted concurred with both Chaplain Steele and his colleague Dr. Peter. The staff psychologist, Dr. Peter said, "The number of clients that I see is far greater this year than it was last year. When asked about the level of stress in the force he

replied, “I think it’s a pretty high level right now.” He went on with a clinician’s approach to this statement and tried to quantify or explain it when he said, “I haven’t seen any particular reduction. I think for some reason the class previous to this one, I think had a very high level of stress, and I don’t know if that was just the way that all the deployments, you know, occurred.”

Combat related stress in the classroom

LTC Grant, a combat arms officer and a second year instructor, said the following about combat related stress affecting learning. “I have definitely seen stress related behavior in the classroom, and as a comparison to last year, I think it’s greater. I’ve been to the point this year...I’ve pulled out students and actually had discussions with them, because I was concerned enough that they were exhibiting either PTSD or stress related behavior.”

When pressed further about what he looks for in students that might exhibit a form of stress related behavior LTC Grant replied, “I think if I were to characterize how do I recognize it in the classroom I would have to say it’s short temperedness in the classroom, and in a couple of cases it’s almost like something sets them off. They become very short tempered and they have some sort of automatic harsh response to whatever subject matter we’re discussing.”

Being back in the classroom again can be a stressful experience for many CGSC students. The peer competition within the classroom can be either a motivator or a de-motivator for some. The ability to keep up, or not keep up with their peers can add pressure to learning in the classroom. Tom said, “Regardless of whether you want to be in the top 5%, everybody wants to be 90% or above...nobody says I’m (an) 80, give me an 80% and I’m fine.”

Students have also seen this behavior among some of their classmates. Major Tom spoke about his roommate who was in a staff group where “people have gone after each other, like you know want to kill each other.” Major Tom said later “That people are getting bombarded with so much stress that little things are able to set them off. I mean hearing about two majors going at it about to get in a fist fight over a stupid argument in the classroom.”

Again, LTC Grant had the following comment, “The instances of combat related stress in the classroom I think is greater, but what is more concerning to me are the students going through some form of stress and (they) don’t exhibit any warning signs. The reason I say that is that I had a student last year that was in my observations in the classroom was a top notch, first rate officer, seemed to have his life together, and just recently he committed suicide down range.”

Chaplain Steele, who has been in his position for over two years said, “I think with each increase of the class size I see more and more counseling. I’ve definitely seen, you know, an increase in people dealing with stress.” This comment from the chaplain is verified by Dr. Ted, “You know we have seen more (than) we used to... now it’s up quite a bit...I’m not sure how many, but in the 30 range I think, so quite a substantial increase.” This increase in student counseling for the chaplain did not account for a number of CGSC students who are not seen for a variety of reasons, particularly as indicated by the medical professionals in greater detail in later comments in this chapter.

The chaplain indicated there is a connection to the academic environment and the ability of students to function effectively in that environment immediately upon return from combat. “I think that ability to kind of get their head on straight or decompress...I think a lot of the guys...haven’t had that time to really decompress and kind of come back to center, if that’s possible and now they’re thrown into this academic environment where change is such a constant.”

One of the students, Neal, channeled the chaplain when he mentioned decompression and learning in the same phrase, “If people are decompressing their learning level is lower.” Dr. Peters the psychologist, indicated that many students find this year academically stressful, “Yeah, many find it stressful” and he continued with “guys that have academic stress will also endorse, hey, I’m having trouble concentrating.”

With respect to the challenges that students dealt with on a daily basis Chaplain Steele indicated, “So, (with) their academic overload trying to absorb everything, and they’re trying to be normal again, and if they’re married trying to get their families again, trying to be a mom or a dad and juggle all this, I think some of them really struggle personally with the value academically here.”

Timothy’s perspective on the work load at CGSC was crystallized with, “I think some people—the school house preaches this, take a knee, enjoy your life, blah, blah, blah, and then you walk up to the classroom, and you get dumped on for—here’s a stack of work to get through, and people bristle at it, because they’re told one thing and then expected to do other—to do something else.”

Dr. Peter spoke about academic stress when he said, “I know a lot of guys come here, they report academic stress, they haven’t been in an academic environment for a long time, and

their academic skills are rusty, and maybe they had a tough time when they were in college anyway...and so these are the guys that have the high stress.”

Faculty members can relate to that academic stress also. When recalling his days as a CGSC student Eldon, a former Infantryman and tactics instructor, said the following about his arrival as a student, “I deliberately drove to Bell Hall (CGSC academic building) and wondered if I could keep up academically with my peers that year.” His uncertainty about the next ten months as a CGSC student added to the pressure he felt at that moment. He knew he needed to be academically successful in the classroom that year to both remain in the Army, and be competitive for future promotions and selections to other Army schools.

Barry perceived being back in the classroom as being stressful when he said, “I mean it was a little bit stressful for me. I hadn’t written a paper in years...(You) come here and you’ve got to get over that hump and get your head back and thinking the right way academically, and reading and citing stuff and the proper way to format things. So people-anyone who says, well, I didn’t stress any of that, I think I would call them a liar.”

When asked about stress in the classroom Neal said, “Yeah, oh, yeah, yeah, absolutely. The first few weeks being here trying to re-establish what...you know...it was difficult...But there were a lot of things in my life going on that added to that...I mean looking at the-for me personally-you know trying to sit down and just figure out how to footnote a paper again and do all these different things it kind of freaks you out.”

Neal was stressed and did have many things going on in his life. Like his peers he had just moved to a new Army post. Both he and his wife were now attending the same school at the same time. Add to this the fact that his wife was pregnant and would deliver their first child early in the academic year and you have some key ingredients for stress (Holmes-Rahe, 1967).

Neal offered further clarification on his stress when he said, “But there were a lot of things in my life going on that added to that. It may not have been, you know, if I was just a single guy and I was just coming here, and there were no problems. I mean everybody has issues in life regardless of whether you’re single or not, but may not have been as bad, but I think, yeah, I think anybody would have, after being out of the (academic) environment long enough. And then coming back to it and expecting something else, because captain’s career course and advance courses are totally different, totally different.”

Neal carried with him the memories of the burden of providing medical support to returning veterans before he deployed. “And just for the record, I mean you know that I’m a medical services corps guy and when I was under combat related stress it’s not necessarily-I wasn’t out there getting shot at every day...And everybody...the chaplain will tell you and the psychologist... will tell you they’ve seen all branches (of the Army). Well, there’s an interesting phenomena, when I worked at Walter Reed. During the first five years of the war I was there, and you know, as casualties came back from the war, it was more of a there’s something providers and individual that are taking care of these people and end up getting PTSD just from the experience of –look, here’s the deal... You see an eighteen year old- hundreds-of eighteen year old kids with no arms or legs on a daily basis, and you’re performing the surgeries on them, or you’re the administrator taking care of them, it affects you. I don’t care if you’re in Iraq or not. It affects you as an individual, you know, and I have many good friends that are not necessarily, haven’t necessarily been to Iraq, but are affected, I think.”

Neal’s distinction about combat related stress and not being shot at is important. He was correct in saying the chaplain, and the psychologist both indicated that everyone is susceptible to stress. Combat stress knows no boundaries. Combat related stress is an equal opportunity stressor. It can strike generals as well as privates. General Carter Ham spoke about his journey in dealing with combat related stress (William, I., 2009). Both Chaplain Steele and Dr. Peters indicated that no branch of the Army (Infantry, Signal, Transportation, etc.) was immune from stress. In their experience they treated all ranks, and all branches. Specifically, Dr. Peter said, “I’m seeing officers from all different branches. So I don’t really have a sense that branch A is getting more stressed than branch B.”

Finally, Dr. Peter’s assessment of stress in the classroom covered both academic stress and the impact of simultaneously obtaining a master’s degree. “Yeah, the one other area is-that occurs to me is the academic stress, it’s the guys that take the master’s degree as well as CGSC, and I think that just increases their stress levels tremendously...it’s going to be tremendous...(and) you know, you guys are coming out of multiple deployments and going back into deployments. Maybe this wouldn’t be the best time.”

Memories and stress in the classroom

Personal experiences especially those involving fear are powerful components to the making of memories. In any given moment the brain processes and stores a variety of visual and

audio inputs or cues. These inputs are sent to various parts of the brain to be retrieved later as necessary. The most powerful memories are those associated with emotions (Fishback, 2008a; Medina, 2008a; Sapolsky, 1998). Fear has an emotional arousal affect that not only helps the brain learn it also creates very powerful memories. All 11 CGSC students reported being afraid for themselves or others in theater and. their personal memories had either a direct impact on their learning or their ability to concentrate in class.

One of the faculty members, Bill, spoke about his experience with one of his students and the impact of combat related stress in his classroom. “Last year... I showed a video clip from *Saving Private Ryan*. He (the student) became emotionally distraught, I guess is the best term for it, so much so that he had to leave the classroom. He was unable to gather himself and continue to perform, and it was because of-it was kind of almost a flashback for him to a Soldier that he had lost while he was in command. It caused a significant amount of emotional distress in the classroom and forced him in essence to be pretty ineffective the rest of the day and throughout the remainder of that class certainly.”

Bill later added that when he went outside to the hallway to check on this student he found him sitting alone quietly on a bench. When Bill asked if the student was OK, he received the following reply, “Sir, I can’t watch stuff like that, I had a kid (Soldier) die in my arms four years ago. I don’t do those kinds of movies’ anymore.”

Major Jack spoke about how a comparable classroom experience affected his learning on a day when he became ‘learning ineffective.’ “You know-one of my experiences....was when you showed *12 O’clock High*. It starts out with, you know, a B-17 all shot up, it lands, and one of the guys had his head you know, exposed head wound and things, you know, there still brains in the plane, and I had to walk out of the class, because I had a bad flashback of when Rich XXX was killed, and I had to tell Sergeant XXX get the hose and wash, you know wash, you know, wash his blood out of the Stryker. That was all I could think of when I saw the movie, so I had to walk out, and I was like, oh, God, you know. I didn’t want to go through that here. But, you know, some orders you think you’ll never have to give can haunt you.”

This particular response from Jack was a difficult and traumatic moment during his interview. He had a hard time speaking and actually being able to verbalize this situation based on his memory of the events in Iraq. Jack’s hands covered his mouth as he spoke about this event, and how he re-lived it in the classroom after viewing the video portion of *12 O’clock*

High. It was perhaps a cathartic moment for him based on the researcher's observation notes from that interview.

Elizabeth had a parallel experience based not only on her combat wound, but also the loss of a Soldier in her unit, who as she said "basically died in my arms" during one of her three IED incidents. She was responding to a question on barriers to learning when she spoke about combat videos (in the classroom) that although valuable for some learning they have "been extremely stressful to me." She continued the interview with, "Like I know we had at least one video of an IED strike in a vehicle. That was kind of a surprise, and it kind of made me shut down for the remainder of the day. I was just like, okay, I don't want to, you know, I was, I was 'otherly' focused...just because... (of the IED video)."

When responding to the interviewer's question of being mentally focused elsewhere and "taken out of the classroom for an extended period, of time" because of the video, Elizabeth said, "Uh-huh. Yeah. Right. I'd say for me it was usually the rest of the day, until I got a chance to get away from class and away from the environment and try to distract myself with something else that was usually, you know, by the next day I could get...I could re-engage."

Tom's reaction to the same IED video was, "Watching a... I forget what video and stuff the other day in class and that IED or whatever...I forget which class that was in now... I'm trying to think, but I was... Yeah, but that was the first time that that really—I was like we're watching these guys driving and stuff, and then you know, but then I could actually, you know, and I don't know why, because I've seen other stuff like that, and I'd never really did that. At that one—I mean I could actually feel, and then they were going Jones, Jones or whatever after they got hit and I was like, shit, because I was actually going I know how those guys feel. I mean that's..." Tom's comments stopped at this point as he mentally and physically composed himself to move on with the remainder of the interview.

Other students had similar reactions to situations that occurred in the classroom that caused a flashback to their time in Iraq or Afghanistan. In almost all cases the trigger event cannot be predicted. Everyone's memories were different and how they reacted to them caused different emotions and different reactions on their part. There was no doubt that the IED video caused a visceral reaction for many students, not just Tom and Elizabeth. Not all students felt a need to leave the classroom, but many were affected by the intensity and emotions they felt as the video of the IED unfolded in their classroom.

Major Hunt, a fellow DCL instructor, who participated in pre-interview training for the primary researcher said he mentally checked out of class one time for about ten minutes after seeing an introductory power-point slide for one of the lessons. The slide he referred to is a collage of three pictures of Soldiers conducting a patrol in Iraq. He said he was immediately “transported back to Iraq and was on the street again.” He said it was about ten minutes before he realized he was sitting safely in a classroom at Fort Leavenworth.

Another student, Major Dixon related to the primary researcher that during class he occasionally ‘checks out.’ He says other students will say something and, “I just find myself back in Afghanistan.” He did not distinguish triggers that will mentally cause this to occur. Major Dixon indicated that it could be up to 30 minutes before he is paying attention again to what is physically occurring around him in the classroom. Even then, as he says, “I’m really not paying attention.” After class one morning he said, “I have no idea what we were talking about for the last 20 minutes. I was back in Afghanistan.”

Ryan viewed the impact of combat related stress on learning as causing friction or intransigence for the student to overcome. He said, “Your combat experiences shape the way you understand and visualize any particular problem set. However, combat related experiences can make you more set or “stubborn” in your ways. Thus, learning at CGSC can be more difficult because each student has a variety of combat experiences that the student has to learn to overcome.” Neal put it this way when he said, “The overall stress the force is under makes learning harder here at CGSC.”

Combat related stress in a civilian academic institution

Ryan also provided the perspective of the transition from combat and combat related stress within a civilian academic environment. His immediate post combat deployment assignment was to attend graduate school at a civilian university. His comments have application to both cohort observations as well as combat related stress. He experienced what might be termed a ‘non-supportive civilian academic environment’ or a ‘non-understanding civilian academic environment.’ In his interview comments he says, “I was in a graduate program at XX University...and the majority of them (classmates) were civilians, and (I was) coming straight out of theatre into a very liberal academic environment. I came to the understanding that the civilians, along with the instructors, did not understand in my mind the real world outside of the classroom, and they didn’t understand. They, one, don’t understand the

fight in Iraq or Afghanistan, or the big picture world view of what's going on between the east and the west, and they took a very academic approach, as if the academic approach will always solve the problem." When asked directly did combat related stress have any impact on his learning in an academic environment Ryan said, "Uh-huh, I think it did...because it's very easy for you if you're in your comfort zone with other military people, but if you're in a completely civilian culture or civilian environment it's a lot more difficult...it also hindered me."

Ryan's comments were significant because his experience involved an immediate transition from combat operations into a civilian academic institution. His experiences have implications with how combat veterans are both treated and perceived in a classroom environment. He had difficulty communicating with his civilian peers and gaining their acceptance. The Yellow Ribbon program is predicated on successfully integrating veterans into main stream university programs. Although Ryan's experience may be the exception as opposed to the norm, it does provide both a warning and a caution that not all transitions for veterans into civilian university settings will be wildly successful. When asked how he felt as a Soldier attending a civilian university he was adamant that he was negatively affected by the experience. "Yeah, I definitely think so, and my experience may be exceptional because XX University is supposedly centered on XX studies."

Marital stress and its impact on learning

Newton said, "I don't believe combat stress affects CGSC learning." This positive, declarative statement by Major Newton contradicted the reality of his present situation. Newton had a number of stressors in his life and some may link back to his 38 months of combat deployments. In an earlier portion of the same interview he said there had been challenges and barriers to learning this year for him, "Yeah, there's been lots of barriers to learning, lots."

Major Newton was a dual enrolled student this year, as were seven of his peers in this study. Students who elected to do this do so voluntarily. Usually there are about 300 plus students in a CGSC class of a 1000 plus students who are simultaneously enrolled in a civilian graduate degree program. Although it is not an uncommon occurrence, it does add to the academic load experienced by approximately 33% of a CGSC class. So Major Newton was not only attending CGSC, he was also simultaneously attending a full time graduate degree program. His assessment was, "I figured that if I could either take CGSC or XX University I would be

fine. The combination of CGSC, XX University and the demands of fatherhood and being a husband are too much for me. I frequently wish that I was deployed.”

He furthered added that to sometimes achieve a temporary balance he would not complete various CGSC assigned readings or homework until there was a written requirement associated with it. “If I see a yellow sheet (CGSC graded requirement) then I’ll go back and do the readings. So, a lot of times you’re just sitting up in class, and if there’s not a yellow sheet, you’re just like, wait until it’s due and then go over the material.”

Newton wrote in another student forum about XX University and said the course work there was “very demanding.” He then shared, “On average, the readings were ten hours in duration. A week later CGSC started. The work load quickly overwhelmed me. During this time my wife was pregnant. She was having a difficult time, she experienced severe nausea her entire pregnancy and it was a struggle for her to eat. It was the first time that she had been separated from her family. The stress from the school work coupled with her sickness strained our marriage. On average I would sleep two hours a night. I was very irritable and I stopped doing physical training which made me more irritable.”

Newton’s wife had a difficult pregnancy that ended successfully in a premature birth. The premature birth obviously caused its own stress, as well as causing Newton to miss classes at CGSC. He was granted 10 days of maternity leave to assist his wife when the baby came home from the hospital. He spoke about the winter break at CGSC. “We went on winter break and I focused on my family. I didn’t work on my thesis for XX University or conduct PT.” When school started in January, “I continued to stay up all night studying. Only now there’s a newborn at home. Mary tells me she’s unhappy. I remember sitting on the couch, the baby’s crying and I saw emotional pain on her face. She was giving up. My wife says she wants to go home to XX because I’m not giving her the support she needs. At first I’m calm, but because I’ve gone almost 48 hours without sleep I become irritable and we start screaming at each other. At 3 in the morning my wife wakes up and starts packing, I go into a rage. Eventually we both calm down and start crying.”

Newton continued to say, “It’s been unfortunate, because I spend so much time and effort. I mean I think ten, fifteen hours a week in studying for XX University, on top of the time I spend in CGSC, and it’s just overwhelming, especially with family, my wife, her pregnancy,

the trouble she was having, and then the baby coming. And just that stress. She's like why are you never here, why are you always gone."

The 'always gone' comment is a fair statement for CGSC spouses. Many students set up offices in their quarters where they can go to read, work, and write. As they immersed themselves in their studies they did not realize the time it took away from their family relationships. In their minds they were accomplishing the mission. They did the readings and prepared for the next class. Some were not cognizant of the time it took away from the relationships within their own homes. Some spouses and families felt cheated because the student was actually physically home, but mentally was not participating in their domestic life.

As one student said, "It's a price you have to be willing to pay." Barry furthered this point when he said, "I mean we've had arguments at home. You come home and you go to the basement and you start reading books for XX University, whoever, and writing stuff on the paper for XX University, and other husbands are going out. That's true...it's a cost you have to pay, and even though like Mary's very good, it bothers her...that's added stress."

The three geographical bachelors did not deal with the immediacy of this issue but in fact, it still impacted them. Tom is a geographical bachelor and he experienced both academic stress and marital stress brought on by the separation from his family. All three geographical bachelors in the study admitted that although they had more time to study, they still had to deal with the family separation and the impact it had on their relationships.

The time spent worrying about things 900 miles away that they cannot impact as a husband or a father because they are not there periodically impacted their ability to focus on, attend to, or concentrate on classroom activities. As another student said, "You cannot think about (it), you know the kids broke their arm or you know the wife needs- the car broke or you know anything like that. It's still things you've got to deal with even though you're thousands of miles away."

Approximately 28% of the combined CGSC classes are geographical bachelors. Chaplain Steele and Dr. Peter offer more on this recent phenomenon at Fort Leavenworth. Their detailed comments were more appropriately grouped under the theme of Social Functioning/Relationships addressed more fully in Research Question Three.

Opposing Points of View

A different perspective is offered by other interviewed students who opted for a more laid back approach to the academic life style of CGSC this year. Their approach was not to focus on academics. By choosing not to do the academic work, the readings, or other homework and by minimizing their personal efforts they did not succumb to academic stress. One student said, “Repeated deployments have certainly affected how hard some of us are willing to work.” Colin added to this point of view with, “I just came off my 3rd deployment prior to ILE. I can tell (you) that a large part of my lack of effort at times was strictly due to prioritizing family time over ILE homework.”

John, much like Colin, had a relaxed approach to academics and learning at CGSC. “I tried not to let too many assignments, papers, projects get me too stressed out. I always tried to remember I did not have to shoot for the A grade, and that no one was really going to get hurt if my answer was not exactly right.”

Bruce had a comment about stress, but he seemed to be able to keep it all in perspective. He was academically adept having been selected earlier in the year to attend a second year at CGSC in the SAMS program. He spoke about academic stress with the following, “I may stress over finishing an assignment, you know, basic stress over am I really reading as much as I should be when I’m given an assignment. I do stress about things like that, but I don’t stress about being here at all.”

Elizabeth did not find CGSC academically challenging. She was in the percentage of students who do well in school and probably have always done well academically. Her response to the stress associated with homework and papers reflected this, “I read quickly. I can process information fairly quickly. So for me, writing a four page essay is not a particularly stressful event. I just have to take some time and knock it out.” She then added, “I mean I’m working on my thesis now, and I know what my deadlines are, but I’ve been pretty proactive, so I have not been stressed the way I know some of my classmates have been.”

Timothy’s earlier statement about being ‘dumped on’ is now balanced by his calm Army aviator demeanor when asked about the stress associated with transitioning into an academic environment, “Being asked to get back in the books and reading and writing, thinking and all that kind of stuff is...took some time to adapt to. I don’t know if I’d say it’s stressful or not, because...but as I look back on the year, that first part of the year was... was challenging,

because there's a lot of requirements. Those first couple weeks you're writing a lot of papers, you feel a little pressure to kind of perform early until you...the dust settles, and you figure out the lay of the land and really figure out what people were expecting."

Finally, Chaplain Steele summarized his experiences counseling CGSC students when he said, "There's so much academically they have to do here, it becomes, for some people, I've checked the block, and I've got to move onto the next event, because I'm just inundated with how much information I'm trying to absorb."

Summary

Some of the students felt that combat related stress had a negative impact on either their learning or learning in general this year. They saw stress as an impediment to optimizing their experiences in the classroom. Barry offered some tremendous insight when he said, "If the combat related stress makes your home life, personal relationships more difficult, and argument prone that will negatively impact on any learning." Barry also spoke about the lack of sleep as a contributor to a lack of concentration in the classroom. Barry later indicated that although combat related stress did not have a negative impact on his classroom experiences, but that he could understand "If the combat related stress affects the soldier to the point where he can't concentrate, or his/her mind wanders in class or while doing assignments that would also impact learning."

Sharan Merriam and other qualitative researchers wrote about the importance of using the words of the participants. These researchers echoed the value of the interpretive nature of this research. The words of Dr. John Medina and Major Neal seem to have some relevance and resonant with respect to how stress affects learning. As Dr. John Medina (2008a) said, "Stressed brains don't learn the same way" (p.195).

Allowing a couple of the interviewed students to have the final word *on the influence of combat related stress affecting the learning of CGSC students*, Major Neal said, "So, I guess the answer is maybe, it depends on the individual. My learning has been affected, I can say that." Finally, Barry said, "Yeah, the stress does impact learning."

Research Question Two

What were the common themes in how each participant dealt with stress?

Five common themes emerged from the post interview analysis of the data from the interviews with the eleven students about their experiences with combat-related stress.

1. Alcohol or Nicotine. Eight students reported an increase in alcohol or tobacco consumption upon their return from a combat tour of duty.
2. Social Functioning, Relationships, and Family Separations. Some students noticed a change in their functioning with family members. Chaplain Steele spoke about this from the perspective of positive relationships within family units, and is supported in his comments by Dr. Peter.
3. Anger. The students in this study noted that others in their lives noticed an increase in their anger, or an inability to control their emotions. Their resultant anger issues seem to arise more quickly upon their return from either Iraq or Afghanistan. Chaplain Steele corroborated this observation.
4. Sleep/Concentration. When discussing the more common reasons that majors would seek medical assistance Dr. Ted indicated that many would initially self refer based on their sleep patterns. Their sleeplessness or “insomnia causes people to come here for treatment.” Nine students reported interruptions to their normal sleep patterns upon return from a combat theater of operations, and in some cases an attendant difficulty associated with concentration in the classroom.
5. Time Management. Six of the eleven students turned to their experience as military planners to carve out time in their day to accommodate class time, family time, relaxation and time for exercise.

The identification of these five themes came not just from the interviews, but after reviewing field notes and observing the body language, word choice, and general attitude of the student respondents during the interview process itself. These themes were a product of the initial data analysis. The potential for identifying specific themes was greatly assisted by interviewing staff and faculty prior to the semi-structured student interviews being conducted. The staff and faculty interviews helped inform the primary researcher while simultaneously improving the quality and the content of the questions for the semi-structured student interviews.

The genesis behind the increase in alcohol consumption question came from Dr. Ted. His point was that a researcher should look for other indicators or ways that Soldiers attempted to mitigate stress in their lives. As he said some students self-refer, but many are goaded into seeking mental health assistance because of other behaviors, be it sleeplessness or insomnia, or as he said, “hitting the bottle”. Chaplain Steele was also instrumental in focusing attention on relationships and identifying this as a theme.

The final note about these themes may actually belong in the section on data collection, but it is more a sense or a feeling that an interviewer has at the conclusion of an interview. There was a sense that although most students were very forthcoming in the interviews, a couple of students may have held back on some questions. Questions that come into mind are the relationship and trust between the interviewer and his subject, the impact of their responses, a potential discomfort with discussing certain topics, a thought (by the student) that I do not want to answer that question as it may open another door. The themes as noted above were relevant, and appropriately identified, but they may not have been plumbed to their full depths by all students.

Alcohol

The Army is a drug-free environment. Soldiers are routinely tested and screened for drugs through urinalysis. So for returning Soldiers, particularly officers, who have so much invested in their careers alcohol becomes a great legal drug of choice. Many of the interviewed students indicated an increase in alcohol consumption on their return to US soil. It became a way to relax, to forget, or even to self-medicate.

Dr. Peter spoke about alcohol and its use as self medication among Soldiers. “Now on the self-medication, I mean that, you know, one might think about that as a positive coping. On the negative side, the negative coping, the additional alcohol, you know, sure of course you’re going to see some of that as well, but I’m not sure quite honestly the extent to which I have a good window on that.”

When asked about “an increase in the consumption of alcohol,” Neal said, “Excess consumption of alcohol, yes...And I still probably consume more than I should now...Do you know what I mean...Yeah, I know, I know, I know, but I probably drank more than I should have coming back...I like to tell myself it’s under control now, and it is, you know, but it’s one of those things where, you know...You know the deal.” The deal is alcohol allowed Neal to deal

with issues he faced at Walter Reed, and when deployed to a FOB in Iraq without his wife, and he needed counseling to deal with that stress. Neal may continue to use alcohol or as a medical supporter may have doctors prescribe drugs to control stress and anxiety. “That’s what the doctors do when they can’t take it anymore; they write out a prescription for each other, you know what I mean.” Again, as Neal says, “You know the deal.”

Both Tom and Ryan spoke about the use of nicotine or tobacco to relax. Ryan said he did not think his alcohol consumption went up, but on the issue of tobacco he said, “I’ve been addicted to tobacco for a long time so that didn’t really increase or decrease.” Tom responded to an increase in tobacco usage during his first deployment which has continued to this day. “I mean, I quit dipping. You know, I promised Mary that when we had our kid well that was the... you will quit by the time we have our kids and stuff... So I had promised her that, so before XX was born, I quit. So, I had quit for like two years, and then didn’t do it in Kuwait and everything. It was right when we got into Iraq, probably like a good 36-40 hours, and just because of you know, hey, we got accelerated (movement), company commanders and staff we’re going up and you know, sergeant major for our battalion pissed me off, and so that was just the trigger that I like all of a sudden I got, I think between sleep deprivation and just his lack of caring for everybody pissed me off enough that I went and bought a can and started dipping, and that was just like, you know what, I’m not even going to bother. I’ll just you know, I’ll dip.”

The follow up question or probe from the researcher to Tom was, “Do you attribute that to nervousness or stress?” Tom’s answer was, “Its stress.”

Tom continued with, “I think, yeah, I view it as a stress reliever. It was something to, you know do, but it’s an addiction once you get it.” In responding to a query on alcohol he said, “Alcohol, I didn’t see an increase or decrease between how much I, you know, normally drank before or after deployment...I mean because I can have, you know I can go out and party and have fun and go all night, feel like crap the next day.”

When asked about an increase in alcohol consumption Elizabeth immediately responded with, “Yeah, definitely.” Her response was much quicker than the males and she was more forth-coming in her response to this question. When further questioned about consumption between pre and post deployment levels she indicated it was “pretty much post.” She then completely opened up with, “yeah, and that’s....To the point I started becoming concerned, you know, because I was using alcohol, too, to try to get to sleep which is not necessarily-I

understand it's a depressant...It's not a great idea, but it's a technique and it does not require a prescription, and you don't have to talk to anybody except maybe the clerk at the Class VI, so, yeah." (Class VI is the military equivalent of a liquor store).

The comment about not having "to talk to anybody," was significant for Elizabeth on a couple of issues. She was the lone bachelor or bachelorette in this case study. She did not have anyone to go home to when she has a bad day. Her earlier comment about the IED incident and how it impacted her with the statement "I'd say for me it was usually the rest of the day, until I got a chance to get away from class and away from the environment and try to distract myself with something else that was usually, you know, by the next day I could get- I could re-engage." This is a significant comment when combined with her thoughts on relationships/social functioning in the following sub-chapter.

Barry said he drank more when he returned from his four deployments. "I probably drank more when I got back, yeah, truth. It helps me to relax. I forget about things. I mean take your mind off of preoccupation of thinking." Barry had some things to forget about. He once served as the escort officer for deceased Soldiers returning from a combat theatre. Perhaps one of the incidents he would like to forget about is the following, "Probably hurt me the most when I went to his funeral and I saw his dad who was a retired Marine pick up his ashes and put them in the internment, and it just hit me like a ton of bricks, and I think that was probably the most significant thing for me to overcome, because I had developed that personal relation day to day with him, and then to see, you know that just hit me like a ton of bricks. You know what if it was me up there putting my son into that thing, and shutting the door and turning the key and that's the last time I ever saw him. He's now committed to Arlington" (National Cemetery).

Newton also reported drinking more when he said, "For me personally, I think after the second one (deployment), drinking was a problem for me, but I saw that it was a problem, so I personally nipped it in the bud, you know. I stopped drinking. I started going to church, got involved in a church and I just stayed really, really busy instead of just going home and sitting down and drinking."

John's perspective on drinking began with, "Me and my wife got married before I started flight school. So, she was kind of along for that ride, and we. I mean we partied a lot, had a lot to drink...So, I don't think my consumption has gone up. It's definitely gone down as I've gotten older and wiser and made some better decisions, but I definitely have a feeling that if I

want to have a drink then I'm going to have a drink...And there are times you know, during the week where I've just had a long day, and I'm going to have a beer. To me, it's just having a beer relaxing, and my wife looks at it as why do you have to have a beer when you come home, why can't you sit and talk to me?"

At this point in the case study it is appropriate to mention the impact this behavior had on John and Mary's relationship. As John continued the interview he subconsciously continued a theme throughout his interview and that is his relationship with his wife and the impact of the various stresses in his life; marital, financial, academic, and anticipatory stress for his next deployment after graduation. His wife has concerns too with his extracurricular activities involving riding his motorcycle. It is one of his ways to relax, but she is concerned that he'll die in a motorcycle accident.

Continuing the interview John said, "So, there's probably some increased confrontation or stress about my drinking in the relationship. I think the amount, the consumption amounts have definitely gone down." He continued on drawing a parallel to drinking in his earlier days and his current drinking habits. "I mean I look at a ton of days where we were having two parties in a weekend, and there was ten, eleven drinks minimum. You know the weekend now I've probably-I could say during the week I probably have five to six drinks in a seven day period, and four or five of those will be on Friday and Saturday night...After a long weekend I usually have two drinks Friday, two drinks Saturday. I might have another one during the week sometime, so I don't think my consumption has gone up any, but I think my wife's perception of why I drink has changed a lot."

Bruce like many of his peers experienced an increase in alcohol consumption when he returned home. As he said, "My alcohol use went up pretty drastically."

Scott Canon of the *Kansas City Star* wrote a story about increased alcohol consumption among Soldiers. Army chaplain Major Steve Roberts of Fort Leavenworth was quoted as a source in that story. He is quoted as saying that some Soldiers will say to him, "I can't sleep. It's just one way to kind of numb out. If I go out and get hammered I don't have to think about anything" (p. A10).

Finally, as Dr. Ted, the Army psychiatrist, said when asked about health problems or behaviors, "We haven't mentioned substance abuse which is certainly quite common in people with PTSD or PTSD sort of symptoms...A lot of people if they're having trouble sleeping the

bottle will be one of the places they'll go, and if they're on edge all the time, if they're irritable, a lot of Soldiers, especially junior Soldiers, will turn to drinking.”

Social Functioning, Relationships, and Family Separations.

There is a tendency among CGSC students to disconnect from family during the academic year. It is not planned. It just happens. They go to school during the day, coach soccer or lead Cub Scout meetings in the evening and then go home to their office area to study in the evening. It's what they do. They were students this year and most were diligent about being students and wanted to do a good job in the classroom. They had an obligation within their staff group or cohort to uphold their end of the class discussion by doing the appropriate readings and preparing for class. Homework takes time, and time spent doing homework is time spent away from your family. This can become an issue in some families and with some Soldiers.

Attendance at CGSC is a time when a major should be able to spend more quality time with their families and most are able to do exactly that. There was, however, a percentage that struggled with this balancing act. Chaplain Steele and Dr Peter articulated their experiences with those students in their interviews and had the following to say about the impact of a students' academic experience when measured against their relationship within their family. Chaplain Steele addressed the stress generated by those students who chose to be geographical bachelors this year and its impact on family relationships.

Dr. Ted spoke of those who do not self refer for insomnia, irritability, or depression. “Certainly with the majors at CGSC it's not uncommon that the spouse has been bugging them for quite some time to get something done.” This observation and comment from Dr. Ted indicated the importance of relationships, and social functioning in transitioning effectively back into both the professional and personal roles that students faced during the academic year at CGSC.

When speaking about the time students spend doing home work and preparing for class Dr. Peter said, “Those are the guys that are, you know absenting themselves from their family life, and then it's causing a problem with their family, and I'm not sure what the answer is, because how can you essentially have a graduate program without having that level of academic challenge?”

Dr Peter later goes on to add, “And, and so I’ll see a lot of different elements of PTSD or stress injury from the PCLM (a health survey form used by his organization). For example, guys will endorse, you know, feeling distant from their relationships.”

Barry who is the senior major in the group by date of rank and has been married over 15 years displayed the wisdom of his age and experience with the following comment, “I want to get a master’s degree, and I’m willing to commit to it, and if you’re married, that’s a discussion, and that’s a group decision beforehand, it’s easier than just if you say I’m doing it and with no consultation to your spouse, because now you’ve got the stress, academic stress, of trying to get your master’s, and you just created a stressful situation at home, because you didn’t consult with her before you made that decision. Communication, communication, setting your goals.”

Barry was in a master’s program and has seen and felt its effects at home. “I started a master’s program. Then I got assigned to the Regiment and the program stopped dead in its feet, and I got here and I started up again, and the thing is that it’s kind of a catch 22, because I see the value of education, yet to get that I have to take time away from the family, so it’s a vicious cycle almost where it’s supposed to be a down year for academics, but to get where you want to be, you have to take away from other things in your life. There’s only so much time available. It’s a price you have to be willing to pay. It has impacts at home.”

John’s perspective about his relationship with his family is impacted by his past experiences and the anticipatory stress (Sapolsky, 1998) associated with his deployment following graduation. “Probably my dealings with my wife, not so much the kids, but, you know, as I get ready for deployment, in the past it’s hard not to have some kind of building, you know, building up knowing you’re going to go do a job and trying to focus on that job. So, I think it causes...I think it can cause some misunderstanding and stress between a couple, husband and wife.”

Major Hunt, the faculty member from DCL, indicated that both social functioning and concentrating were issues upon his return from Iraq. He said prior to his deployment he could sit and read in the family room with his wife and son, while they watched television. After returning from Iraq he said it became too difficult to concentrate with the television on when reading and he had to go to another room to read. His inability to concentrate because of background noise necessitated a change in his social behavior that actually impacted his normal family routine. Of his time in Iraq he said, “I find it increasingly difficult to remain engaged in

family matters when I am trying to stay alive. I am worried about separation issues and my relationship with my kids and ultimately my wife and myself.”

Elizabeth, the lone single officer in the student group, did not have a close support group of friends or family. Earlier she spoke about trying to mitigate stress with alcohol. Her technique which neither Dr. Ted nor Dr. Peter would endorse is to just be alone. When asked if she had any relationships to access and support her during transition periods or stressful times she was very direct and blunt, “Not really.” Elizabeth said, “My response to being stressed out is not to seek out other people, but to, you know, sit alone in my apartment or whatever. But my approach...I don’t know if that would be helpful or not, but I do know the way I have reacted both times coming back was to pull away from any of that structure that might be there.”

Ryan talked about both sleep patterns and his relationship with his wife and how he tried to cater to both while in graduate school. “I would sleep during the day while she was at work, and then as soon as she’d get home, I would be up doing my homework and stuff like that, so I did have the opportunity to focus on my family relationship, but with the other demands of school, at times I would have to cut out the family relationship to take care of my school business.”

Neal’s situation was different again from his peers. Both he and his wife were deployed together in Iraq, but at different locations. That affected their personal relationship, as well as their simultaneous transition (Schlossberg et al., 1995) and immersion into a new academic environment as a professional couple. “Yeah, once we’re home we had to re-establish ourselves as a family; it was a difficult situation, because we had issues. You know, you’re apart. Everybody does, but transitioning to the academic environment and us both being here, we made a choice up front to keep our academic picture of this thing completely separate, and we did that with each other.” In this case he’s talking about the issues associated with writing papers and working independently so there would be no ethical issues associated with sharing information or student products. In their case they both established offices or study rooms within their quarters that were off-limits to each other, so there is no appearance or perception that they cooperated together on any projects or papers. Even during Mary’s pregnancy Neal did nothing to assist his wife academically. She worked independently through her staff group to make up the classroom work. Neal wanted to help Mary but understood that they must both deal

independently with these transitions (Schlossberg et al., 1995) in their lives; academic stress, marital stress, childbirth, new parents, and their ever-changing schedules.

Stress and family separation

Chaplain Steele addressed families and academics with the following, “So if their academic overload trying to absorb everything, and they’re trying to be normal again, and if they’re married trying to get with their families again, or like a huge chunk of them here are geographical bachelors, and they’re trying to manage two households long distance, keep the relationship afloat, try to be a mom or a dad and juggle all this.”

Specifically addressing the issue of family separation and the stress it created on students the chaplain continued with, “A good portion of the people I’ve talked to about it has said if I had to do it again, I wouldn’t have done a separation, because again, what they’re doing is, you know, they’ve already been separated, and the reason they’re doing this, you know, this geographic—you know geo-bachelor thing is they don’t want to uproot the kids again, because most of them know they’re going to deploy as soon as they leave school again, so they don’t want to do the move, the move, the move, and so they’re trying to bring some type of stability just for their kids’ sake and family’s sake, but I think for, you know, the couple, I think for the parents, it’s kind of becoming, wow. It becomes kind of a big eye opening event, because now it’s like, man, I am here, I’m still separated, I may be separated again for another year when I leave here, I don’t know if that was really a great decision or not, and I think that does add to the stress, because even financially you do have, you know, men and women both trying to support two households and do the academics and parent long distance and all those other challenges that go with it because, you know, they know their parenting doesn’t just stop because they’re separated by a thousand miles or two, but they’re trying to juggle all that stuff. Then a lot of them feel that pressure of I’ve got to get my master’s. So they jump, you know, they dump that on their plate, too.”

The following interchange between the primary researcher and the chaplain is recreated in its entirety to present a perspective about why students would choose to be a geographical bachelor and put themselves through this additional stress.

Chaplain Steele: Yeah, and I think the quicker people turn around and go right back out the door again—and that’s just got to be adding to it. I mean maybe—you asked me about how many people I see here. I think the reason why we see the numbers that we do and the reasons

we see the numbers of people being geo-bachelors is either they don't want to deal with the problems, or they can't deal with the problems, or—and so they just put it off to the side, and separating geo—you know as a geo-bachelor again—I'm not saying all of them do that. I'm not saying that, but it's easier for me to deal with my problems long distance by phone like I've done for the last year than actually having to sit down and deal with the problems. Does that make sense?

Shea: So in other words, they dealt with issues from Iraq over the phone and it...

Chaplain: Right, spouse ran everything, did everything.

Shea: So now as opposed to coming home and transitioning with the wife and setting up

Chaplain: Right. Or husband.

Shea: Or husband, yeah, or husband. So now as opposed to coming home ...

Chaplain: And disrupting it all.

Shea: And dealing with that, they said I'll just go to Leavenworth alone.

Chaplain: Right, don't disrupt the kids. Kids can continue to have their normal life, and I understand that thinking. It's, you know, we don't want to upset anybody's life, and we can continue to deal with each other how we've dealt with each other for the last however long.

Tom provided the student perspective to being a geographical bachelor and the stress that it caused when asked, "What have you done this year to mitigate any levels of stress in your learning?" He reported that, "I think, well, I mean I think I've added to it by being a geo-bachelor is kind of...that so that added additional, you know, factors and you know, just being separated from the family and having my wife go through everything, you know, by herself and stuff. It was one thing when I first deployed. We had an eighteen month daughter, and now we've got a five year old daughter, a one year old son, and a dog. Well, we got rid of the dog, but, so that's added stress, because now you're trying to deal with that and help her go through when she's having her stressful moments.

Timothy addressed his separation from his wife this year and the impact it had on him when asked "Has it been stressful?" "Yeah, you kind of, you do this to yourself thinking that there's a reason for it, and at the end of the train-at the end of the deal that we will have made these decisions for the right reason."

David Wood a military correspondent writing about two deployed Soldiers shared their perspectives on the stress associated with deployments and the impact it had on relationships and families. Writing about Sergeant First Class Michael Pore he said he was now more comfortable in combat than at home. Pore himself said, "As soon as you get back it's a countdown until you go again," he said, explaining why he had no civilian friends, no steady girl, and no home of his own. "It's just too hard to let down. I'm scared to even think about a family now" (Wood, 2010, para 19). Wood wrote about Captain Dan Gregory of the 10th Mountain Division with, "it's easiest to "hot bunk" between year-long deployments, using whatever bed was empty in an apartment he shared with other deploying officers. His real home, he said, is the company operations center, whether at Fort Drum or deployed in combat. "I live my life in 12-month increments" (Wood, 2010, para 20).

Dr. Peter offered point and counter-point on the issue of geographical bachelors and the stress associated with that separation when he said, "I've heard of some individuals come here and they have the geographic separation, and it's a good thing, because they can focus on their academics. I've heard of others who come here, and they—it's a bad thing, because their stress level is high not being with family, and then they're missing their family. But then what we have seen a little bit is after about four or five months they go, oh, this is—you can see it. It's affecting them."

Anger

Anger and depression were signs of stress and both Dr. Peter and Dr. Ted indicated that students supported it when talking about stress. Chaplain Steele also endorsed the idea of anger among students this year. "I mean the people I've seen they've, they've exhibited all, and I think all ranges, left and right extremes of symptoms. I think one I get a lot is just, you know, people being angry, and they can't figure out—they can't put their finger on why am I angry, what am I upset about, what is it that's driving us, and I think that's really been a—that's probably one of the ones I've seen more, you know, exhibited more than anything else, that and just again, lack of sleep."

Chaplain Steele indicated he has seen an increase in anger and anger management issues among the majors he counseled. That anger stemmed from a variety of triggers. Some students cannot handle change and as he said it increased their anger and angst. "I think that fuels part of that anger, because they're...I think they're already dealing with their own symptoms...now

they're thrown into an academic situation where most of them haven't been in 10 or 12 or 13 years, and it's just one more trigger for them to get angry."

Tom indicated that he was not quick to anger, but was more prone to stress sooner this year. "You know because it's like, oh, hey, no big deal, got it, and then you know, you start tacking on all these other requirements, and then, boom, finally you get into...that culmination point I think is where you... Yeah, I think, though, your mechanisms to handle it, I mean...you feel like you're maybe overloaded a little bit. So, I mean, I guess that's...I'm trying to think if that's the best way to...I don't feel like, oh, my God, I'm overloaded quicker, but like whereas, I may have been, it would take X amount of things to finally get the internal stress mechanism going inside...I think that engages a little bit quicker (now)."

Newton reported that he too suffered from anger after his last tour. "This third tour, right before I left I had gotten married, and when I came back, my wife said you've been very angry since you've returned, and I...that's something I've tried to work on. I've had, I guess because of all the changes, I haven't been able to fall into a routine, so that makes it a lot more difficult than it was last time dealing with that stress. I wasn't as stressed as much--you know, I didn't feel my life was in danger my last tour in Iraq, so it's just kind of just shocking that I came back so angry. I don't know what that stems from. It's just something I'm trying to work on."

Timothy, one of the geographical bachelors responded to the question about anger in the following manner, "I don't think so... (but)... My wife would tell you differently. She thinks that I have a shorter fuse. It comes up once in a while. I'm not sure I entirely buy it, but do I lose patience? Do I have a shorter level—a shorter, you know, probably. I have less patience sometimes for things."

Elizabeth has almost a bi-polar response to the question on anger. She has found that she has patience for things where others might become very angry or frustrated. She related that her car was struck by another vehicle on the highway and nearly forced off the road. As long as she was able to walk away as she said, "It didn't even, didn't even phase me, you know." On the other hand, she does suffer from academic impatience. As she said, "I've always been a fairly driven person, and I think I still am." Her comment applies to her classroom behavior where she is prone to interrupt conversations that she feels are not of value. "For education, I would say it almost had the opposite effect...I cut people off when I think they're dithering around."

She added in a later part of the interview, “I know that I went off of, you know, I went off on a couple of students at different times for, you know, their responses or them being too slow or not taking something seriously for things that, you know, granted were not good, but probably didn’t warrant as extreme a reaction as I gave them, and like I said, it took me probably about a year to, I think, even out. I still get pissed off like that sometimes, you know, I think.”

Ryan also indicated he had anger issues in the classroom when he felt frustrated that the discussion was not focused on the mission of war-fighting. His comment is underscored with, “I think there have—that not necessarily the stress, because it’s pretty easy to blow off, but anger I think it has, and especially I think when we start moving into academia, and we’re not focused on, you know, accomplishing the mission or saving people’s lives.

Tom talked about anger issues with students in other staff groups. His comment attested to the camaraderie, cohesiveness and chemistry within his own cohort or staff group, but as he said that is not the same in all staff groups, “I think our staff group...we’ve jelled...(but)... my roommate, he talks about people have gone after each other like, you know, want to kill each other. And I mean you’re talking to guys, oh, people getting in fights and stuff like that. I mean captains, majors, I mean you’re adults.”

Tom said being in school has increased his stress levels. “I would say that I probably stress more-I mean you would think that, oh, I’m okay now (that) I’m back. You know, hey, it’s just school, so it’s, you know, not a big deal, and I mean I’m doing my masters program, so I’ll get my-I’m in my last quarter right now, but I think it has added a-it’s increased the level of heightened stress. stressed out, where it was at this bar right here, well I think it’s dropped down now to, you know, where it’s much lower that it occurs, you know, more often than.” He amplified this further with, “I think you’re able to—you’re able to cope with it, but I mean I think you engage that stress combat, stress kind of mechanism internally, occurs earlier now versus that, you know, would take multiple things to finally drive, you know (to) hit that mode.”

Sleep/Concentration.

Nine of eleven students indicated their sleep patterns were affected, in some cases both in Iraq and immediately upon their return home. Some indicated that this lack of sleep affected their concentration in class and concentration in general. Both Drs. Peter and Ted endorsed this theme and further indicated that anyone who is sleep-deprived will have issues concentrating. The Army Physical Fitness Research Institute at Fort Leavenworth surveyed 747 CGSC students

and found that 65.1% reported sleep problems (Diggs, 2010). Additionally, according to the Armed Forces Health Surveillance Center sleep related issues among male Soldiers has more than tripled to 67,515 incidents in 2008 (Kennedy, 2009). A representative sample of the sleep comments follow.

In assisting clients Dr. Peter made the following observation about sleep. “I see a lot of, a lot of sleep difficulties, a lot of sleep difficulties...and in some ways the guy’s sleep just hasn’t reset yet. A lot of, you know, guys that have academic stress will also endorse, hey, I’m having trouble concentrating.”

The follow up clarification question for Dr. Peter was, “And is that a result in your opinion, of a lack of sleep, or maybe there’s just an acute level of stress associated with it?” He said, “Well, on that point I think the way I’ve approached it with some of these participants is I’ve approached it as, hey, let’s get your life reset, and then let’s assess how your concentration’s coming along.”

Students weighed in on sleep and concentration when returning from a combat theatre. When questioned, “Did you have problems sleeping when you came back?” Neal responded, “Sleeping? From Iraq, yeah, in the beginning, for a few months I had some things. But academically I struggled when I came back.”

Barry’s response to sleep had roots in both anticipatory stress as well as his reaction because of his relationship with his wife. “We’re moving overseas. Mary’s worried about where we’re going to live, school, so on and so forth. So basically, that gets put on my shoulders, too, and I start thinking about it and wake up at four in the morning. I start thinking about something I shouldn’t be thinking about at the time I should be sleeping.”

Colin reported, “Leading up to deployment there was probably more interrupted sleep, just wake up, and you know, things going through the mind. And even coming back it’s been...I think it’s kind of started to die down a little bit. I’ve been able to go back to sleep far easier, but even the—probably the first few months here it was definitely a problem. I wasn’t...you know I’d wake up at three in the morning, and the mind would be racing and tough getting back to sleep if at all. So, some of that’s kind of died down. Nonetheless, no matter what keeps a student from sleeping it was bound to have an impact on concentration in the classroom.

Colin was then probed with the following query, “That must have impacted your academic day in terms of being able to attend to things in class. Can you talk about that?” His

response was, “Oh, yeah, yeah. I mean there was definitely days where if I didn’t get that good night’s sleep because I’d woken up and couldn’t fall back to sleep for a few hours where, you know, I was just dragging throughout the day. So it definitely did affect the ability to stay engaged with the course.”

Ryan’s sleep patterns were affected as he reported, “I think my sleep patterns were affected, especially after my last trip, because my work pattern was work a little bit during the day, and then you get a lot accomplished at night, but then whenever I’d go into the classroom, if the classroom discussions were not what I’d focused on the night before, then it was very easy for me to tune them out, because I was more tired during the day.”

Elizabeth said it took about four months for her sleep patterns to normalize enough so she could sleep through the night. “Yeah, I definitely had a hard time getting to sleep, and then, you know, waking up during the night, and then, yeah.” Her earlier comment about the use or abuse of alcohol seemed to correlate with the demise of the acute stress associated with her return from combat. She saw her alcohol use declining as her sleep patterns improved and her sleep functions return to normal. She comments on both drinking (alcohol consumption) and sleep when she says, “And, I’d say that that probably evened out about the same time as the sleep piece.”

Newton was a mixed bag on sleeping. As he said he did not have trouble sleeping when he returned home. He did however have some issues with being in two schools simultaneously and family issues that he was sleeping less “On average I would sleep two hours a night.” This lack of sleep made paying attention in class problematic some days. As he said his first academic paper “was a disaster.” He then added, “Yeah, it was difficult, because I mean you’re just sitting there fighting to stay awake, let alone trying to learn the material.”

Tom said, “I think it, you know, I think in a little while you...it takes a little while for you to finally get back into a normal pattern, I think, because no matter what, you know, yeah, you’re home.”

When asked about his sleep patterns and ability to concentrate Bruce had the following to say, “Yeah, sure, both deployments like you and I were talking before, this is on the—you kind of go through that logarithmic curve for both deployments. It was...my sleep patterns, very light sleeper when I came back, you know, very hyper-vigilant of things that were going on around us, and then over time you slowly kind of get back into a steady state again where it doesn’t bother

you as much, but things still--you know like I still don't react well to loud noises just like everybody else, and you know, I'd probably hit the ground if somebody popped a bag next to me, but things like—you know those are the things that get affected that just don't go away. It does. It's funny that, you know...and here at CGSC a good example would be when they move the walls, and they take the walls down in the classrooms, and you can hear it. It's not in your classroom, it's somebody else's. You know you stop breathing for a second, because it's just there's a thump there that is just that you can discern the difference between a mortar round coming in or being launched and that noise, and they're pretty close together unfortunately.”

Bruce continued his comments with, “So that makes you take pause, and those are the things that I think you notice during the day that, I don't know you don't sit with your back to the door. You don't like that. It doesn't make you feel comfortable. Even in an environment like this those are the things that affect your concentration I think, and those are the things that all of us probably deal with a little bit, you know, a little lesser degree and a little more to other people.”

When asked about how this affects his behavior in the classroom and impact on concentration he adds, “Sure, things that I think about personally are classrooms that don't have a door or have a window in the door, and when I was on the fourth floor, because there's supposedly...they could classify them and have no... (Primary Researcher, “The doors have no windows.”)...Right, other ones like some of my electives I could see (out) the door, and I was more comfortable knowing that if the door opened, I would see somebody was there before the door opened. Those are the small things that you could pick up in an academic environment that kind of affects your concentration level in a class.”

Army Colonel (Ret.) Greg Belenky is the director of the Sleep and Performance Research Center at Washington State University. Belenky believes losing an hour of sleep over a period of several days will degrade or affect performance. He views sleep as restorative, and an important component of the rest and relaxation the brain needs to function. He said, “Sleep is equal in importance to a healthy diet and exercise. But, I recommend sleep over exercise if you're not getting enough” (Kennedy, 2009 p. 5).

Wilfred Pigeon is a clinical researcher at the VA Center of Excellence at Canandaigua, New York, and the director of the Sleep and Neurophysiology Research Lab at the University of Rochester. He said, “Left untreated, poor sleep seldom resolves on its own. And it's more

acceptable to have a sleep problem than to have PTSD, so sleep is a perfect entrée for people to access services. Sleep could be a red flag that other things are coming, so it's a great place to intervene." (Kennedy, 2009, p. 5).

Insomnia is one of the leading stress indicators for mental health professionals. Dr. Ted confirmed, "Insomnia is probably the, the-one of the biggest lead-ins...for what causes people to come in here for treatment." It's also one of the reasons that students cannot concentrate in the classroom, they are tired. The majors recognized when they were tired or suffering from lack of sleep and the impact it had in the classroom. Barry confirmed that when he said, "If the combat related stress affects the soldier to the point where he can't concentrate, or his/her mind wanders in class or while doing assignments that would also impact learning."

Dr. Ted offered his expert medical opinion when he said, "If you're not sleeping well, you're not going to function as well during the day...but I would say insomnia would probably be the biggest factor...if you're only sleeping four, five hours a night you're just not going to function that well in the classroom, or you're not going to concentrate that much on your reading assignments."

Time Management

Another theme that occurred with some students was their focus on time management and personal time to help dissipate the stress associated with combat related stress in the classroom. The question used during the interview was, "What have you done this year to help mitigate the level of stress in your learning?"

There were a variety of responses, but most centered on the idea of time management. This makes sense when one reflects on the participants in this study. Army officers are mission oriented and time driven in their professional lives. They are concerned with accomplishing specific things within a given time frame. They are used to setting goals that are driven by time and they are willing to invest personal time to achieve certain goals. It also gives them a sense of control. They are in charge. This concept of control is very important. For all who have ever been around any kind of military formation they will understand the idea of 'who's in charge.' Someone is always 'in charge' of any military formation. Officers tend to extrapolate that concept and apply it to their personal lives by categorizing tasks. They are in charge of their studies and therefore they schedule study time. Army officers are used to dealing with daily

training schedules, so scheduling study time is not a novel concept for them. It is the simple application of what they have been doing in their professional lives for 12 years.

Barry said he managed his study time by, “I try to do a lot of stuff before the kids would get home. Like I’d come home 12:30, 1:00 and try and go right down and start doing it right away, and you know, try to consciously carve out time to spend with the family at certain events, and also acquiesce to things that I may not want to do.”

Neal alluded to the quality of his papers based on the impact of a new baby in the house with first time parents who are both CGSC students. He said there was a lack of sleep in his house some nights and it impacted the quality of his work some days. “I mean people are going to help you out, and they’re going to work through, and most people understand, oh, Neal’s got a new baby at home. There’s XY and Z. His paper’s not quite as sharp as I would expect, but I probably know why. Do you know what I mean?”

Elizabeth spoke about her time management and being attentive to time lines when she adds, “I mean I’m working on my thesis now, and I know what my deadlines are, but I’ve been pretty proactive, so I have not been stressed the way I know some of my classmates have been.”

Newton spoke about his schedule but admitted he has been unable to follow his own advice this year, forcing him to wrestle with the academic stresses of two university level programs. He recommended the following, “I would recommend just taking time to yourself every now and then, just spending time with your family when you can, try to schedule it in, and try to get as much of a routine as you can even though you’re—you have a high amount of work. Don’t try to read everything. Work to a point. Like work from—you get up, come to class 8:30, stay at the library to about 5:30, go home 5:30, 8:30 spend time with your family. Just every day just do that, and then maybe 8:30, 10:30 wrap up whatever studying and then go to bed. That’s what I’d recommend. That’s what I’ve tried to implement, and I haven’t been very successful.”

Finally, Timothy one of the geographical bachelors approached this idea of *Time Management* with the calm, analytical demeanor expected of an Army aviator as well as some humor when he said, “The stress, stress, stress. It gives me; first, it gives me more time. I’m not dealing with two dogs at night after work, you know. I don’t have responsibilities around the house at night, so I have had, on the positive side of the world, a whole lot more time to kind of do things that I want to do and spend my time the way I—that I want to. I don’t know if it’s affected it academically at all. It probably should have helped me, because I have more and

more time. I have more freedom and more time, but did I take advantage of that? I don't know?"

Research Question Three

What were the common outcomes, from the perspectives of the participants with respect to combat related stress in the classroom and if so, what were they?

There were common outcomes in the classroom as a result of combat related stress. These outcomes originated with the fear that generated the initial stress associated with combat. All eleven of the interviewed students indicated that at one time or another during their deployments they were in fear or felt afraid or helpless. In some cases it was an instantaneous fear brought on by the immediacy and severity of the incident. In other cases, they were not afraid until after the incident terminated and they reflected on the proximity of the danger they had faced and its potential outcome. Other outcomes that were identified as a result of combat related stress are the transitions associated with leaving a combat theatre and re-integrating back into their families. In some cases their experiences with combat had a transformative effect on selected students. The students were asked to comment on the Rand Study that estimates that 20-26% of the force suffers from a degree of combat related stress. Interestingly, they all had an opinion and a very strong reaction in some cases, and for those who agreed (8 of 11 majors) they generally placed it higher than 25%. Finally, all the students had a similar reaction and related comments about the stigma associated with the receiving assistance for mental health issues and the use of the Behavioral Health Wellness Survey (Appendix E).

Fear

All eleven majors indicated they experienced some level of fear or helplessness while deployed. The American Psychiatric Association indicated that two conditions must exist for stress to be present in any situation. One must first feel a sense of helplessness and a lack of control, and second one must be in fear, or fear of losing their life. (American Psychiatric Association, 1994, p.427).

A represented sample of student comments about fear and helplessness follows. Elizabeth spoke about her experience with her first IED in terms of helplessness, and how it also transformed her life today. "You know, with an IED a lot of times there's nothing you can do.

My job is—most of its going to be outside the wire, so I'd say that was probably the biggest in terms of helplessness that you get is that type of attack, because there's nothing—there's really nothing you can do about it, you know. It's—the time I was hurt was actually the first of the three IED's that I was in theatre, and it was the worst one. So after that, every time was like, okay, am I okay? Alright, who's not okay, what can we do about them, what are the other things that we need to mitigate? And I guess that's the reaction. That's my reaction-is to try to figure out what I can control.”

She continued with the specifics of the incident by adding, “I, for me, probably one of, I don't know, maybe say the best thing I've ever done was probably tied to the IED where I got hurt. We had some, you know, loose rounds coming in, but they weren't very accurate. Our vehicle caught on fire pretty immediately, and I wound up in two separate moves getting a couple of the guys who were not able to move themselves, getting them out of the vehicle, getting them kind of off the road and behind a wall. It took a while for the rest of the vehicles in the convoy to come back and help, so I wound up—one of the guys I pulled out died anyway, basically died in my arms, and the other kid lost both his legs, but lived, and I would say that it was a tremendously, tremendously humbling experience to me to save somebody's life.”

When asked how that experienced transformed her she replied, “And I'm...I get up, still now, several years later, just about every day, and I remind myself how lucky I am to be alive and to be intact and to have all my facilities about me.”

Ryan offered his perspective from the view point of a helicopter crash en-route to his ODA location. “I was in a helicopter crash, and it was the first time I'd really experienced the thought of my guys without any type of leadership. Helicopter crash -my battalion sergeant major, my company or my battalion commander, myself and my medic were all involved in a crash, and at that point the battalion commander was completely out of the loop, sergeant major was out of the loop, severe concussion and my medic, the first time I went to him I thought he was dead, and the rest of my detachment was about a kilometer away, and at that point we didn't know whether there was going to be an attack upon us. It was myself and one other guy that were able to defend the helicopter and any of the other casualties within the helicopter. So, I had that experience. Another experience was my detachment was surrounded for four and a half hours, and we were basically about ready to get overrun, and we had no heavy weapons left, and we had called for an international QRF, and the international QRF said that they were going to

come. Forty five minutes later they came back and told us that because of political considerations they weren't allowed to come, and for me, the biggest fear is being in a situation that I have no control over, and not only my life, but the guys that I'm responsible for, their lives are at stake, and that's how I consider fear."

Jack had a number of experiences with fear. He has the greatest amount of direct level combat experience among the interviewed students having spent 33 months as a rifle platoon leader and Infantry company commander beginning in the fall of 2001 with a combat jump into Afghanistan. "The first time I was in combat which was an airborne operation, with the three hour flight from Oman to Afghanistan, just sitting in the plane, you tend to think about the worst. Some of it's just the fear of the unknown. I was probably much more scared on 18 October, 2001, than I was in my other 30 or so months in combat, because the first time when you go into the unknown, it's an unknown, and you don't really know what to expect; therefore, you know, you picture the worst [laughter] you know scared in '03-'04 and '06-'07, but it was more...I mean I remember consciously sitting on a port-a-potty going, you know as a mortar attack came in, you know, praying to God, you know, please don't let me die covered in blue shit."

Jack continued this portion of the interview by focusing on the fear that he felt after an incident he experienced as a company commander in a very difficult fight. In fact, it was in this action that his company lost Soldiers in combat and earned Jack the Silver Star for his bravery under fire. As he said, "Some of its irrational fear, but there's different types. I mean there are different types of fear. With indirect fire you just never know when it's going to come, and you know you walk from one hard building to another. I mean you kind of get a little quiver in your body going, ooh, I'm I going to make it to that building or not, and then when in direct contact I—there was a lot less fear for me when people are shooting at me, because there's always so much to do as a commander, and then I remember when I got hit...after I was hit by a suicide bomber, I turned around to go back, because my other vehicle had been damaged worse than mine, and I pulled next to the vehicle, and we were going to get some of the wounded out, and my first sergeant and my driver goes RPG gun at one o'clock, and I pop up, and I see the guy, and you know, there's a point where there's no fear. You just, you see him, and you just do what you've done on hundreds of ranges and get them, aim a little low, and then you kill them. I don't remember being scared that time until I was sitting in the hospital bed, and you really go, oh, my God, I almost died. And then even in a higher intensity fight that lasted for hours, the fear was

less, and maybe because I've been in combat so long before that it doesn't hit you maybe until afterwards. It never hit me during (the fight).” This statement is why Jack's wife is worried about him. They married late, they have one child and this child may be their only progeny given their respective ages. As Jack says, his stress is associated with his wife worrying about him and his next deployment. Jack truly is a quiet hero who deals with his stress matter of factually. He wears his uniform and medals with the silent knowledge that they were acquired through the effort and blood of others, and he personally will not forget their sacrifice.

Tom provided the perspective of a Logistician running convoys from one FOB to another when he spoke about fear, “I mean, two vehicles in front of me got hit with five or eight EFP, the—actually it was my replacement company commander, took over for me, but he lost his leg below the knee. Luckily it was a, you know, he was in an MTV, so the elevation where it came in, the main EFP hit would have been...had shot by a... Humvee and stuff, but, yeah, at that point, I mean, obviously holy shit. And, since the vehicle ended up...it went through, hit him. I mean it went through a bunch of places and stuff, but it knocked out the engine basically, so they had to stop. So we went into a blocking position, and it was pretty crazy and chaotic for a little bit, and there were sightings of other guys and stuff. So I mean, fear, obviously, yeah, you're at a heightened level and kind of scared, but then it was focused. I think I didn't—until I got back, but every time you walked off, I mean, we had rockets land, I mean, yeah, fear.”

Interestingly both aviators expressed being afraid but not in the moment. In both cases, they realized after the fact that the situation they found themselves in their aircraft was far more serious than they originally thought during the mission. Much like Jack, who did not feel fear until he was hospitalized, both aviators were able to compartmentalize their fears until after the incident ended. It was only then that their emotions overtook them.

Timothy began with, “Well, I would say from my perspective northern Iraq during the surge, height of the surge, and started to see a lot of helicopters get shot down across northern Iraq, or actually across Iraq. You start seeing that stuff every day as you get ready to go work, but you start seeing that stuff on the front page of the newspapers online or front pages of Stars and Stripes, and that stuff will start to creep in your head for sure and start to go through that am I next, you know, or is somebody close to me going to be next kind of thing?”

Timothy continued with further elaboration saying, “So, yeah, I would say that would be, that would be one instance, and then not only that, but flying missions where we were doing

things and coming back with bullet holes in the aircraft, or one experience where a bullet comes right up underneath the cockpit, hits the floorboard where your foot's resting. If Kevlar's there, not a problem, but foot comes up off the floorboard of the aircraft, and you smell the gunpowder, and you're like, interesting. So, yeah, I would say those are a couple instances.”

John actually articulated two different fears. One is professional and the second is personal. From a profession point of view as an Army aviator he reported the following, “Any of the fear I had mission-wise, I don't think it was prior to. It may have been after something occurred. I might have sat back afterwards and thought, hey, you know, that could have been a lot worse than it was.”

John's most insightful comment is a personal observation about his family. This comment is important because it re-enforced the personal relationship all these students must have in their lives to help keep them going mentally and emotionally on these long deployments. It emphasizes the importance of relationships, and this quote could easily be include in the sub-chapter on Relationships/Social Functioning but is more appropriate within the context of John's professional ability to compartmentalize fear as an aviator. “I think my biggest fear is being gone, having to come back to something not there like with family not being there or my wife not being there.”

Transformations and Transitions

As noted above many students experienced fear while in theater. In fact, every student had a story to tell about fear. The quotations in the above sub-chapter testify to the impact of the fear they usually felt in the moment. Other stories and quotations revolved about the uncertainty of rocket and mortar attacks and the helplessness that pervaded their thoughts in those moments of anxiety until the attacks subsided. In the semi-structured interview process, questions about transformation usually followed the question about *Fear*. The specific question asked was, “How have your experiences and exposure to combat related stress transformed you?”

Some students had particularly poignant and focused thoughts and comments about transformation, while others clearly had not thought about fear and the inherent stress impacting them until the question was asked and they reflected on that during the interview. The other point here is that again many thoughts and quotes from the students seem to run together in terms of themes. Many students who had comments about transformations or transitions framed them in the context of relationships. Although two separate questions were asked about

Transformation and Transitions the manner in which students responded led the researcher to combine their comments in this one section. Most students had positive reactions to the questions about Transformations and Transitions, although it is clear from both comments and their expressions in the interview that these were questions they were unprepared for, and had not thought about until the actual moment when the question was asked. The responses varied and included comments that spanned both their personal and professional lives.

When asked the question about how “combat related stress transformed him?” Jack had the following to say, “Yeah, I-and I choose to, I choose to believe in a positive way, because I was much more—and you know you go back to 2000 (year), I was an anal son-of-a-bitch. I was pretty high strung about everything. You know if one thing didn’t go right, oh, my gosh it was the end of the world. When I came back from Afghanistan the first time, I saw it in my personal life, because I maybe didn’t dedicate the time. I wasn’t married and probably for a reason, because I couldn’t put the effort that was probably needed into a relationship, because I was putting more of it into work. I kind of realized that maybe I should refocus that, and you know, realized that, you know, although I hadn’t been hurt or killed in my first combat experience, you know, it’s just the roll of the dice where it could happen tomorrow. So, maybe you need to change your emphasis on the type of person you should be, and I think I did, and I tended to have much more healthy relationships, again in my opinion, after my first time I was in combat, because they mattered more.”

John, ever the aviator had a very precise response that demonstrated his emotional maturity and self awareness. He said, “I think it’s made me smarter. It’s made me think more the next time when I was coming up to something on how to prepare for or how to relate something to maybe a younger junior guy that could find himself in the same situation.”

The other Army aviator, Timothy, offered a similar comment when he retorted, “You’d like to think that it helps you figure out what’s important in your life. Makes you think a little bit more—makes you think a little differently about--about some of the stuff that had a transformative affect on me personally.” Thinking differently about something meant Timothy was approaching it from a new perspective. Something changed. Timothy needed to make new sense out of this experience. Jack Mezirow (2000) would say that Timothy had a transformative event because now he has a new “frame of reference” (p. 7).

Ryan offers a slightly contrarian view when he said, “I think for me, they lead me to question assumptions that are held by most people as valid or that the assumptions are set in place, and I question how people validate those assumptions.

Neal offered another mature view and statement when he said, “Well, and it’s refocused what I see as important and stressful things that probably aren’t as stressful as you make them in your mind. Do you know what I mean?” It was interesting to note that with many of Neal’s answers he usually ended with, “Do you know what I mean?” It was not really posed as a question as much as it was added as validation to the statement and for the interviewer to nod in agreement as in, “Yes, I know what you mean, Neal.”

Transitions

Again, the responses to the questions about Transitions were generally positive. The questions were focused on transitions either back to family or academic environments depending on specific students and their personal time lines from deployments to arrival at CGSC. In all cases they obviously re-united first with family prior to making the move to Fort Leavenworth. In some cases, those responses about family were more illuminating. A representative sample of those comments is offered here beginning with Neal.

The initial question asked of Neal was, “Describe your emotions as you transitioned back into an academic environment?” His response was, “I think initially for me I was in the training mode, not in the education mode. So for me it was tough to transition into, you know, I have to actually think as opposed to just act.”

The same question to Ryan revealed, “I think I had a fairly good transition back to family life, because my wife is also an Iraq vet, so she kind of understood where I was coming from,...so, I can blow off steam with my wife, but I don’t have the recurring thoughts about combat all the time...so, for one, it helps you forget about those things, but it also makes it bad, because you’re going to-you don’t get it over with right away, so it’s going to carry on for a few years.”

Barry focused on his family as he described his most recent transition. This transition brought him to Fort Leavenworth, and the opportunity to finish a masters degree he had begun years before, but was unable to complete due to the pace of Army life and deployment schedules in a special operations unit. He says his transition to a student at CGSC was, “Positively impacted. There was things that I had to work through, but when I go home and I look at my

kids, I know that, hey, I'm committing to get this master's degree so that when I get out of the Army I can get a better job, and I can pay for you to go to school or help you out when you buy your first house or pay for your wedding."

Colin continued his laid back approach to CGSC. He addressed the transition he made as a professional Soldier and the dichotomy between his combat theater duties and those of being a student in an academic environment. He did not perceive his transition as particularly difficult as he indicated, "As far as transitioning into an academic environment, it wasn't really a hard transition per se beyond...because I'd been working on my master's, you know, on line for a little while. So some of the academic, you know, writing papers and stuff like that was not a huge psychological shift or anything for me. It was...if there was anything hard in the transition, it was going—coming from straight out of deployment, you know, where I'm going 16 plus hours a day to you know, theoretically where hopefully things I was doing on a daily basis affected what was happening out on the battlefield to an environment where, you know, I could blow off a history reading and nobody was going to die."

John, like the other 5 students to include Elizabeth dealt with what Robert Sapolsky calls anticipatory stress. John, Elizabeth, and four of the other interviewed students will all be re-deployed within 120 days of graduation from CGSC. For John, this stress is the result of his impending family separation and another transition. This deployment (September 2010) will be his fourth. He has already experienced 6 transitions with his family. His family has experienced 3 family separations and 3 family reunions all with their attendant issues, stresses, and role reversals especially for the spouses. In typical calm aviator parlance he addressed his arrival at CGSC and his initial exposure to academic stress when he said, "I don't know if it was a big impact. The biggest thing, I think, has been knowing that I'm leaving again. We've kind of shifted our focus at home, a lot more—enjoying a lot more family time and trying to get more things accomplished together, and we've kind of not strayed away from the kids having to do academics, but we've extended bed times and stuff so that we can do more things."

Elizabeth's transition was a little more difficult. As she said earlier she is "fairly driven." When asked if the "transition was difficult?" she replied, "It was. It took...it probably took a year of that change to become, I don't know, comfortable with it, maybe to not be quite so much of an asshole, especially training lieutenants."

At the end of the interview, which Elizabeth confessed to as being a “stressful event” she also indicated that she is beginning to experience stress thinking about a return to Iraq. “I will tell you that now that I know where I’m going, and now that I know when my next deployment will be, which is October (2010), that is starting to stress me out.” This is the classic anticipatory stress according to Robert Sapolsky. It is perhaps also a case of fatalism. As she said, “there is certainly an element of how many (more) times am I going to be lucky.”

Stigma & Stress

Colonel Chris Philbrick, deputy director of the Army Health Promotion, Risk Reduction Council and Task Force had the following to say, “The issue of stigma in the Army is real,” and that “Soldiers are expected to deal with traumatic events and “drive-on” (Hemmerly-Brown, 2010, p. B4). Major General Gale S. Pollock, the Army’s acting surgeon general said, “One of my great concerns is the “stigma” of mental illness, Pollock said. “That, to me, is an even bigger challenge. I think that in the Army, and in the nation, we have a long way to go”(Priest & Hull, 2007, para 25). Her statement is further confirmed within the same study by other sources that add, stigma in the military remains a “significant barrier to care”(Priest & Hull, 2007, para 25).

Both Dr. Peter and Dr. Ted strongly indicated that within the Army the stigma associated with reporting mental health status has tremendous implications, especially among officers. When asked specifically if he believes there are people (officers) who are afraid to come forward Dr. Ted said, “Absolutely, yeah, yes, it’s a national stigma. I mean people in general; men just do not like to admit they’ve got emotional problems and that they need help.”

John echoed Dr. Ted when he said, “It’s not only an Army stigma. I think it’s a stigma across society. One of the big things that I personally am afraid of is that if I go and get some kind of mental health evaluation put on my medical records, that someday it could keep me from a security clearance, getting a job I wanted maybe down the road or keep me from being able to purchase a gun, you know. I’m an avid hunter and enjoy outdoor recreation, but I don’t want anything on my records that could come back later to put any doubt in anybody’s mind that I should be certified to do whatever.”

All of the other students had a very strong response to the question about the stigma associated with seeking assistance for mental health issues. It is an issue that is not just confined to Soldiers. Of the 11 students interviewed 8 of the majors agreed with Dr. Ted’s assessment

that Soldiers generally will not seek assistance until driven to do so as a result of either another health issue or pressure from a spouse.

Dr. Peter estimated that some officers do not seek help because of the impact it may have in the future. Of the students he offered services to as a psychologist he said, “Look, we’ve got this available to you, and I might get, oh, I don’t know, probably you know somewhere between 10% and 20% that would say no, not going to do that because of the stigma, because it will follow me in my career.”

Another question the students were asked concerns the work of Dr. Charles Hoge at the Walter Reed Army Institute of Research. Dr. Hoge said that there are a great number of Soldiers who are afraid to get the assistance they need because of the stigma associated with mental health. The students were asked to respond to that statement. A sampling of their responses follows.

Colin, again being very positive in all his responses, offers another optimistic assessment when he spoke about stigmas with the following comment, “I would say that the stigma is waning.” Other students are less sanguine in their observations and comments. Newton offered the following as his assessment about Soldiers actually being afraid to get assistance because of the stigma associated with mental health. “I think that’s true in a lot of respects. I think because people fear losing their clearances, fear on job progression, you know. So, a lot of people just because of that stigma, it’s like, oh, this guy, he can’t hack it, you know, what’s wrong with him. You know we all went through it, you know, why don’t you just go home and drink a beer and get over it like everybody else.”

Timothy faced some of the struggles he dealt with not only as a geographical bachelor this year, but also about his fear of not being allowed to fly in the future based on a mental health assessment when he said, “I wouldn’t—I don’t think I’d fight it for a second, and I—the only thing I can relate to it would be, you know, where you—the wife and you struggle for a bit in a relationship, and she says we need to go get help, and absolutely not. To me it—it almost—you’re almost admitting failure at that point to me, and to go kind of seek that help that you’ve already lost it, and then, you know, you kind of look at it from a medical perspective. It’s like unless you’ve got something truly, truly wrong with you, you know, you don’t go see the doctor. I don’t mess with that. You fight through it. So, yeah, I—and in our world, I just think it’s a

bunch of—you've got a bunch of type A folks for the most part, and I just, I wouldn't debate that statistic one bit or that statement.”

Neal offered his assessment of the real deal again when he said, “I think the Army's tried to put that out, and I think it is true still that people have—they're scared of stigma. I think that—I think the Army has done a lot in the last couple of years to try to change that. I still think that individuals in their own mind believe that something will be attached to them if they go and seek out the help that it is that they need. I think there's a lot being said about the way things will be, but there's probably—there's probably something else on the back side that's reality, you know, but you know. You know the real deal.”

Major Bruce, the student with the medically diagnosed PTSD said, “I actually tried to self refer myself this year because of the stresses induced by medical stuff, and I was having some anxiety problems, and you know it was tough to make that phone call.” He went on to say, “I made a phone call. I talked to some specialist on the other end, and just because when you're in—that approach the mental health profession has right now is not very conducive to allowing people to come in. It's just, it's very standoffish. It's not—how can I explain it? One, it's removed. I think being in the BCT is the best thing if they're peers, but having to leave CGSC and go to a separate building and walk in, and that you don't know what to expect or who you're going to see and things like that, that is a big problem with allowing people to openly go talk to those guys.”

Based on his interactions with students Dr. Peter offered the following comment about mental health services within the Army. “I see quite a few people who say I'm not going to follow up on that because of the stigma of mental health. So I see many who say that. I would say it's not infrequent that someone says that to me.”

Finally, Elizabeth summed up the feelings of many of her peers with a simple declarative statement. “I think that there is a stigma about seeking help for physical health problems still in the Army.”

Stress

All the eleven CGSC students were asked to respond to the statement from the Rand Study that indicated that 26% of returning veterans suffer from some form of mental health issues associated with combat related stress. The range of their responses went from a low of 15% to a high of 100%.

They all agreed that there was a resultant degree of stress in the force as a consequence of both the number of deployments as well as the intensity of the action seen by many of these officers. This particular selection of student comments came primarily from combat arms officers who had seen or felt the sting of combat and experienced losses among their assigned Soldiers.

Jack, who has over 33 months of combat as an Infantryman, began by saying, “As a generalization (25%), it’s probably true.” He was followed by John who placed the bar higher with, “I’d probably say better than 50%.”

Barry said, “I would say it’s 100%, and people who say they don’t are lying.” Barry did modify his position slightly when asked to quantify stress among his classmates. Barry said, “I would say unscientifically it’s probably below 25% that have issues. I’m just basing that off of watching my classmates. It’s probably between 15%, floating around 15% to maybe 20% have issues with stress.”

Another combat arms officer, Ryan backed up Barry’s initial assertion about stress and puts another mark on the wall at 100%. He had the following to say, “If you’re asking people here at CGSC do their combat experiences affect their everyday lives, I would venture to say that it would probably have to be higher than that. The way I define combat stress, because the stresses that I had in theatre, no matter who you are, will always affect your future decisions. So, I think the people who are affected by their combat experience has to be close to 100%.”

Neal was a combat care provider, who has seen combat related stress through the eyes of doctors, nurses, and the wounded Soldiers they are caring for as medical professionals. Even Neal’s stress assessment was higher than the Rand Study. “I’d say it’s somewhere between 30% to 40%, somewhere in that range of people that have...you know maybe 33%, maybe one in three.”

Bruce offered the following, “At some way or another everybody’s affected in my view, I would say those that have been to combat, probably 90%. And the guys in my staff group alone, there’s only one that hasn’t been deployed, and I can see every one of them and a little bit of just their discussions that they have and what they talk about that all of them have been affected in some way, and I don’t know if all of them would be identified with PTSD, but I would probably say above 50% would be diagnosed with something, some form of, you know, a stress disorder

like that.” Bruce does have some personal insight into this issue as he is currently being medically treated for a mild form of PTSD.

The lone female in the interview Major Elizabeth placed it higher than Neal, but agreed with Bruce. “I would say probably 50%.” It’s instructive at this point to remember that Elizabeth was wounded in combat and has been under fire more than once in her 3 combat tours.

Remembering that Chaplain Steele indicated that about 95% of the students he saw are due to stress will help put his comments into perspective. His comments during this portion of the interview were both rapid and rambling at times. He clearly wanted to share his thoughts and observations. At times, he rambled on, answering the question but adding ancillary details and additional insights. The interesting thing about this interview with Chaplain Steele was that he truly wanted to talk about this subject. Part of the reason was that he has no one to talk to about what he hears confidentially from Soldiers on a daily basis. This interview allowed him the anonymity to be very candid and open in his comments. His interview like many of the interviews with the students provided a cathartic moment for him. His comments included in their entirety below consist of material on both stress and how that stress contributes to the anger that some students feel upon their return to the United States.

I’ve definitely seen, you know, an increase in peopling dealing with stress. Everybody has their own level of ability to cope with stress and ongoing change. So I think everybody who comes here manifests something different. I mean I’ve seen the whole gamut. I’ve seen guys that just can’t sleep anymore. They’ve gone to see the mental health people here. We’ve seen people have a hard time just sitting in class, you know, just that idea of, you know, something would happen, something would go off, being hyper-vigilant. One of my buddies he says, hey, I sleep with three or four knives in my room. I sleep with a knife under my pillow. He said I’m having a hard time coming back to I’m really here. I know I’m here, but I’m so vigilant all the time, that’s how I do it. I know that’s pretty extreme symptoms, but I mean the people I’ve seen they’ve, they’ve exhibited all, I think all ranges, left and right extremes of symptoms. I think one I get a lot is just, you know, people being angry, and they can’t figure out—they can’t put their finger on why am I angry, what am I upset about, what is it that’s driving us, and I think that’s really been a—that’s probably one of the ones I’ve seen more, you know, exhibited more than anything else, that and just again, lack of sleep. I mean they’re coming from maybe three months ago they were deployed or literally some coming straight from deployment straight to school. I think that ability to kind of get their head on straight or decompress or whatever the right term is, I think a lot of the guys haven’t—guys, men and women both—haven’t had that time to really, really decompress and kind of come back to center if there’s a center, if that’s possible, and now they’re throwing this academic environment where change is just such a constant. I think that fuels part of that anger, because they’re—I think they’re already dealing with their own symptoms, and

again, everybody's different, but they're already dealing with that coming back from deployment from combat from whatever they've dealt with the past, whether it's 12 months, 16, doesn't matter. Now they're thrown into an academic situation where most of them haven't been in it in ten or 12 or 13 years, and it's just one more trigger for them to get angry.

Behavioral Health Wellness Survey Form

When Soldiers prepared to leave a combat theater they were required to fill out a Behavioral Health Survey Form (Appendix E). There have been a couple variations of this form over time, as well as changes to the timing for issuing and completing the form. Some units had Soldiers complete the form in Kuwait, prior to shipping home. Then approximately 30 days after returning home, at the end of the block leave period many units had Soldiers fill it out again. Soldiers were well-surveyed in terms of mental health. They were asked on the form if they needed assistance for mental health related issues. The interesting issue with this is the dichotomy of the Army bureaucracy and the needs of the Soldier.

The Army wants to know that its Soldiers are mentally fit. They can only initially ascertain this by asking the Soldier to tell them the truth about their personal mental health. Soldiers do not want to tell the truth. The truth will, in their opinion, bring about the stigma of mental health, as well as appearing weak, and ineffectual among your battle buddies. Soldiers never want to appear weak, physically or mentally, they never want to let the team down. They, therefore, are in a dilemma. They end up not being honest to the very institution they took an oath to be a part of as a Soldier. Realistically, the Army knows this but as long as the Soldier filled the form out and did not indicate he needs assistance the Army met its obligation to survey the mental health needs of the field force. Brian P. Marx's article in the Clinical Psychology Review said, "Importantly, it has been speculated that these estimates may actually minimize the real numbers of military personnel and veterans suffering from PTSD and other disorders due to the fact that disclosing mental health difficulties may lead to removal from military duties, ruin the prospects for a military career, or delay a return to home" (p.671).

Most of the interviewed students indicated they did not fill the form out accurately. If they had filled it out accurately it would have meant a potential visit to the psychiatrist. At this point in the interview students usually demurred in their answer as they did not want to be dishonest, but it was clear that they did not fill this form out accurately when returning from combat. Based on the researcher's observation notes it was apparent that some of the students

were uncomfortable in either reviewing the Behavioral Health Wellness Survey form or did not want to provide a false response to the primary researcher. One student after looking at both sides of the form, placed it back on the desk, looked up and spoke about how Soldiers viewed this form as opposed to answering the question about did he fill it out accurately.

Major Newton said, “I can’t really say. I only speak for myself. I know I wouldn’t want to put down anything that would make me go see a counselor afterwards. Especially as an officer. And so, everyone knows you’re there with your unit. Everyone knows you, so if you said things like, yeah, XY and Z, and they see you in line for the psychologist, okay, major so and so over there, well, what’s wrong with him, he’s cuckoo you know.”

Bruce indicated he filled it out both times coming back from Iraq. Bruce has a mild form of PTSD and was very sensitive to those questions throughout the interview. As he said, “Yeah, they-yeah, yeah, definitely, are you afraid, you got—do you think you’re going to commit suicide. And they all just hand wave it...I don’t even believe we ever captured anybody putting anything on this that said it bothered them.”

Ryan indicated that he was very careful about what he put on the form every time he filled it out, “I probably tried to keep it exactly the same, because I wouldn’t want any red flags to come up. You wouldn’t want any flags to come up so that you would be told you were going to have to go do something.”

The most complete interchange and dialogue about the Behavioral Health Wellness Survey Form (BHWS) was with Jack. This portion of the interview is included in its entirety because of the depth of Jack’s response and his understanding of the Soldier psyche upon returning from combat. Jack was initially asked, “Have you filled that (BHWS) out accurately in the past?”

He responded with, “Yeah, I have, and the Army’s bad...I mean I’ve seen, I’ve seen three iterations of it. When I came back in very late 2001, December 2001, we didn’t do any of this”. He then continues his answer with, “We did something like it in 2004, but it was not this thing, and then in 2007, I mean, God. I mean...the pendulum had almost swung so far where it becomes overwhelming when you look at all the stuff, and you’re like I just want to go home. I hate to say that, you know, that attitude, but it really comes, okay, right before you...before we can go on block leave, before you get to go on block leave, you’ve got to...we have to fill all this out, and you’ve got to do the follow ups and all this other stuff.”

In talking about Soldiers and especially Infantrymen, Jack had the following to say about filling the BHWS out accurately. “I mean Joe ain’t dumb. I mean he knows if you put yes on any of this stuff, that means more time away from the bottle, you know the club, him getting laid, him going out and doing what he wants to do or anything else. Maybe other people feel like they should fill it out more honestly. I don’t think that Infantry guys feel that they should fill it out dishonestly. I just feel that within the (Infantry) culture, I got it, you know, I’m fine. It’s not that I think I’ll be stigmatized if I say yes. It’s just, man; I don’t want to talk to these weirdoes. They’re not my squad. They’re not my platoon.”

Timothy is a bit more caustic and pessimistic in his response, “I think a lot of people see this stuff as check the block stuff. It’s the government, military, covering their backside. I think a lot of people just pencil a lot of that stuff.

Research Question Four

What were the teaching and learning episodes for the staff and faculty?

The professional staff; Dr Peter, Dr. Ted, and Chaplain Steele, normally dealt with students on a one-to-one basis. A student will come into their office and they assist them individually. It is important to note that they do not act in concert with one another. Although they are familiar with one another, they are not located in the same building. Only one of the three is in the same academic building as the students. The other two are within a 5 minute walk of the primary CGSC academic building.

So, although they know one another they do not meet together, collaborate on specific students, or discuss their sessions with students. Dr. Peter, the psychologist, did indicate that after 3-4 sessions with a student, or after a lack of progress by the student that he might then recommend a referral to the Army mental health organization administered by Dr. Ted and the other psychiatrists at the Fort Leavenworth Army Mental Health office.

The chaplain was a release valve throughout all of this. He often saw students who did not want to seek assistance from psychologists or psychiatrists. They did not want to go to mental health counseling. As indicated earlier, they were afraid of the stigma of seeking assistance through mental health. This forced Chaplain Steele to be an amateur psychologist as he attempted to counsel students and assist them in reducing their stress and solving their emotional issues.

The faculty was actively involved in this process with the above listed professionals, but they were very interested observers. If a student was having an issue, any issue, it eventually began to impact them or their performance within the classroom. When their performance was affected it had a deleterious bleed-over affect within the classroom. Class discussions were impacted, and products within the class were not completed as a result of one or more students struggling with stress or emotional issues. One of the issues every year is the increase in the number of divorces among students. Many of these divorces were a direct result of prolonged deployments, and the marital stress it produced. These situations created a lack of focus and concentration within the cohort. A student needs time off to talk with lawyers, attend hearings, make changes to child care, provide transportation to children and react to a new role in their domestic life necessitated by partner changes. All of these things have an impact on classroom dynamics, and affected how instructors dealt with both the individual student as well as the remaining 15 peer officers in the staff group.

The faculty members at CGSC were both interested observers, and active participants in helping to manage the classroom activities of an effective and successful classroom environment. As such, they became progressively more aware and cognizant of the potential for combat stress among their students, and what they needed to do to properly and politely intervene and assist students who may struggle with a degree of combat related stress.

The faculty became increasingly more sensitive to latent combat related stress issues among the students in their classrooms. Student centered instructors were far more likely to take time after class and to speak with a student about either seeking professional help or alternative remediation for stress reduction. The current CGSC faculty understands that reporting is the critical first step in reducing or mitigating the effects of combat related stress not only in the classroom but also in the personal life of those affected students. The faculty has become partners with the medical professionals in attempting to decrease combat related stress in the academic environment. The comments below were collected from an almost two hour long interview session with a faculty focus group that was interdepartmental in nature.

Jerry talked about his unscientific observations based on his 3 years as an instructor at CGSC. His 3 years at CGSC are balanced by over 20 years in the Army with a combat tour to Afghanistan as a battalion commander. His observation follows, "In general...and I can only go for the last three years or so, and so not a very scientific comparison, but there does seem to be a

level of fatigue, a level of being cynical. Eldon talked about the attitude of students when he said, “You know, even when they take it out of context, but you know... a guest speaker makes a comment, and they (students) immediately... I think they shut down a little easier. So I, I think that’s an element of fatigue that we’re, you know, we’re seeing maybe.”

Examples of students walking out of class due to videos still exist. The instance involving Major Jack is articulated earlier in this chapter, as well as the incident related by Bill in his classroom. Some of those videos are tied to larger lessons and may not be able to be rapidly changed and as a result faculty need to be vigilant in watching individual students for signs of stress brought on by their combat experiences.

Earlier LTC Grant spoke about seeing and experiencing “short-temperedness” as an overt sign of combat related stress in his classroom. He went on further to say that he has opened himself up personally to some students by sharing some of his combat experiences as well as his fears in an effort to get them to either open up or to relax. As he said, “The one behavior that I have changed this year compared to last year is I take the opportunity to share my personal struggles with students in the classroom which I did not do last year, and I will say because they are very personal, and they do have ramifications.”

Jim followed LTC Grant’s comments when he added, “I just recalled something that LTC Grant said a moment ago that I would like to underscore, and that’s the issue of transparency. LTC Grant said that he, you know, from time to time will share personal experiences in the classroom. From a personal level, I think that’s very important. I think it’s very important for us to do that, and I think it’s especially important for us to share experiences where they didn’t work out quite so well, because that, that lets them know that, hey, you know maybe I haven’t been messing this up quite so, and I think that in...that transparency in and of itself can help reduce stress within the classroom.”

This is an important observation from Jim. This behavior by faculty requires both a degree of self-confidence to open yourself up in front of subordinates, as well as the humility necessary to talk about yourself as being less than adequate earlier in your military career. It also requires a level of modesty to admit that your performance may not have been at the level you desired, thereby allowing the students to benefit from your mistakes. It allows them to understand what right looks like. It may also reduce future stress on them, if they already know the appropriate action to take when a similar event occurs in their career.

Eldon spoke about watching students interact after class and that they were sustaining each other through their own personal Soldier support group. “I noticed a couple years ago when I was teaching I had a group of students who would hang around after class and kind of bond, and at one point, you know, I talked to them, and they said the reason we’re doing it is we’re just talking things out, we’re helping one another. There was a guy going back for his third tour, and this was a couple years ago. He was already going back for a third tour, and he was upset about that and other things, and as I said, there were three to four of them, and they seemed to kind of police their own a little bit.”

Eldon’s comments were underscored by Jerry when he added, “I think this probably ties to several of the comments that have already been made, but I think that one of the reasons that we may not necessarily see stress bubbling up in the classroom is peer pressure. You know they look around the classroom, and they see probably 15 out of 16 with the combat patch, and we’ve, we’ve seen...I think I’ve witnessed our students kind of becoming a master of perspective. They’re able to put their experiences in perspective as they hear the experiences of everyone around them as well, and in some cases I think they’re probably saying, you know, I’m not sure I had it quite so bad. So it’s the...I think, I think it’s the peer pressure, and I think in some cases we may see students actually suppress the, the overt indications of stress simply because of the peer pressure issue.”

Dr. Peter offered his view of this support among Soldiers, “When staff groups come through I’ll see camaraderie and cohesion, and I think that’s helping each other, and in my classes I see the guys asking each other, hey, are you doing okay with this topic or whatever? Are you, you know...might be sleep. Hey, are you not getting sleep that you should be right now, and they’ll talk to each other in that way, and that’s, of course, what you do want is you want that, that good interaction, the supportive interaction.”

Finally, Bill attempted to sum up what instructors need to do to mitigate combat related stress and its effects in an academic environment. “I think we have to figure out ways to be more attuned to the personal lives of the officers in the classroom, and I don’t know how to do that other than, you know, asking a bunch of questions, and that’s not something that’s comfortable for me as an individual. So, and I know sometimes it puts those students in an uncomfortable position, too, but if we don’t know what’s going on, it’s hard to say, hey, let me help. For example, I have an officer that’s getting a divorce, and it’s a pretty nasty affair from all accounts,

and you know, I don't know that I've gone out of my way, really, to say, hey, how can I help you get through this, and is she struggling in the classroom? Yeah. Is it PTSD related or deployment related stress? No. But it's certainly stressful, and it's certainly causing her major problems in the classroom, so I just think, you know, as a group of instructors we need to be a little more...figure out a way to be more in tune with them.”

Summary

This chapter presented the biographical profiles of the eleven CGSC students who participated in the study as well as the findings with respect to the research questions under review. Additionally, other perspectives about combat stress were presented through the viewpoints of professional staff members and faculty assigned to Fort Leavenworth. The intent of this chapter was to represent the point of view of the participants through their own words. Detailed quotations were used to tell the story of each officer's unique experience with stress. In answering the four research questions it was found that there were overlaps in some areas and at times it became during data analysis for the researcher to distinguish which quotes more effectively typified either outcomes or themes. This was further exacerbated by students actually answering a question earlier in the interview process based upon providing greater detail in response forcing the interviewer to drop or scratch the scheduled question at the appropriate place in the interview.

The student comments were thick and rich in detail but it quickly became apparent with 423 pages of interview notes that qualitative research can be messy. This chapter identified the major themes and outcomes experienced by the student participants. These concepts were identified initially by the first three participants during the interview process. Subsequent interviews confirmed the emergence of these themes. The interviews taken as a whole added to the veracity, verisimilitude, and validity of these emergent themes.

Topics that emerged were the levels of combat related stress in the classrooms, due to the academic stress experienced by the students as well as martial stress and the strain that put on social functioning and relationships. Another topic was flashbacks and how they were impacted by memories. Last, but not least of these topics was the issue of dual enrollment and the impact that this had in the amount of time necessary to complete both CGSC and the course work at XX University.

Themes also surfaced during these dialogues with the students. Among the themes identified through the interview process were alcohol usage, anger, sleeplessness and concentration and time management. Finally, outcomes with respect to combat related stress were articulated in the form of fear, transitions and transformations, and the stigma associated with seeking assistance for any mental health issues, which was further confirmed by the discussion surrounding the use of the BHWS form.

Lastly, to follow the maxim of Sharan Merriam about allowing the voice of the participants to speak for the case study the comments from Major Barry appear to be both relevant and germane at the conclusion of this chapter.

I do believe excessive stress can slow learning for some folks. Most of us, CGSC students, have been in some form of combat. Some of us have witnessed horrific things, yet are still able to deal with the stress and maintain happy productive lives with the ability to learn unimpeded. Others, who experienced lesser catastrophic events during combat, may feel completely tapped out and in dire straits. I do believe that individuals with severe cases of combat stress, who deal with depression, anxiety, lack of concentration, patience, and focus may have problems learning. These folks have a much greater problems to address before they can get on with life, let alone be able to effectively learn. The stress associated with learning comes from examinations, deadlines, possible failure, and pressure to uphold a reputation and please other, which can led to increased anxiety. The stress associated with combat can be far more severe.

Chapter 5 - Analysis, Discussion, and Implications

Overview of the Study

The final chapter of this qualitative research case study on *the effects of combat related stress on learning in an academic environment* has a restatement of the research problem, a review of the research methods employed in the study, as well as the implications of the findings, with recommendations for further study.

Restatement of the Problem

The problem this qualitative case study addressed was that Soldiers affected by combat related stress are returning to academic environments, and that stress had an impact on their learning. While there is a great deal of information about stress and learning there is very little information about the impact combat related stress created on Soldiers in a learning environment. This research provided additional information in this area.

Review of the Research Methods

This research study used the qualitative case study methodology. This approach allowed for greater depth and understanding of the participants perspective and points of view. More importantly it allowed the participants to speak for themselves. The voices of the 11 Army students, as well the CGSC staff and faculty members formed a comprehensive inspection of the research question.

Purposive sampling was used to identify appropriate study participants who met the selection criteria for the research study (Frankel & Wallen, 2006). Study participants came from a representative sample of CGSC Army majors with two or more combat tours. This research methodology used semi-structured interviews during data collection to capture the experiences of the study participants in their own words (Creswell, 1998; Merriam, 1998).

A semi-structured interview process allowed the researcher the flexibility to modify questions or ask follow-up questions that added depth, breadth, and substance to the on-going research (Merriam, 1998). Interviews with the study participants allowed the researcher the

flexibility to search for common themes and factors, rather than concentrating on acquiring data for other purposes (Creswell, 2002).

Research questions were the primary data collection vehicle. Interviews were conducted until saturation was achieved. Interviews took place at a convenient time for all participants. No attempt was made to limit the time for the interviews. A constant comparative method was then used to identify common themes, and outcomes, and to further inform the research (Merriam, 1998). From the descriptions of the various stresses experienced by the student participants a view was formed to describe the incidence of stress among Army CGSC students with combat experiences, and its effect on their learning.

Discussion

Prior to an examination of the research questions it would be helpful to understand the phenomenon of being a Soldier in an academic environment. There is a typical Army ‘can-do’ attitude about learning and being in school among Army officers. That attitude carried over to learning and simultaneously dealt with stress or stress related issues while in an academic environment at CGSC. Many CGSC students felt they can just do the job and ‘drive-on,’ even in the classroom. Soldiers as a group are normally very positive individuals who are used to working together to accomplish a goal or complete the mission. Soldiers rely on one another and work well in teams to achieve mission success. They feed off the enthusiasm and efforts of the entire group. Being together in a group is normal for most Soldiers, even in an academic environment (Saltiel & Russo, 2001).

Consequently when Soldiers look around at their peers in a classroom, and if they all appear to be doing well it becomes far easier for that individual Soldier to meet the norms of the group. Or as they say in the Army, “shape up, and ship out.” In this case the cohort, (a staff group in CGSC), had both a polarizing and calming effect on all of the assigned individuals (Saltiel & Russo, 2001). The cohort may have a moderating effect on the influence or impact of combat related stress in the classroom. The cohort kept some stress in check in the classroom. Yet even with the moderating effect of their peers within a staff group some students felt the pressure and strain of stress in their academic lives. Among the staff and faculty there is a perception based on both observations and conversations with CGSC students that there is an increased level of stress this academic year.

This academic year (2010-11) Dr. Peter is already booked 4-6 weeks in advance. In fact, in one Staff Section that has 40 Army majors 3 (majors) are already scheduled to see Dr. Peter, and the academic year began less than 6 weeks ago.

One of the three majors was a geographical bachelor. The Army created a situation that placed this major and his family under a great deal of stress. The major returned from Iraq in June, and was scheduled to attend the February CGSC class. However, there were vacancies in the August CGSC class and his unit released him early to attend the August class. This Army major, much like Major Tom, was faced with the very difficult decision to leave his family in their house and come alone to CGSC as he too had insufficient time to market and sell his house. He now faces the prospect of two years back to back away from his family. It was difficult for him initially as he adjusted to life without his family. He said at night he thinks about them and consequently finds it difficult to concentrate on his academic homework some evenings. The latest development to his situation as this dissertation is finalized is that his wife has just served him with divorce papers.

In most cases, there were two primary areas of stress that affected most majors attending CGSC. The first and the largest cause of stress among CGSC students was academic stress. Eight of the eleven CGSC students indicated that they suffered from some form of academic stress while seven of the eleven indicated that there was some marital stress or spousal concerns in their lives.

From a different perspective there are two groups of CGSC students whose learning is affected by combat stress. There are those who have not yet recovered from combat stress in their daily lives. They are still transitioning back into various roles in their lives; husband/wife, father/mother, student, and other roles in the military community like soccer coach or Sunday school teacher, to name but a few (Schlossberg et al., 1995). They continue to need more time to decompress and may struggle to concentrate either in class or with the post classroom reflections involving their homework and study.

The second group is recovered from combat stress in their daily lives, but remains overly sensitive to certain images or topics. They may also have trouble concentrating once an image or idea re-connects them to their combat experiences.

Research Question One

How did the influence of combat related stress affect the learning of CGSC students?

Analysis of the interviews indicated there were a number of stressors that impacted students at CGSC. Many of the stressors either crossed-over or overlapped into other areas of stress. That meant some stressors could be applied to more than one symptom. Dr. Peter said this best when he said, "I mean it's hard to separate what's an academic stress from what's, you know, operational stress or post, post combat type stress."

In other words, academic stress led to marital stress in some cases. In fact, this research indicated that many of the stressors acted in conjunction with one another. Insomnia or sleeplessness would definitely impact concentration in the classroom. If a student was tired it became increasingly more difficult to concentrate on the task at hand and pay attention in the classroom.

Combat related stressed affected the CGSC students in a number of ways. Their stresses and stress reactions were as individualized as the students. There was a commonality in themes but a difference in their individual responses to combat related stress. This was based on a variety of factors ranging from academic stress; marital stress and social functioning; dual enrollment, and flashbacks. Other themes that emerged and also had an effect on learning were anger, alcohol usage, and time management.

Academic Stress

Eight of the eleven interviewed students mentioned academic stress under Types of Stress, from the pre-interview student survey form (Appendix C). The common hypothesis was that these were combat veterans and that being in an academic environment should not be a stressful event for them. The actuality for many students was that CGSC attendance was stressful for them, and for some it also had an impact in their personal lives outside the classroom. These CGSC students had not been in a true academic environment in over a decade. Their personal professional expectation was that they would do well academically. They had already successfully commanded companies in combat and done well in a number of Army training courses: Officer Basic, Airborne, Ranger, Jumpmaster, Air Assault, and the Captain's Career Course. However, the focus in those courses is not as academically focused as CGSC, nor are any of them a year long course like CGSC. As college undergraduates they may not have

had many written assignments, and now CGSC was assigning a number of written products for which they were graded. When an Army major has not written a 3-5 page paper in over ten years, and he does not understand how to properly footnote or add citations that paper became a stressful event. Major Newton captured the personification of dealing with this form of stress when he said, “I frequently wished that I was deployed.”

Finally Major Neal indicated that sometimes a student would just tune out and not pay attention because of the value they assigned a particular lesson and its importance to them. It was not academic stress in this case, but rather an academic overload. “I think, yeah, I think sometimes my mind is not focused on things that, at least in this environment here, that I don’t necessarily believe are important.”

Marital Stress

Seven of the eleven students interviewed indicated they were concerned about marital or family issues in their lives. When Major Elizabeth (bachelorette) is eliminated from this survey 70% of the CGSC students admitted to some form of marital stress in their lives. Marital stress is tied to a number of other stressors; academic stress, social functioning to include family transitions, family reconciliations, and even time management. The academics at CGSC demanded attention to detail and due diligence especially early in the academic year. This often meant managing individual schedules and taking the time to do the necessary scholarly work in preparation for class. For families that were just re-uniting after a combat tour and the military spouse disappears into a home office for the evening the other spouse thinks he might as well be deployed. Barry captured the quintessence of the tension between academic stress and marital stress and being dual enrolled when he said, “I mean we’ve had arguments at home. You come home and you go to the basement and you start reading books for XX University, whoever, and writing stuff on the paper for XX University, and other husbands are going out. That’s true...it’s a cost you have to pay, and even though like Mary’s very good, it bothers her...that’s added stress.”

Dr. Peter talked about the overlapping of academic stress, marital stress and social functioning, and the issue of dual enrollment. “Those are the guys that are, you know, absenting themselves from their family life, and then it’s causing a problem with their family, and I’m not sure what the answer is, because you can’t have a, you know essentially a graduate program without having that level of academic challenge.”

In the semi-structured interviews students acknowledged that family transitions induced marital stress. For some, it was not just academics that forced the issue as much as knowing that shortly after graduation they faced another imminent deployment and they're trying to both assuage and prepare their family for another transition and another family separation (Sapolsky, 1998). One student indicated that because he knew he would deploy immediately on graduation he cut back on academics, as did a second student to focus on his family and spending time with them.

Students struggle throughout the year with balancing academic requirements with family obligations. Marital stress is a very real issue. The percentage of divorces within the Army is on the rise. There is a slogan within the Army that when a Soldier deploys so does his family. The family members suffer from many of the same stressors to include anxiety, depression, and insomnia. A Soldier's return from combat and his re-integration within the family has a tremendous impact on how a family transitions and what traditional roles are resumed or changed upon his return (Schlossberg et al., 1995). In the minds of the 10 married CGSC students in this case study there was a clear correlation that marital stress had a direct impact on academics and their ability to concentrate and offer their best efforts in a learning environment.

Dual Enrollment

Dual enrollment at CGSC is a double edged sword because it added to academic and marital stress and a lack of concentration in CGSC classrooms. Of the eleven CGSC students in this case study two already possessed graduate degrees. Of the remaining nine CGSC students seven were already enrolled in graduate degree programs. This enrollment required an additional investment of time, money, commitment, and effort on their part. It also threw the year out of balance for those seven students who were now attending two colleges. The extra time spent attending graduate classes and doing the additional homework came at a price that is usually passed onto the families. At a time when many spouses felt they would have time with their returning combat veteran, this same veteran announced that he would attend XX University in the evening to obtain a masters' degree. Attending graduate school was an individual decision. It was also a decision that impacted the entire family in terms of the time and commitment necessary to balance both CGSC and XX University along with the other demands of father/motherhood.

There is no official requirement for Army majors to have a graduate degree. CGSC does not award a graduate level degree or masters degree upon completion of the normal 10 month CGSC course. Students are told that the curriculum is graduate level work, but the Army only awards a diploma from CGSC with the official designation of having completed Military Level Education 4 (MEL 4) or the Intermediate Level Education (ILE) required for Army majors. The designation of MEL 4 is an important milestone for selection for promotion to Lieutenant Colonel. It is not the sole determinant, but with the MEL 4 designation most majors are selected for promotion to Lieutenant Colonel. A graduate degree however is not a promotion requirement or prerequisite to achieve the next rank in the Army. In the past, it has nonetheless been seen by some as a potential discriminator for promotion boards. Presently the Army has about a 95% selection rate to Lieutenant Colonel.

Approximately 33% of an incoming CGSC class already possesses a graduate degree. The remaining CGSC students look to both those peers and senior officers who already have a master degree and they feel it is a necessity for them for future promotion and certain jobs. They therefore immediately signed up for the various graduate degree programs that are available within the local Fort Leavenworth area. There are a variety of programs with an equally assorted level of requirements. They all fill a need, and if students looked around long enough they would find one that supports their academic requirements. Some are major local universities and colleges; others are satellite campuses with a classroom on the fort, while others are on-line universities. It should be noted here that CGSC is authorized by the North Central Accreditation to award graduate degrees to selected students who complete an faculty supervised independent study program during the course of the CGSC calendar year. This program is in addition to their normal CGSC classes, and requires additional personal time outside of the classroom to complete. Normally about 65-75 students in the August class take advantage of this program.

No matter which program was selected they all demanded a level of time, effort, and commitment. This additional effort often added a level of stress to everyone's life. It affected the student because he was carrying a double academic load. It affected the dynamics of family life in the evening in many military quarters on post. It affected family finances depending on the cost and the payment methods available to some students. Finally, and perhaps most importantly it affected concentration and attention to detail in CSGC classrooms as students focused on examinations and papers for their civilian graduate degree programs.

Flashbacks

This concept is not new, nor is it something that can be controlled or predicted. Flashbacks are very individual mental moments in which a past memory is recalled based on a current situation. It may be an image, a paragraph, a conversation with a peer, or half a dozen other moments in a classroom that triggered the flashback. Some would call it day dreaming, but it is day dreaming with consequences. Occasionally, flashbacks mentally removed a student from the classroom. Something in the curriculum would mentally transport the student back to Iraq or Afghanistan and in that moment he or she would not be attending to or concentrating on the academic discussion in the classroom. Sometimes a video or movie clip used as part of an exercise conjured up memories that were painful enough that it caused students to physically leave the classroom.

Within this case study there were five documented flashbacks that were validated by student or faculty comments. Elizabeth and Tom spoke about their reaction to the IED video, while Jack and one of Bill's students discussed their reaction to video clips from *Twelve O'Clock High* and *Saving Private Ryan* respectively. Finally, one student spoke about mentally being back in Afghanistan. What he indicated to the primary researcher was that it was not an isolated visit. He indicated he was mentally transported back to Afghanistan on more than one occasion during the academic year.

As an instructor there is no way to tell when a student is mentally in the moment or when he is not actively attending to discussions in the classroom. The current CGSC class has multiple tour combat veterans. There are 138 officers or 17% of the current CGSC class who have 3 combat tours. It should not be a surprise that after 36 months of combat that there are many transformative moments that transition a Soldier from their academic environment back to those events that had a significant emotional impact on their life. When that happens they are not concentrating on what is occurring in class, no matter what the topic is at that moment.

Flashbacks clearly cause a lack of concentration among students who experience those moments in class when they are mentally transported back to Iraq. There is no way to predict when those moments will occur, nor how long they will last. They are as individualized as the specific memory that caused the mental break in a student's concentration. A flashback has the potential to curtail learning for any Soldier for anywhere from a few minutes to as Major Elizabeth said, "Usually the rest of the day."

Research Question Two

What were the common themes in how each participant dealt with stress?

Five common themes emerged after the responses of the participants in this study were analyzed and evaluated. The common themes were alcohol usage; social functioning, relationships and family separations; anger; sleep/concentration; time management.

Alcohol Usage

Seven students reported an increase in alcohol usage on their return from theatre. One reported a resumption of tobacco use and another indicated an increased usage of tobacco products since returning from Afghanistan. One student indicated an addition to dipping (tobacco). Three students indicated their use of alcohol may still be on the high side in terms of usage. The students who endorsed drinking did so for the following reasons; alcohol is easy to buy, alcohol is legal, and it allowed students to forget things they don't want to remember.

Alcohol usage when combined with the sleep issues associated with a return from a combat theater meant that during the decompression period, which can last up to a year, that alcohol is another factor that can affect concentration in a classroom. Students in this study and those observed by the primary researcher were only affected by their preparation time. For those few who drank to forget or the three students who still drank too much the issue was that they did not devote the appropriate level of effort to their homework and class preparation. Therefore, given the cohort model employed by CGSC the next day not only were they not ready for class, their lack of preparation time then impacted the learning of their fellow cohort members.

Social Functioning, Relationships and Family Separations

Some CGSC students noticed a change in their functioning with family members. The Holmes-Rahe stress inventory (1967) indicated that many Soldiers and their families experience three or more stressful events as part of a normal Army deployment cycle. Associated with that were family separations and family reunions with their attendant stresses, transitions, and outcomes as military spouses and military parents determine their new roles in the family.

Family separations were very stressful events in the life of both the Soldier and his or her immediate family.

When deployments are happening every 18 months or less and the military partner is then deployed for 12 months this cycle begins to wreck havoc on families and relationships. They barely have time at home to decompress and process what has happened to them and then the cycle begins again for a second or third time. In the current CGSC class there is a major with a special operations background who has deployed 8 times, albeit for less than a year on all occasions he and his family have suffered through 16 transitions of family separations and family reconciliations.

The transitions (Schlossberg et al., 1995) and how they are managed with each succeeding deployment had a tremendous impact on the mental attitude and stress within those families on the Soldiers return. Not to be forgotten in a discussion on relationships and social functioning is Major Elizabeth. As the sole single Soldier in this study it is not entirely appropriate to draw a conclusion from her participation, but her lack of a relationship caused her to be introspective at a time when she needed someone to talk with and to be around other people for support.

Relationships became important because Soldiers wanted to reconnect with family and friends on their return from a combat theater. For some that was more important than academics, particularly if they knew they were going back to Iraq in the short term. It became difficult to focus on academics when your anticipatory stress levels (Sapolsky, 1998) were elevated based on your future assignment. Family became more important than History 101. Soldiers made decisions to put family or friends in front of academics.

Anger

The students in this case study noted that others in their lives observed an increase in their anger, or an inability to control their emotions. Their resultant anger issues seem to arise more quickly upon their return from either Iraq or Afghanistan. The students cannot determine what makes them angry. They do admit to feeling helpless when they cannot control things around themselves (APA, 1994). Three students indicated evidence of anger in class. They would turn on peers, be short with answers, or just choose not to participate until the topic or lesson changed. They would then deliberately absent themselves from the discussion within the cohort or staff group. The anger like flashbacks was not predictable, as opposed to it being

initiated by a memory it usually came about because of a perception of a lack of peer professionalism. These three students endorsed being angry at their classmates for a lack of focus during class discussions. Their reactions were to turn on their peers, be short with answers, or not participate themselves. They would then deliberately absent themselves from the discussion within the cohort or staff group. So although anger was a theme the research shows that only 3 students felt angry in classroom situations. Those 3 students however had a direct impact on the learning of 15 other students on days that they expressed anger in the classroom. So anger by one student may appear to be an isolated incident but it has tremendous implications within the cohort (Saltiel & Russo, 2001) and how the cohort members respond to that conflict.

Sleep/Concentration

Nine of the eleven CGSC students indicated their sleep patterns were affected in some cases while in theater, but more often once they returned home. In academic year 2009 over 65% of CGSC students reported sleep problems (Diggs, 2010) based on the data reported to the Army Physical Fitness Research Institute annex located at Fort Leavenworth, Kansas. Students who reported directly to CGSC from a returning unit had the greatest degree of difficulty in both regulating sleep and being able to concentrate and attend to discussions in class. Fortunately, most students 'normalized' within the usual parameters of heightened awareness. Normally it takes 3-4 months to decompress for everything to be normal again. This heighten awareness coincides with increased levels of stress (McEwen, 1998; McEwen & Seeman, 1999; Sapolsky, 1998).

However in those first 3-4 months of returning and decompressing it is difficult for some Soldiers to fully attend to and concentrate on the tasks at hand especially in an academic environment. Generally sleep will not be the only issue that students are dealing with, but it is the issue that most often forced the appointment with medical professionals. Lack of sleep has a direct correlation to lack of concentration or an inability to concentrate during periods of academic study (Kennedy, 2009; Tan, 2007).

Students spoke about waking up in the middle of the night and not being able to return to sleep. For some it was too quiet back home. They had difficulty adjusting their sleep patterns because of changes in eating habits, sleeping conditions, living and operating conditions and daily routines. All of these required an adjustment and needed to be reset so that sleep patterns can return to a level of normalcy. Inadequate sleep, or sleep interruptions for whatever reasons

impacted their ability to pay attention and concentrate in the classroom. Again, in this case there were overlapping stressors. One student would wake up for no apparent reason at 3 or 4 o'clock in the morning and would be unable to return to sleep. Another was influenced by his wife. She was worried about his next assignment and consequently he would wake up in the middle of the night and begin worrying. Not only was it difficult to concentrate in class due to the lack of sleep, the anticipatory stress (Sapolsky, 1998) associated with worrying about the family move after CGSC was further dividing his attention in the classroom and his academic performance suffered.

Time Management

Students saw time management as a way to dissipate or manage the stress in their lives. Like most things a schedule was something to be both managed and conquered. Again this was something they could control when it came down to their personal schedule. Five of the eleven students indicated they had a battle rhythm for their daily activities. A couple stayed in Lewis & Clark to read and study before going home. Basically they tried to finish normal homework readings before going home and being consumed with family activities.

Another student went right home and would immediately begin working on CGSC homework and XX University readings so when the kids came home from school he could spend time with them. But often in the evenings he would have to return to the basement to finish up. This academic commitment and adherence to his schedule caused friction with his wife. He was not the only one who experienced this. Major Newton articulated a great daily schedule in terms of time management, but as he said, "That's what I tried to implement, but I haven't been very successful."

Students were frustrated, stressed, and even angry at times when the CGSC academic schedule would change. It was worse when it affected their family. When the CGSC schedule is open or free students acting in another of their roles as a parent or guardian will schedule a doctor's visit or an appointment with a teacher at their child's school, and then the CGSC schedule would change. These inexplicable changes would cause frustration and add additional stress. In almost all cases their SGAs would allow them to depart on an individual basis. They still were frustrated by the lack of control, and unpredictability of the larger institutions schedule. They liked a certain level of predictability in their lives.

Being able to manage and control their schedule reduced the feeling of hopelessness and lack of control in their personal lives. When the CGSC school schedule originally indicated free time and that time is later re-scheduled by adding another event students feel as if that time has been taken away from them. When students saw open time on the schedule they adjusted their personal schedules accordingly. When the schedule changed at the macro-level for anything it always caused a sense of frustration as well as elevating stress levels among some students if only temporarily.

Research Question Three

What were the common outcomes, from the perspectives of the participants with respect to combat related stress in the classroom and if so, what were they?

There were five common outcomes that emerged from the responses of the participants in this study. The common outcomes were fear, transformations and transitions, stigma, stress, and the Behavioral Health Wellness Survey Form (Appendix E).

Fear

Every one of the eleven interviewed CGSC students felt some degree of fear or helplessness while in theater (APA, 1994). Most lost friends or Soldiers, while three of the students were wounded in combat themselves all in the act of saving fellow Soldiers. None of the eleven students were unaffected by their experiences in either Iraq or Afghanistan. These fear inducing events all had some form of transformational effect (Mezirow, 2000) on these Army majors. The three combat wounded students were more vociferous in classroom discussions and clearly had little tolerance for discussions that as Ryan said were “not focused on saving people’s lives.”

Fear is an emotion and a marker for creating memories within the limbic system. The amygdale regulates the brains emotional response. All memories have an emotional component (Fishback, 2008a; LeDoux, 2001). The connection of fear to the curriculum is through memories and flashbacks. Parts of the CGSC curriculum, readings, presentations, discussions or practical exercises have the potential to cause an unpleasant memory to resurface. It is in that moment that fear and the sense of helplessness that the student experienced in theater that he is not concentrating on classroom activities.

Transformations and Transitions

Most of the personal transitions for the eleven students were both positive and successful. In only one case was there a possibility that the relationship between the student husband and wife (Soldier and spouse) was headed for a divorce based on off the record comments by the Soldier to the primary researcher. The professional transitions were a bit more difficult for some especially when associated with an academic course like CGSC. Students were not used to being students. One month before arriving at Fort Leavenworth all of the interviewed students were in charge of someone or something. They were responsible for people and equipment in Army. They were Soldiers leading other Soldiers. They were the responsible individuals in their subordinate organizations. Not only were they in charge of someone or something, they were responsible for it.

After signing in as CGSC students at Fort Leavenworth, in the blink of an eye, they were now only responsible for themselves. They were now students and they had to successfully produce quality academic products to receive a passing academic grade. This transition to full time students generated additional stresses laid on those stresses already generated by the stress of combat, returning from combat, rejoining your family, moving your family cross country, and becoming a student for the first time in years (Schlossberg et al., 1995).

Stigma

There continues to be a stigma associated with receiving assistance from mental health professionals (CBS, 2006; Hoge et al., 2004). The Army has not yet learned how to deal with this phenomenon. The students are products of the Army and reflect its values. The Army is changing its approach and attitude about mental health, but there is still a stigma associated with it and that is reflected in the attitudes and comments of most of the eleven students. Some want to believe otherwise, but either by actions or deeds they have yet to see the evidence that the 'Big Army' is trying to mitigate the stigma associated with seeking help for mental health. That effort from the Army has not yet been actualized in their minds. The DOD Mental Health Task Force provided the following data from related Army surveys about this issue and it indicated that, "Only 40 percent of the troops who screened positive for serious emotional problems sought help, Nearly 60 percent of soldiers said they would not seek help for mental-health problems because they felt their unit leaders would treat them differently; 55 percent thought they would be seen as weak" (Priest & Hull, 2007, para 26).

The medical professionals associated with this case study agreed that the stigma associated with mental health is “a national stigma.” Based on their interview responses eight of the eleven CGSC majors would probably not seek assistance for mental health issues from Army health care providers.

Stress

The Rand Study estimated that 26% of the force suffers from combat related stress. Eight of the eleven CGSC students represented in this research case study said that stress levels were higher than the Rand Study indicated. Of the six students who are quoted in Chapter 4 about stress levels among their CGSC peers five of the six students placed the level of stress higher than the 26% articulated by the Rand Study. The Rand Study (Tanielian et al., 2008) was a benchmark for combat stress statistics and a start point for the discussion of stress within this case study. CGSC students have twice now repudiated data from national sources. The Dixon study (2008) a CGSC Masters and Military Art and Science (MMAS) thesis that surveyed CGSC students came in higher than the data it was seeking to replicate.

Behavioral Health Wellness Survey Form (Appendix E)

The findings surrounding the use of this form are almost a continuation of the comments associated with Stigma (above). The surveyed students indicated that any question on the form answered affirmatively would immediately draw the attention of the medical screeners and would warrant a visit to Army or community mental health. This acknowledgement by the eleven CGSC students that they did not fill this form out accurately lends credence to the words of Dr. Charles Hoge and Lieutenant General Eric Schoomaker who both contend that there are more Soldiers ‘out there’ who need assistance and that our numbers who need mental health assistance are off. Recently retired LTG John Vines, an Infantryman and combat commander in Iraq and Afghanistan corroborates this issue with, “Countless officers keep quiet out of fear of being mislabeled. All of us who were in command of soldiers killed or wounded in combat have emotional scars from it. No one I know has sought out care from mental-health specialists, and part of that is a lack of confidence that the system would recognize it as 'normal' in a time of war. This is a systemic problem" (Priest & Hull, 2007, para 27).

What they're basically saying is that the mental health issues within the Army are greater than we suspect, and it is only exacerbated by Soldiers when they do not fill a form out accurately. A review of questions 1, 2, 3, 4, 5, 6, 7, 8, 10, & 14 on the Behavioral Health Wellness Survey Form combined with knowledge of the student quotations from Chapter IV and the realization is that very few Army officers in this case study filled this form out accurately. They were doing exactly what LTG Vines indicated officers do in most cases involving combat stress or mental health related issues. They were not accurately reporting health information nor were they asking for help, even if they felt they needed help.

Research Question Four

What were the teaching and learning episodes for the staff and faculty?

The faculty understands that observation and personal knowledge about a student's background is the first step in mitigating the effects of combat related stress in the classroom. The CGSC faculty partnered with medical professionals as they all attempted to decrease combat related stress among the students. This year faculty members have physically taken students to see mental health professionals based on classroom observations and discussions with students and other instructors.

The episodes themselves are usually subtle, and ambiguous in nature. Stress is sometimes difficult to discern. It cannot always be determined that a particular behavior is a direct result of a form of stress. What are its manifestations, and the classroom behaviors associated with combat related stress? What do you tell instructors to look for in a classroom? Most likely, combat related stress in a learning environment is discerned by instructors through conversations, observations and confirmations with fellow instructors. The important point here is that the CGSC faculty is sensitive to this phenomenon and prepared to deal with it in whatever manifestation it appears. In addition to being sensitive to student needs the CGSC faculty through their on-going faculty development program and interdepartmental training were responsive to recognizing and understanding the characteristics of adult learners in an academic environment. Saltiel and Russo (2001) approached the idea of an experienced faculty invested in the students when they said, "Good instruction comes from a faculty that is knowledgeable, invested, and trained in the program" (p. 47).

CGSC Faculty members were not only professionally invested and aligned with their students many also had a personal interest and investment in the health and education of their CGSC students. CGSC Faculty saw students as an extension of their service; as well as the future leaders of their immediate family members. Many faculty members have sons or daughters who are currently serving in the Armed Forces. The Department of Command and Leadership at CGSC has 27 retired Army officers who have 11 sons serving as Soldiers, Marines or Airmen.

In at least one case combat related stress is transferable and exacerbated by knowledge and proximity to active duty Soldiers. One of the CGSC faculty members was an SGA who actually taught two of the eleven students in this case study, and he also has two sons in the Army currently on their third tour to Iraq. This SGA had to leave class on more than one occasion while teaching to collect and compose himself. He has been very professional, but knowing what he knows about the profession of arms has made some discussions with his students difficult for him. Some days it is not just students who have difficulty concentrating and paying attention in class; it is actually faculty members worrying about their own family who are in harm's way while answering the Nation's call.

The CGSC faculty realized that stress can never be completely eliminated. The faculty also viewed stress as stress. They made no determination whether it was combat related stress, martial stress, or academic stress. It might be brought on by divorce or by other stress inducing variables. To them, it was just stress and it was occurring in their classroom. It was their job to mitigate or eliminate it, if possible. Having worn the uniform of their Nation they are sensitive to the needs of those who wear similar cloth and see it as their duty to "take care" of their Soldiers, even though they may not be on active duty themselves. It is a duty and a trust that they take seriously as Veterans responsible for teaching the next generation of Soldiers.

Implications of Findings

The Army as an institution understands that Soldiers are under stress. It is everywhere the Army looks. Personnel statistics are alarming and they have negatively increased this year in the area of DUIs, divorces, domestic abuse, and suicides. Fort Leavenworth has experienced the loss of 3 CGSC students to suicides in the past four academic years. The Army has attempted to minimize the effects of stress on Soldiers and families. The current operational tempo and

personnel assignments have, in some cases, contributed to that overall stress. Basically, the Army knows and understands the symptoms and causes of combat related stress (Headquarters, Department of the Army). It comes down to a matter of scope given the size of the Army, its finite supply of resources, and the mission of the Army in the Global War on Terror (GWOT).

At CGSC the Army Physical Fitness Research Institute (APFRI) offers a voluntary health wellness assessment for all CGSC students. It is a comprehensive examination of a student's health from the perspective of diet, exercise, sleep, and general health (blood pressure, cholesterol, weight and cardiovascular fitness). This beneficial examination offers an honest insight into the personal health and life style choices CGSC students can make to transform unhealthy behaviors into positive behaviors. Soldiers arriving at CGSC have been stressed by 10 years of conflict and many deployments to support the GWOT and the security of the Nation.

Figure 5.1 from APFRI indicates general health trends for two CGSC classes (Diggs, 2010). The APFRI survey corroborates some of the issues associated with earlier interviews with CGSC students concerning anger, insomnia or sleep problems, and tobacco usage. Additionally, during the initial physical screening APFRI discovered that in the last two CGSC classes there is a higher incidence of elevated blood pressure when comparing CGSC to their older (by 7-8 years) counter-parts at the US Army War College. In other words, Army majors attending CGSC have greater health risks because of higher blood pressure than the Lieutenant Colonels attending the Army War College (Diggs, 2010).

Figure 5.1 Mid-Career Officers Identified Risk Factors



Mid-Career Officers Identified Risk Factors



Percent At Risk

Measure	CGSC 09-01 (N~510*)	CGSC 09-02 (N~237*)
Alcohol consumption (>14 wk)	4.7%	5.7%
Tobacco Use	13.6%	16.9%
Former Smokers	18.4%	13.1%
Anger (> 75 th percentile)	19.4%	12.2%
Anxiety (75 th percentile)	13.4%	11.0%
Depression (>75 th percentile)	13.4%	8.9%
Sleep Problems	65.1%	
Sleep dissatisfaction	24.8%	

* N size slightly variable for each measure.

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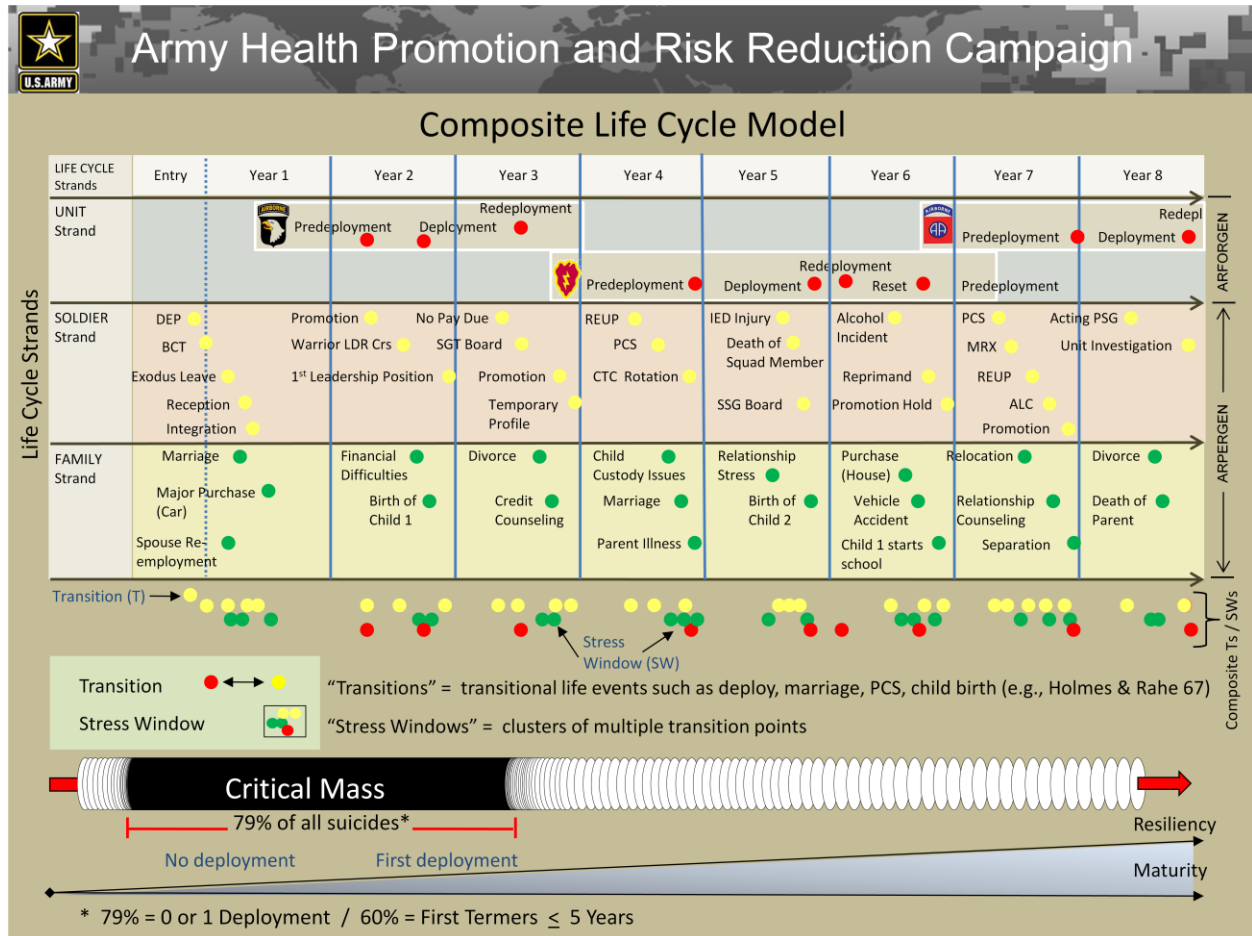


Medical professionals know what relieves some forms of stress. Acute stress can be moderated by diet, exercise, and rest, while sometimes combined with counseling and medications as temporarily required and administered by medical professionals. Both Doctors Peter and Ted endorsed the idea that combat related stress can be addressed and dealt with in a positive manner. Usually the stress associated with combat can be overcome in a 4-12 month period and for many Soldiers within 3-4 months if they follow a standard regimen of diet, exercise, rest, and rebuilding or reconnecting the relationships in their lives.

As a result of this experience the Army took a holistic look at the causes of stress and attempted to identify, modify, and mitigate those contributors to stress. They leveraged the works of both Holmes-Rahe and Nancy Schlossberg in an effort to educate leaders of the effects of various stress producing events in the life of a Soldier. Figure 5.2 depicts a Composite Life

Cycle Model. This model indicates significant emotional events (Holmes-Rahe, 1967), as well as the various transitions (Schlossberg et al., 1995), that occur to a Soldier.

Figure 5.2 Army Health Promotion and Risk Reduction Campaign



Source: US Army Report on Army Health Promotion and Risk Reduction, Report Overview Leader’s Brief, July 2010, page 13.

Missing from this Army Life Cycle Model is any acknowledgement of the impact of attending school and the effects of academic stress in a learning environment. The implication is that school or attendance at school is considered a break by many Army leaders and they do not view academic attendance as stressful. Yet eight of eleven CGSC students indicated they experienced academic stress this year.

The actual Holmes-Rahe Stress Inventory scale includes schools and changes in schools and residencies as stressful events. The Holmes-Rahe Stress Inventory lists 43 events that

produce stress (Holmes & Rahe, 1967) and those stressors have the ability to stimulate illness by weakening the immune system or inducing other health related issues (Ember, 1996; Jaffe-Gill et al., 2007; McEwen & Lasley 2002; Medina 2008a; Rahe et al., 1964). Numerical scores or values are assigned to each of the 43 events listed on the inventory (Appendix F). The scores are then summed to provide a total score. A low score is better than a high score. Scores of less than 100 are not considered stressful while scores of over 300 are considered stressful (Holmes & Rahe, 1967). By adding the events associated with attending school and the other attendant changes to the already existing events in the Army Composite Life Cycle Model the point scale for most CGSC students exceeded 300 points.

In September 2010 the office of the Vice Chief of Staff of the Army directed that CGSC incorporate the Composite Life Cycle Model (above) into the CGSC curriculum. This tasking was assigned to the Department of Command and Leadership (DCL) within the College. The model as currently depicted did not allow for stress associated with an academic assignment as a student. Acting on the advice of the primary researcher DCL incorporated the academic events from Holmes–Rahe into the Army Composite Life Cycle Model as well as the numerical values associated with the Holmes-Rahe inventory. This addition of academic events and their associated numerical values will provide a more realistic assessment of stress experienced by CGSC students, as well as providing them both insights and visibility as to the type of events that can cause stress in their daily lives (Holmes-Rahe, 1967; Medina, 2008a; Selye, 1976). This recommendation by the primary researcher about the application of the instrument and the incidence of stress within the CGSC student population will have an immediate impact on over 1400 Army majors and their sister service class-mates beginning with the February 2011 class.

Implications for Practice

Prior to examining the implications in a systematic manner following the sequence of research questions there were a couple of general observations that need to be acknowledged and comprehended. Along with being cumulative stress had a symbiotic relationship with other stresses. With ten sub-areas of stressors for CGSC students there were a variety of implications for practice, as well as a number of potential recommendations.

Perhaps the first thing to acknowledge after reading the experiences of the eleven CGSC students in Chapter 4 and the discussion of the Research Questions in this chapter was the

recognition that these stressors cannot be examined in isolation. The stresses experienced by the student participants were real and had an immediate impact on their lives, their learning, and their future experiences. The cumulative and multi-faceted impact of these ten stressors meant that often they were dealing with more than one stress at a time.

The second implication was not only were these stresses cumulative in nature but they were overlapping and intertwined in their complexities and combinations. As the medical personnel noted earlier if a student endorsed insomnia or sleeplessness he or she also indicated that caused concentration issues in the classroom which may then led to academic stress.

A third implication was the impact this stress then had within the student cohort. If a student was awake or alert in class they were not be fully participating in the classroom discussions. This had an impact on their learning as well as the learning imparted to their fellow cohort members because of their inattention and non-participation in meaningful discussions representing their branch perspective (Saltiel & Russo, 2001). This implication depicted the impact that more than one stress had on students, and the consequences associated with it. The worst case scenario in this situation would be to add dual enrollment or marital stress to this equation.

A fourth implication was stressors that affected academic stress were dual enrollment, marital stress, time management, alcohol usage, and flashbacks. The issue was that none of these occurred sequentially or concurrently, nor did these five stressors occur simultaneously with all eleven students. They did, however, occur. It was this occurrence that affected students. The impact was that their learning was affected, and not in a positive manner.

A fifth implication was that students who experienced academic stress supported that idea because they were dual enrolled. This additional academic work load impacted their ability to fully function at home in their role as a parent, and a husband. Time spent away from the family may have led to marital stress in some cases. Their ability or inability to successfully implement time management skills and the personal discipline they needed academically might again lead to academic or marital stress. Dual enrollment was driven by the implication that you “need” a graduate degree for promotion to Lieutenant Colonel. The stress of dual enrollment as illustrated earlier had the potential to impact marital stress and family functioning as well as increasing the possibility of academic stress. While there are many fine graduate programs available in the Fort

Leavenworth vicinity the fact is that this may not be the optimum time for some majors to take the time away from personal responsibilities for additional schooling.

The sixth implication stayed with the issue of academic stress and that is that all Army majors will attend CGSC, and many do so shortly after returning from combat. There was little time to decompress and process your transformational combat experiences, transition and reunite with your family, re-establish your role as a father/mother and a husband/wife, and conduct a cross country movement to begin a new job as a student. Nancy Schlossberg (1995) indicated that all these transitions are not only important but they are stressful on all parties involved, and that they have future implications based on how successful all those interpersonal interactions were implemented.

A seventh implication was that among the eleven CGSC students there were 12 incidents of excessive alcohol usage and flashbacks. Both may have had their origins in psychosomatic responses of the students. Flashbacks occurred in the classroom and the trigger cannot be predicted. The five students who experienced flashbacks had no control over their memories subconscious recall of an earlier traumatic event associated with their combat tour. The implication is that in some cases this effectively removed them from the classroom and there is a period of time before they are both physically and mentally able to re-engage in classroom activities. The alignment of flashbacks and alcohol usage together underscored the students use of alcohol to forget about things that have occurred in their past. As the students said about alcohol, it's legal, it's easy to obtain, and it allows them to forget. Alcohol, however, did not prevent flashbacks but it mitigated their impact. It dulled the pain, and in some instances alcohol prevented students from adequately preparing for class.

There were both physiological and psychosomatic stresses that have implication for practice and are difficult if not impossible to individually control. Those stresses are anger, sleeplessness, fear, flashbacks (again) and anticipatory stress (Sapolsky, 1998). Some of these stresses can be controlled sooner by seeking medical assistance, while other may 'normalize' over a period of time based on individual mental resiliency.

An eighth implication or observation was the fact that because of the stigma associated with mental health Soldiers were not accurately reporting on themselves. Very few Soldiers accurately filled out the DOD Behavioral Health Wellness Survey form. The Army culture, in

the past, has not looked kindly on those Soldiers who report issues with mental health issues. Soldiers today lack confidence in the system.

Finally, based on the above implication the number of Soldiers suffering from combat related stress is under-reported. The issue may be greater than realized. The numbers may be much larger than the Rand Study postulates. The long term implications for our Army and veterans may be severe and expensive. As Dr. Charles Hoge said, "There are individuals who are afraid to come in and get help despite needing it, because of fear that they'll be stigmatized." Brian P. Marx, Dr. Ted, Dr. Peter and many active duty Soldiers to include LTG John Vines support the statement of Dr. Hoge. In fact, many Soldiers actualize his statement through their behavior by not seeking help for themselves when they know they need it. For those readers who know anything about Army life and Army culture this phenomenon should not be a surprise. The Can-Do attitude of the Army even permeates health issues. The idea of 'toughing it out' is embedded in Army culture, and Soldiers perceive themselves as weak if they seek assistance.

Recommendations

The findings associated with this case study have implications for both further study and potential recommendations for academic institutions with a predominately military population. In the eyes of the reader there may be more recommendations than listed her. This list is certainly not all inclusive. There may be other recommendation that a reader could establish based on their experience. They may see an implication that would merit additional study or research. Based on the primary researcher's understanding of the issues the following six recommendations merit consideration.

Dual enrolled students experienced academic stress as well as marital stress in six of the seven who reported both stresses. The issue of dual enrollment is not unique to CGSC. It occurs at other locations within the Army. We do not, however, have a good feel for what that entails in terms of academic load from the civilian institution. CGSC does not have visibility on the academic requirements of the civilian universities that service CGSC students. The impact of this lack of coordination and understanding of joint institutional schedules often collides with multiple assignments due within days of one another. Both CGSC and the civilian institutions could do a better job of vetting schedules and requirements and effectively reduce some of the stresses on dual enrolled students.

The impact of flashbacks and anger in the classroom might be assiduously avoided by a pro-active faculty that closely re-examines the need for concrete experiences or videos that are either inflammatory in nature or so poignant they cause a visceral psychological reaction among some students. The concern here is what we do not know. What is the something or someone in the classroom that might mentally trigger or set off a particular student? CGSC faculty might help mitigate stress in their classroom by persistently employing active learning techniques advocated by Raymond Wlodkowski (1993) and Stephen D. Brookfield (1990).

The stigma associated with mental health is an issue for many students and Soldiers in today's Army. The Army leadership and health professionals are all aware of this. There were numerous references and quotes from key leaders within the body of this work that attest to that fact. There is still, however, a wide chasm between the perceived realities of many Soldiers about seeking assistance for mental health issues. LTG John Vines said he would not seek assistance for mental health as did many of the eleven students. Contrast that to General Carter Ham who publically tells Soldiers to get help. This dichotomy speaks to the vagrancies in the culture and attitudes within the Army among senior leaders on the subject of mental health and stress. Dr Ted said "the stigma is a national stigma." The Army is on the right track here and the recommendation is for key leaders to be transparent like General Ham and speak out about their experiences to allay the fears and the misunderstandings associated with seeking assistance for mental health issues.

Finally, there are three parochial, individual, and particularly specific recommendations for CGSC. The first recommendation is to add an Army psychologist to the CGSC staff. The second recommendation would be to add greater predictability to the CGSC schedule, and the third recommendation would be to use Army chaplains who have specific counseling skills as the CGSC Chaplain.

Just as Chaplain Steele is available to CGSC students in the Lewis and Clark academic building CGSC could create a staff position for a CGSC psychologist within the building. Students might be more inclined to "walk-in" and chat with a psychologist than actually picking up the phone and make an appointment with a psychologist at the Fort Leavenworth mental health unit. This recommendation was endorsed by three of the interviewed CGSC students. This position could be both provisional and temporary based on the number of students who

might take advantage of both the confidentiality and the convenience of the availability of a medical professional in their academic home while attending CGSC.

The second recommendation about predictability came not only from Dr. Peter, but also from several students and addresses the Army's propensity to schedule and re-schedule events. This recommendation came back to the old Army axiom about not messing with a Soldier's pay, mail, or time off. Every time the college reschedules an event it is messing with the student's time off. Dr. Peter said CGSC could improve the students experience here by, "giving more predictability...because I know that's a stressor when schedules change. So I know that is one area that more predictability that the school can give to the students. That'll help a lot. I know that."

This last recommendation comes from personal knowledge and experience with Chaplain Steele who did an amazing job as the CGSC chaplain during his tenure at the college. His 'Strong Bond' marriage retreats helped reunite families and rebuild personal relationships between couples. His counseling skills helped prevent some stresses becoming worst for certain students. If as he said, "stress is the underlying problem of 95% of everyone I see," then it would only make sense for the Army to assign a chaplain who has the military experience, background, and specific counseling skills to deal with the potential stress issues of this particular student population. In conclusion the findings and outcomes from this case study might serve as the foundation for a large-scale longitudinal research inquiry using other commonly accepted survey and research practices.

Recommendations for Future Research

Of concern would be an understanding and determination of whether the information in this case study is unique to Fort Leavenworth. A similar study of the effects of combat related stress on learning in an academic environment at the CGSC satellite locations would make a contribution from the perspective of a different cohort.

The Army conducts ILE training at four satellite locations within the United States. The Command and General Staff College at Fort Leavenworth administers those programs and all students receive the same education. The difference is that the satellite locations only instruct on the core curriculum which is about four months long. Those students attend as geographical bachelors in a Temporary Duty (TDY) status and return home after the four months at the

satellite locations. An investigation of the effects of combat related stress on learning at the satellite locations would be particularly helpful in examining whether there is more or less stress on those students. It might also indicate what ‘Best Practices’ could be implemented from the satellites to reduce stress among CGSC students at Fort Leavenworth.

Major Elizabeth was selected for this case study based on her multiple combat tours, as well as replicating the female population percentage for her CGSC class. Based on additional background readings not specifically connected to the literature review, as well as professional discussions with medical personnel a study documenting combat related stress levels among female Soldiers might be of interest and value to the advancement of knowledge about that subject.

A longitudinal clinical study might be appropriate if funds were available. Leveraging the work of Dr. John Medina (2008) who said that “Stressed brains don’t learn the same way” (p.195), a study measuring memory (Fishback, 2008a; McEwen & Lasley, 2002; McEwen & Seeman, 1999; Morgan et al., 2006; Wolfe, 2001 & 2003;) might indicate an impact on memory as well as health problems with depression, anxiety, anger, diabetes, hypertension, obesity, and negative behavior (Behavioral Health Wellness Survey, 2010; McEwen & Lasley, 2002.)

The perceptions, knowledge, and experiences willingly shared by the CGSC staff and faculty professionals to support the information in this case study, along with others who have expert knowledge about the influence of stress on Soldiers in a learning environment should be leveraged to gather additional information about this subject. In conclusion the findings and outcomes from this case study might serve as the foundation for a large-scale longitudinal research inquiry using other commonly accepted survey and research practices.

Reflections

Before closing there are some personal thoughts that merit some time and consideration. There are the usual personal laments and perturbations that no matter how diligent, assiduous, and detailed the research there is the immediate fear that something has been left out or not addressed in sufficient detail. The words of Creswell, Merriam and others confirmed that qualitative research is emergent, evolving, and messy. Qualitative research is a farrago of interviews, notes, observations and documents. It is thick and rich in detail and material, and the researcher is often left wondering whether he did justice to the perspective of the participants.

Did his words and the manner of his content and organization correctly convey those overarching themes in the tone and manner offered by the participants? There is a bittersweet sense of being finished but never being done. There is also the sense that there are portions of some interviews that you would like to do over again because you know more about the topic now, and perhaps you could ask a more revealing question. That sense of regret is what currently motivates a researcher to continue to learn, to observe Soldiers, and to carry on by asking more questions. There is an immediacy associated with qualitative research and it is enhanced by the direct association and interaction in the lives and the lived experiences of the people being researched. The topic itself is sensitive in some quarters of the Army and fraught with misunderstanding in other areas. It is a topic that has relevancy and will have long term impacts on some members of America's Army.

In closing, it was a rare privilege and a pleasure to spend time with some of the Army's finest Soldiers. The men and woman interviewed for this case study selflessly donated their time in the interest of this research. Like everything else they do these Soldiers did so unabashedly in a straight forward unpretentious and professional manner. One could not help but be struck by their carriage and bearing and the manner with which they comport themselves. We are indeed lucky as a country to still have fellow citizens who are willing to defend this Nation and assume a post on the wall of freedom. As a combat veteran of the Gulf War my experience pales in comparison to their understanding of war and conflict in the current operating environment. I am constantly in awe of their accomplishments and their personal resiliency. Finally, this experience humbled me, as well as confirming that America's Army is in good hands with this current generation of Soldiers.

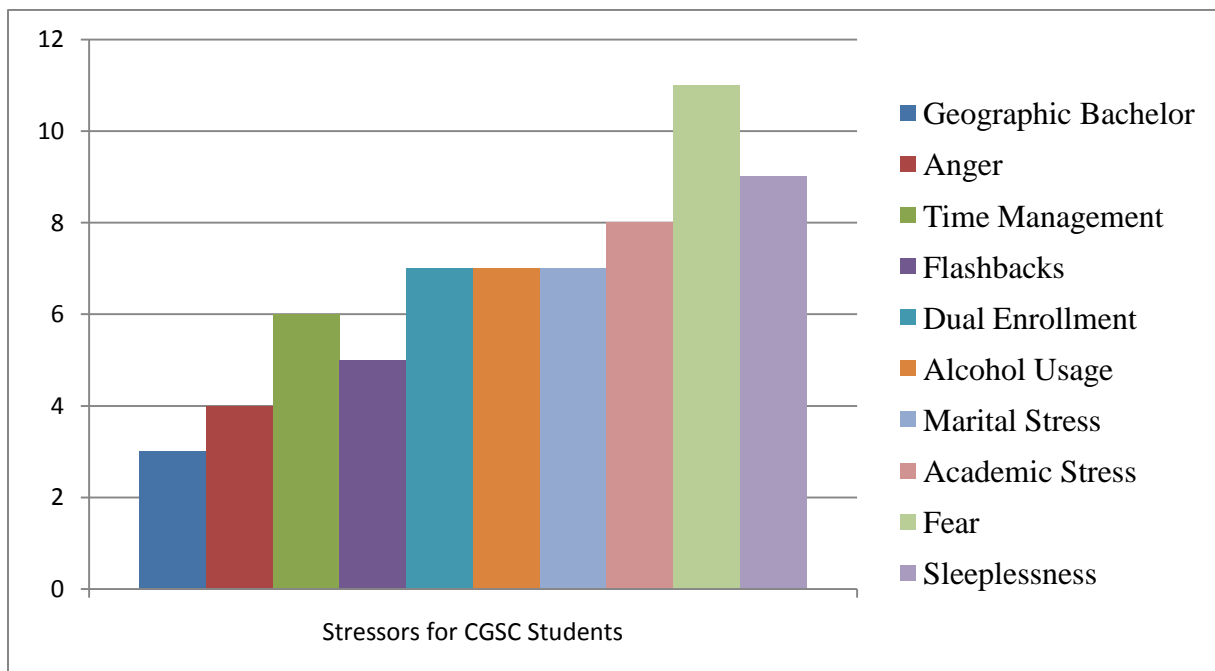
In Closing

In a limited manner this qualitative research case study has augmented the information on the effects of combat related stress on Soldiers in a learning environment. It illuminated a number of issues and framed them in the light of the words of the participants. It confirmed that being in an academic environment can increase the stress levels of even combat veterans. This research further confirmed levels of anger, alcohol usage, sleeplessness, and concentration issues among CGSC students. It identified the impact of transitions, dual enrollment, and social functioning in family settings, as well as confirming that there is still a continued stigma

associated with Soldiers seeking assistance for mental health. The figure on Stressors for CGSC Students graphically reflects the number and level of stresses that the eleven student participants dealt with during their year as students. Most of them managed it very well, but there were times throughout the year that they did not or could not fully function as students because of the stresses in their lives

Lastly, as we view these stressors through the perspective of one of the eleven CGSC students we begin to see both the magnitude and complexity of these stresses as well as their overlapping nature. Examined through the perspective of Elizabeth’s view there were five stresses, not including the specter of a future stress that impacted her academic experience at CGSC. Elizabeth subscribed to the following stresses in her interview. She indicated she suffered from anger, flashbacks, alcohol usage, sleeplessness, and fear. Elizabeth also indicated she was beginning to experience anticipatory stress based on her post CGSC assignment to a unit that was scheduled for an October deployment to Iraq, which would be her 4th tour of duty in a combat theater.

Figure 5.3 Stressors for CGSC Students



Finally, the words of Major Neal should be remembered when asked about the influence of combat related stress on learning in an academic environment and he said, “My learning has been affected, I can say that.”

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Appendix A - KSU IRB Approval



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TO: Sarah Jane Fishback
Educational Leadership
355 Bluemont

Proposal Number: 5150

FROM: Rick Scheidt, Chair 
Committee on Research Involving Human Subjects

DATE: August 17, 2009

RE: Approval of Proposal Entitled, "The effects of combat induced stress on learning in an academic environment."

The Committee on Research Involving Human Subjects has reviewed your proposal and has granted full approval. This proposal is **approved for one year from the date of this correspondence, pending "continuing review."**

APPROVAL DATE: August 17, 2009

EXPIRATION DATE: August 17, 2010

Several months prior to the expiration date listed, the IRB will solicit information from you for federally mandated "**continuing review**" of the research. Based on the review, the IRB may approve the activity for another year. **If continuing IRB approval is not granted, or the IRB fails to perform the continuing review before the expiration date noted above, the project will expire and the activity involving human subjects must be terminated on that date. Consequently, it is critical that you are responsive to the IRB request for information for continuing review if you want your project to continue.**

In giving its approval, the Committee has determined that:

- There is no more than minimal risk to the subjects.
 There is greater than minimal risk to the subjects.

This approval applies only to the proposal currently on file as written. Any change or modification affecting human subjects must be approved by the IRB prior to implementation. All approved proposals are subject to continuing review at least annually, which may include the examination of records connected with the project. Announced post-approval monitoring may be performed during the course of this approval period by URCO staff. Injuries, unanticipated problems or adverse events involving risk to subjects or to others must be reported immediately to the Chair of the IRB and / or the URCO.

Appendix B - Informed Consent

Research title: The Effects of Combat Related Stress on Learning in an Academic Environment

Principal Researcher: Dr. Sarah Jane Fishback *Co-Investigator:* Kevin P. Shea

You are asked to participate in a study that examines the effects of stress in an academic environment. The ultimate purpose of this research is an attempt to understand, describe, and to explain the influence of combat related stress, and its effects on the learning environment for Army officers attending the Command and General Staff College at Fort Leavenworth, Kansas.

This research study is predicated on interviews with a series of individuals beginning in November 2009 through December 2009. If you decide to assist in this project, your contribution would involve participating in a semi-structured interview.

Interviews will be recorded, professionally transcribed, and then stored at another location to ensure confidentiality and the integrity of the research. A transcript will be made available for you to member check. Member checking is a qualitative research assurance tool to verify the accuracy of your interview.

Your identification will be protected by the use of fictional names if any portion of the interview is used in the report. Your confidentiality is paramount to the success of this research. At any time, you feel unable or unwilling to continue, you are free to withdraw your consent and stop both the process and your participation.

Problems or questions:

Please contact me: Kevin Shea, Lewis & Clark 4527, or by calling 913 684-4120

You may also contact Dr. Sarah Jane Fishback at Kansas State University, Department of Foundations and Adult Education, 355 Blumont Hall, 1100 Mid-campus Drive, Manhattan, KS 66506 or by calling 785-532-5554.

I have read the statement (above) and been advised of procedures to be used in this study. I understand that this is an exploratory research project and my participation is purely voluntary. I further understand that I may withdraw my participation at any time.

Check the one that applies:

I volunteer to participate

I do not agree to participate in this study

Signature of Participant

Date

Please print your name above

Contact IRB Chair:

The institutional review Board at Kansa State University approves all research conducted with human subjects. If you have any questions about the manner in which this study is conducted, you may contact the Chairman, Committee on Research Involving Human Subjects, Kansas State University, 1 Fairchild Hall, Manhattan, KS 66506 or by calling 785-532-3224.

Appendix C - Student Survey Form

Survey for KSU research and dissertation support

August 2009

A. Name

B. BASD

C. Branch

D. Source of Commission: USMA ROTC OCS

E. Date of Appointment _____

F. Overseas Deployments: (circle) 1 2 3 4 5

G. Combat Tours: (circle) 1 2 3 4 5

H. Number of years deployed: (circle) 1 2 3 4 5 6

I. List assignments of combat tours and units (i.e. Platoon. Leader, A Co, 1st BN, 21st IN)

1.

2.

3.

4.

J. Marital Status: (circle) single married divorced

K. If married, are you a geographical bachelor/bachelorette? Yes/No

L. Number of Dependents: Adults/Children ____/____

Types of stress in your life

Appendix D - Interview Protocol

The following interview helped guide this study. They were a guide and were asked in random order based on previous responses from earlier study participants. The questions are designed to both help uncover and describe the participant's point of view (Marshall, 1999). The semi-structured interview format started with the following list of questions, with the understanding that not all participants were asked the same series of questions. Semi-structured interviews are not only open ended; they are designed to be modified based on previous responses by earlier participants.

Questions for the CGSC students

Thinking about your experiences in theatre have you ever experienced fear?

How have your experiences and exposure to combat related stress transformed you?

How has that transformation impacted your approach to education?

What is your perception of how combat and the stresses associated with it influences/impacts your learning?

How has combat related stress influenced your ability to learn effectively, and cognitively assimilate the curriculum in an unbiased manner?

What are the barriers to learning for you?

What have you done this year to help mitigate the levels of stress in your leaning?

What do you think the effect of combat related stress is in a learning environment?

What obstacles have impaired your ability to synthesize the material in the classroom?

What academic techniques or practices have you implemented or employed to accommodate any changes in your learning style?

How is your combat experience valued within your current learning environment?

What can CGSC do to improve the academic experience and education of combat veterans?

How has your exposure to combat and the stress associated with it influenced your approach to education?

What are your recommendations for helping others cope with stress in a learning environment?

Describe your emotions as you transitioned to an academic environment?

What made this transition difficult for you?

Can you describe how your transition back to your family positively or negatively impacted your academic life here at CGSC?

Thinking about your pre and post deployment behaviors and actions. What sorts of things were affected? For instance: Were your sleep patterns affected and how did that impact you academically? What about other behaviors? How did your return impact the social functioning within your family? Any anger? Depression/Any increase in alcohol consumption?

Has there been any part of the CGSC curriculum that at any time caused you a specific loss of interest, depression, anger, or stress?

Do you think among classmates that there is a level of stress within the cohort (staff group)?

How does the cohort (staff group) positively or negatively affect students who may be experiencing a degree of stress?

The Rand Study titled the *Invisible Wounds of War* estimates that approximately 20-25 percent of the force suffers from a degree of combat related stress.

Do you feel this estimate accurately represents your peers at CGSC?

What would you estimate the level of stress to be among your classmates here at CGSC?

Dr. Charles Hoge of the Walter Reed Army Institute of Research says there is a great number of Soldiers who are afraid to get the assistance they need because of the stigma associated with mental health.

What is your opinion about that statement?

In your opinion is there a stigma associated with receiving assistance for mental health?

(Can you clarify your position on that? Ask for additional information.)

I have a copy of the DOD Behavioral Health Wellness Survey for you to review. Do you remember taking this survey?

Do you remember when you took it?

Did you answer all the questions?

Looking at these questions now, do you recall how you responded to the questions on this survey?

Final question: Do you think you will stay in the Army beyond 20 years?

Questions for the faculty focus group

What instances of combat related stress have you seen demonstrated in your classroom?

How has combat related stress influenced learning in your classroom?

How has it affected your teaching style?

What are your recommendations for helping students cope with combat related stress in a learning environment?

What can CGSC do to improve the academic experience and education of combat veterans?

Questions for the CGSC Chaplain:

How has the incidence of combat related stress affected students?

What have students indicated to you about stress and learning this year?

What examples can you use to cite combat related stress in the college?

What can CGSC do to improve the academic experience and education of combat veterans?

Questions for the Army psychologist/psychiatrist:

What is the percentage of stress within the current class?

What impact do you think this (combat related stress) might have on learning at CGSC?

What examples or evidence can you cite to demonstrate the levels of combat related stress within the college?

What can CGSC do to improve the academic experience and education of combat veterans?

Appendix E - Behavioral Health Wellness Survey Form

BEHAVIORAL HEALTH WELLNESS SURVEY

Please print clearly

Name & Rank: _____ SSN: _____ Phone: _____

Service: USN USA USMC USCG DoD CIV

1. Are you currently experiencing increased medical problems? No Yes, please explain: _____

2. Are you experiencing sleep problems? No Yes, for how long? _____ Have you tried anything to resolve the problem? _____

3. Are you having difficulty dealing with feelings of stress or anxiety? No Yes, please check all that apply:

Assault	Reckless Driving	Easily startled or jumpy	Excessively watchful or nervous
Arguments	Spending sprees	Self mutilating behaviors	Increased use of alcohol/drugs
Promiscuity	Become a "loner"	Throwing/breaking things	Assaultive or angry with enemy POW
Binge eating	Emotionally numb	Thoughts of going AWOL	
Increased anger	Need for medication	Troubling thoughts, images or memories of combat experience	

4. Are you feeling depressed / sad / overwhelmed? No Yes, for how long? _____

5. Have you recently experienced a significant loss in your family or other relationship? No Yes, please explain: _____

6. Are you currently having thoughts of suicide? Yes No

7. Are you currently having thoughts of death? Yes No

8. Are you currently having thoughts of harming others? Yes No

9. Are you experiencing financial problems? Yes No

10. Have family members been experiencing any of the following problems? Please check all that apply.

Anger/tantrums Truancy problems Stealing/lying EFMP Issues
 Academic problems Sleep problems Need for medication Substance Abuse
 Wetting the bed Increased fighting with siblings or peers

11. Do the above issues impact your family's ability to function at this time? Yes No N/A

12. Do you or your family want to speak with someone about the above issues? Yes No N/A

13. Are you or family members experiencing any other issues not listed above? No Yes, please explain: _____

14. Have you had prior treatment or contact with any of the following? No Yes, Check all that apply:

Social Work Services Army Community Services Alcohol/Drug Counseling
 Family Advocacy Child & Adolescent Services Mental Health Services
 Marriage/Family Counseling Chaplain Other: _____

If you **have not** returned from a deployment in the past 18 months, please stop here. Bring this form to the Behavioral Health Section to complete your inprocessing

If you **have** returned from a deployment in the past 18 months, please complete the following:

19. Have you experienced any situations prior to or during deployment that had a negative impact on your health? No Yes, please explain: _____

20. Did you experience any serious accident or illness during deployment? No Yes, please explain: _____

21. Did you have any injury(ies) during your deployment from any of the following? (Please check all that apply)

1. Fragment 2. Bulle 3. Vehicular (any type of vehicle to include aircraft)
 4. Fall 5. Blast (IED, RPG, Grenade etc) 6. Other: _____

PLEASE TURN PAGE OVER AND CONTINUE

Below is a list of problems and complaints that veterans sometimes have in response to stressful life experiences. Please read each one carefully, put an "X" in the box to indicate how much you have been bothered by that problem in the last month.

No.	Response	Not at all (1)	A little bit (2)	Moderately (3)	Quite a bit (4)	Extremely (5)
1.	Repeated, disturbing <i>memories, thoughts, or images</i> of a stressful military experience from the past?					
2.	Repeated, disturbing <i>dreams</i> of a stressful military experience from the past?					
3.	Suddenly <i>acting or feeling</i> as if a stressful military experience <i>were happening</i> again (as if you were reliving it)?					
4.	Feeling <i>very upset</i> when <i>something reminded</i> you of a stressful military experience from the past?					
5.	Having <i>physical reactions</i> (e.g., heart pounding, trouble breathing, or sweating) when <i>something reminded</i> you of a stressful military experience from the past?					
6.	Avoid <i>thinking about</i> or <i>talking about</i> a stressful military experience from the past or avoid <i>having feelings</i> related to it?					
7.	Avoid <i>activities or situations</i> because they <i>remind you</i> of a stressful military experience from the past?					
8.	Trouble <i>remembering important parts</i> of a stressful military experience from the past?					
9.	Loss of <i>interest in things that you used to enjoy</i> ?					
10.	Feeling <i>distant</i> or <i>cut off</i> from other people?					
11.	Feeling <i>emotionally numb</i> or being unable to have loving feelings for those close to you?					
12.	Feeling as if your <i>future</i> will somehow be <i>cut short</i> ?					
13.	Trouble <i>falling or staying asleep</i> ?					
14.	Feeling <i>irritable</i> or having <i>angry outbursts</i> ?					
15.	Having <i>difficulty concentrating</i> ?					
16.	Being " <i>super alert</i> " or watchful on guard?					
17.	Feeling <i>jumpy</i> or easily startled?					

PCL-M for DSM-IV (11/1/94) Weathers, Litz, Huska, & Keane National Center for PTSD - Behavioral Science Division; with modification for this survey application.

Please stop here. Bring this form to the Behavioral Health Section to complete your inprocessing

Behavioral Health Staff _____

Date _____

I have been informed of available Mental Health Services as well as walk-in and appointment procedures.

Signed _____

Date _____

Appendix F - Holmes-Rahe Stress Inventory

Total LCU below 150: 35% chance of illness or accident within 2 years
Total LCU between 150 - 300: 51%
Total LCU over 300: 80% chance of illness or accident

Adapted from the "Social Readjustment Rating Scale" by Thomas Holmes and Richard Rahe. This scale was first published in the *Journal of Psychosomatic Research*. 1967, vol. II p. 214.

Holmes and Rahe Life Change Scale Stress Test What events have happened to you in the past 12 months?*

Life Event ... Event Value	Your Score
Death of Spouse	100
Divorce	73
Marital Separation	65
Jail term	63
Death of close family member	63
Personal injury/illness	53
Marriage	50
Fired from work	47
Marital reconciliation	45
Retirement	45
Change in family member's health	44
Pregnancy	40
Sex difficulties	39

Addition to family	39
Business readjustment	39
Change in financial status	38
Death of a close friend	37
Change in number of marital arguments	35
Mortgage/Loan greater than \$10,000	31
Foreclosure of mortgage/loan	30
Change in work responsibilities	29
Son/daughter leaving home	29
Trouble with in-laws	29
Outstanding achievement	28
Spouse begins work	26
Start or finish school	26
Change in living conditions	25
Revision of personal habits	24
Trouble with boss	23
Change in work hours, conditions	20
Change in residence	20
Change in school	20

Change in recreational habits	19
Change in religious activities	19
Change in social activities	18
Mortgage/Loan less than \$10,000	18
Change in sleeping habits	16
Change in number of family gatherings	15
Change in eating habits	15
Vacation	13
Celebrated Christmas/Hanukkah	12
Minor violation of law	11

Source: http://www.actsweb.org/stress_test.php