

5-1-2011

Impact of military deployment on college adjustment

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UNIVERSITY OF NORTHERN COLORADO

Greeley, Colorado

The Graduate School

THE IMPACT OF MILITARY DEPLOYMENT
ON COLLEGE ADJUSTMENT

A Dissertation Submitted in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Philosophy

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College of Education and Behavioral Sciences
Department of Counseling Psychology

May 2011

This Dissertation by: Ann M. Ingala

Entitled: *The Impact of Military Deployment on College Adjustment*

Has been approved as meeting the requirement for the degree of Doctor of Philosophy in
the College of Education and Behavioral Sciences, Department of Counseling
Psychology

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ABSTRACT

Ingala, Ann M. *The Impact of Military Deployment on College Adjustment*. Published Doctor of Philosophy dissertation, University of Northern Colorado, 2011.

The number of military service members and veterans entering college is increasing with the Post 9/11 GI Bill. Estimates vary on the percentage of veterans suffering from physical and mental health concerns including traumatic brain injuries and posttraumatic stress disorder. Many returning service members arrive on college campuses battling physical or psychological disabilities.

The transition from military to college life is complex and can be difficult to successfully navigate for many. Given the important role of perceived social support for individuals dealing with trauma, especially veterans, little is known about current levels of support for student veterans on college campuses. Even less is known about the perceptions and desires of student veterans presently attending college.

This study examined the following six research questions: (a) to what extent do previous military deployments relate to college adjustment; (b) are multiple deployments to combat zones more likely to increase adjustment difficulties; (c) to what degree does posttraumatic stress disorder (PTSD) relate to college adjustment; (d) to what extent does permanent physical injury from deployment relate to college adjustment; (e) to what degree does level of unit support relate to college adjustment; and (f) to what extent does level of postdeployment support relate to college adjustment?

Survey results from 128 student veterans/military at two- and four-year institutions were examined through multiple regressions. There was statistical significance at the $p < .05$ level for three of six research questions. The PTSD, unit support, and postdeployment support variables contributed uniquely to the explanation of college adjustment. Student veterans and military with higher levels of reported PTSD symptoms had lower levels of college adjustment; whereas, those who reported higher levels of unit support and postdeployment support had higher levels of college adjustment.

The current study supports previous research and demonstrates the importance of perceived social support in dealing with life transitions and trauma. Social support buffers the effects of posttraumatic stress disorder as well. The results of the current study give institutions of higher education insight into dealing with student veterans by indicating how critical perceived support is for successful transition.

ACKNOWLEDGEMENTS

There are so many people I need to thank that this may end up longer than the dissertation itself.

First and foremost, this is dedicated to the men and women everywhere who are wearing and have worn the uniforms of the United States Military--all branches and components. Thank you for your service and sacrifice to our country. I am lucky to call some of you friends, neighbors, and colleagues. Thank you to the families of military service members too; your sacrifices are as great as those of your loved ones. To those among your numbers who participated in this research, a very special thanks for sharing your time and your willingness to answer my survey questions. To the men and women who were and are student veterans and military that I have worked with over the past few years, I am indebted to you for so many things. I have been honored and humbled to work with and for you in a couple different capacities--I will not forget you. Thank you for sharing of yourselves, your insights, your struggles in transitioning, your courage and determination, and your continued desire to serve others, especially your fellow student veterans. You all inspire me. A very special thanks to some of you whom I have worked with the past few years on campus and in the office--Blake, Christy, Joe, Kelly, Alastair, John, A., & T. What can I say--you are simply the best--you inspire me to make a difference. In large part due to my time spent with you and your peers, I cannot imagine wanting to work with a population other than veterans and military members and their

families. I remember one person telling me I must dread it when they walked into my office and I replied, honestly that I wished all the clients who walked through my door were veterans.

Thanks to the department and a special thank you to Diane Greenshields--what would I have done without you so many times?! You are a treasure and a friend. Thank you to an awesome editor/typist, Connie Beard. Without all your fantastic work, I would probably not have any hair left at this point (having pulled it all out trying to format tables, margins, and page numbers). I know my chair and committee thank you too for all the time you have saved them editing. Thanks to my committee members, Dr. Basilia Softas-Nall, Dr. Brian Johnson, Dr. Heather Helm, Dr. Susan Hutchinson--your guidance, insights, and time were so valuable and appreciated. A special thank you for all the “translation” assistance, Dr. Hutchinson; you have been a statistics Rosetta Stone for me! My heartfelt thanks to my chair, Dr. Basilia Softas-Nall--it has been such a pleasure and an honor to work with you on this. Thanks for the wonderful balance you have given me of support, encouragement, and knowing when I needed stronger encouragement. I have great respect for you and I always appreciate your reminders to keep the soldiers’ families in mind. I admire your commitment to thanking student veterans in your classrooms. You set a wonderful example for other professors and send such a great message to all the students in your classrooms. You would have been an amazing military commander and I would have gladly served under your command!

I want to thank my former supervisor, Jan Rastall. Thanks for believing in me and caring so much about all adult learners and becoming a champion for student veterans and military. The student veterans and adult learners at CSU are so lucky to

have you working for them and caring about them. Your passion for working with our student populations was always inspiring. Thanks for giving me such a wonderful balance of guidance, enthusiasm, space, trust, support, supervision, understanding, and friendship. To quote one of your favorite quotes: “It is good to have an end to journey toward, but it is the journey that matters in the end” (Ursula K. Le Guin). It has been so great to have spent time with you on this multifaceted journey--my dissertation, the office, life!

I want to thank my friends; I appreciate all the love and support you have given me over the years--friends from school, friends from work, friends from the Army--there are too many of you to name. A special thanks to a couple of you who have made this dissertation journey yourselves and have been great sounding boards for me over the past few years.

My parents, Joe and Lois Christensen--thanks for all you have given me. You are the ones who instilled in me a love of learning and school. Little did you know I would continue to go, and go, and go! You also instilled in me my values that led me to join the military and serve my country. As a parent now myself, I cannot even begin to fathom all the worry I have caused you as I have traipsed around the world in uniform and the phone calls you have had as a result of my “adventures”--broken neck, emergency surgeries--while I was across the country or across the world. Thank you for all the continued love and support you have always given me. Even when you did not totally understand what I was doing, you supported me without question. I would not be who or where I am without you. Thanks to my brothers, Matt and Tim, and your families--no matter what is

going on, I can always count on both of you to keep me humble and grounded. That is important and a role I would not let anyone else play! I love you guys.

I want to acknowledge the memory of my deceased husband, CW3 Charles Ingala. You were an amazing man. Your courage and bravery as you fought your cancer battle, an enemy you were not trained by Uncle Sam to fight, and as you faced your death changed my life in so many ways. I would not be in this career had it not been for you, our battle with your cancer, and your death. I learned so much, about myself, about life, about emotions, true courage, and about the warrior spirit on that journey with you. I love you and I miss you and I will not forget you. Your spirit lives on and I carry with me the laughter, the tears, the love, and the memories.

Finally, thank you to the three most amazing people in my life--Dave, Claire, and Rachel Schultz! Where would I be without the three of you and your love? You guys are the center of my world and I am so lucky to have you. Dave, your love and support have never wavered and keep me grounded. You have always believed in me, even times when I struggled to believe in myself. You have never questioned that I could do this, or anything else, if I set my mind to it. I love you and am so thankful for you. While having twins during this process certainly has not made the journey shorter or simpler, it has made it so much more worthwhile. I have learned, and continue to learn, so much about emotions, true strength through vulnerability and caring by being a mother. The lessons Claire and Rachel teach me daily--and the laughter they provide with the amazing things that come out of their minds and mouths--I would not trade those lessons for anything. Neither would I trade Claire and Rachel for anything, least of all an earlier graduation date. You guys have kept me focused, sane, and helped me to set my priorities, even

though you have had to bear the brunt of my crazy hours and lack of sleep as I have worked on this. I know I am a better person and will be a better psychologist because of having the three of you in my life. You three make it all worthwhile!

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CHAPTER I

INTRODUCTION

Purpose of the Study

Individuals from all walks of life struggle to deal with and overcome trauma in their lives. Psychologists and researchers believe that a critical component to trauma recovery is support from family, friends, and the greater community (Herman, 1997; Naparstek, 2004; Sherman, Zanotti, & Jones, 2005). In fact, perceived and actual social support can be a protective measure for preventing Posttraumatic Stress Disorder (PTSD) development or limiting symptom severity (Naparstek; Ozer, Best, Lipsey, & Weiss, 2003; Sherman et al.). Ongoing wars in Iraq and Afghanistan involving thousands of United States service members raise the likelihood that increasing numbers of service members are and will be dealing with the aftermath of trauma related to war experiences. These increasing numbers make the need to better understand the role of perceived social support even more important.

Military men and women deploy all over the world and face dangerous combat situations. Then they come home and find the battles are not over as they struggle to fit into civilian life. As Nancy Sherman (2010) writes,

The transitions are rarely seamless. For many, soldiering is not just a job or career; it is an identity, it is who they become. Leaving it behind is not easy. Finding a moral self capacious enough for both civilian and warrior sensibilities becomes the pressing challenge. (p. 4)

Sherman further states that “soldiering, especially wartime soldiering, does not grow skin that a soldier sheds lightly. . . It is a role that is immersed and transformative and lingers long after a soldier takes off the uniform . . . – it embeds deep” (Sherman, p. 20). For many service members, the transition includes trying to fit in on college campuses, get a degree, and then move into successful careers and civilian life.

The U.S. military has had troops deployed in two different conflicts or wars for the past eight years. During that time period, Congress has approved almost \$864 billion for the global war on terror including combat operations in Iraq and Afghanistan; less than 1% of that total was spent on medical care through Veterans Affairs (VA) for veterans who have fought in these conflicts (Belasco, 2009). Medical care through the VA includes mental health services for veterans who are struggling with PTSD, depression, and anxiety. These mental health concerns will impact at least some of the estimated two million service members who are already or will be arriving on college campuses across the country (American Council on Education [ACE], 2008; Cook & Kim, 2009).

Our military is comprised of those individuals serving on active duty, in the National Guard, and in the reserves. Military veterans are those men and women who have previously served their country on active duty or in the National Guard or reserves. Some of them may also be classified as members of the inactive reserves. Today at many major four-year colleges and universities, there are at least 100 or 200 military service members attending classes, usually several hundred (Brown, 2009; Mangan, 2009; Putnam, 2009). Additional military service members are going to school at community colleges and for-profit online colleges across the country. Overall estimates suggested a

30% increase in veterans on college campuses per year beginning in 2009, a total of roughly 100,000 students (Brown).

Although military service members account for a relatively small percentage of the overall student population at most institutions of higher learning, this is an at-risk population of students for a variety of reasons: mental health problems, learning disabilities, dropout risk, and failure to successfully complete degrees (Bryan, 2008; Kessler, 2000). In the coming years, the number of military service members going to college is anticipated to increase with the implementation of the new Post 9/11 GI Bill providing military service members with additional college funding. Under this new bill, some military service members will be eligible for this funding when they were not under the old Montgomery GI bill. These numbers may also increase as troops are withdrawn from Iraq, resulting ultimately in fewer deployed National Guard and Reserve troops.

Estimates vary on the percentage of military service members suffering from various physical and mental health concerns including, but not limited to, traumatic brain injuries (TBIs), posttraumatic stress disorder (PTSD), anxiety, depression, and drug and/or alcohol problems. Numbers of military service members returning from Iraq and Afghanistan with traumatic brain injuries have recently been estimated at 20% (Tanielian & Jaycox, 2008). Additionally, Walter Reed Army Medical Center statistics indicate that 30-33% of patients treated for combat injuries in 2008 also met diagnostic criteria for TBIs (Lopez, 2009a). Some studies reflect a relatively small percentage of TBI incidence, not dissimilar to the rates among peacetime military (Hoge et al., 2004). A U. S. Government Accountability Office (U.S. GAO) report based on Department of Defense (DOD) numbers showed that only 5% of the service members who served in Operation

Enduring Freedom (OEF) or Operation Iraqi Freedom (OIF) were at risk for developing PTSD (U.S. Government Accountability Office, 2006).

A study conducted by Hoge, Auchterloine, and Milliken (2006) revealed that Army and Marine service members who had been deployed to Iraq were more likely to report mental health problems with 19.1% meeting risk criteria upon their return from deployment. In this same study, 11.3% of soldiers and Marines returning from Afghanistan were at risk for mental health problems and 8.5% of soldiers and Marines deployed elsewhere met risk criteria (Hoge et al.). The Rand Institute has estimated similar percentages, stating that as many as 20% of returning service members from Iraq and Afghanistan acknowledge they have symptoms of PTSD or major depression (Tanielian & Jaycox, 2008). The authors of the Rand study further stated that approximately 31% of previously deployed military suffer from either PTSD, depression, or a TBI, roughly 5% of whom probably have symptoms of all three diagnoses (Tanielian & Jaycox).

During the course of OEF and OIF, 61,000 soldiers have been in the Army's medical system (Leipold, 2009). Many of these individuals will have a combination of mental and physical health problems because if they have suffered any type of physical injury, they are also more likely to be struggling with adaptation, grief, and trauma issues (Hoge et al., 2004).

The Pentagon and other sources have reported increasing numbers of suicides among active duty military, many of whom have been deployed to combat multiple times (Military.com, 2008; MSNBC.com, 2008). While these reports focus on soldiers still on active duty, a portion of them are National Guard and reserve soldiers who regularly go

back and forth between active military service and civilian life. Many National Guard and reserve soldiers are not counted in these suicide statistics, especially when they are not deployed in an active duty status (MSNBC.com). As a result, there are no accurate statistics on suicide rates among military veterans of OEF in Afghanistan and OIF in Iraq who have returned home and separated from the service (CNN.com, 2007). Research on suicide rates for veterans who served between 1986 and 1997 indicates that military veterans were over twice as likely to commit suicide as their non-veteran counterparts (Kaplan, Huguet, McFarland, & Newsom, 2007).

Statement of the Problem

Grossman (2009) has stated that based on prevalence rates, 40% of service members may be suffering from various physical and psychological traumas. Since there is no accurate overall estimate of the number of service members suffering from various traumas from their deployments to Iraq and Afghanistan, it is difficult to estimate what percentage of returning service members who arrive on campuses across the country will be battling with physical or psychological disabilities. Additionally, some of these service members entering higher education may have preexisting learning disabilities, which could then have been compounded by a TBI or PTSD based on experiences in their military service (Shackelford, 2009; Vance & Miller, 2009).

In a post-Virginia Tech world, university administrators, faculty, staff, and students have increased concerns regarding safety and mental health problems among their student populations. Past reports of increased rates of suicide, homicide, domestic violence, and other types of violence by military service members after they serve in combat zones have led some people to be wary of these populations. Military service

members have been stereotyped as more volatile and unpredictable than the rest of society (Sherman et al., 2005). These concerns and stigmas are further exacerbated by movie and television depictions and sensationalized news stories such as *Army Wives*, the shootings at Fort Hood, TX, and *The Valley of Elah*.

The administration, faculty, and staff at most institutions of higher education in America have learned from how returning Vietnam veterans were treated in this country and the resulting struggles of veterans to reintegrate with society (Herman, 1997). Administrators, faculty and staff, board members of major corporations and foundations, and community members want to ensure that the current generation of military service members receive better treatment and assistance transitioning back to civilian life than did the Vietnam veterans (American Council on Education, 2008; Cook & Kim, 2009). Various individuals are beginning to realize there are very real and long term costs of failing to provide assistance to military service members when they return from deployments in combat zones (Tanielian & Jaycox, 2008).

Research findings from multiple studies include the importance of social support after experiencing a trauma to mitigate the effects of the trauma (Naparstek, 2004; Sherman et al., 2005). Level of social support has been shown to be related to the risk for developing PTSD, symptom severity, and the path of recovery (Naparstek; Sherman et al.). For the person who has experienced a trauma, the presence or absence of social support can influence how she/he handles the resulting feelings of helplessness, horror, and fear, and the level of distress and the effect these feelings have on his/her life (Cantrell & Dean, 2005). Social support can be critical for mitigating symptoms in the areas of numbing, avoidance of reminders of the event, and hyperarousal (Cantrell &

Dean). In a meta-analysis looking at risk factors for PTSD, overall and specifically in military populations, lack of social support was one of the leading risk factors for PTSD (Brewin, Andrews, & Valentine, 2000; Ozer et al., 2003). Additional risk factors, especially for the military population, were lack of education, younger age, and trauma severity (Brewin et al.).

In light of the risks of PTSD, TBI and other mental health concerns among service members and the nature of life transitions, the transition from military to college life is complex and can be difficult to successfully navigate for many individuals. The transition from military to civilian is complicated enough; adding adjustment to college life compounds this transition. Given the important role of perceived social support for individuals dealing with trauma, especially military veterans, little is known about current levels of support for student veterans and military on college campuses. Even less is known about the perceptions and desires of current student veterans and military presently attending college.

Theoretical Framework

A theoretical framework that complements much of the research and practice on recovery from trauma and underlies this study is social constructivism. Social constructivism--as written about and put into practice by therapists such as Michael Mahoney, George Kelly, and Robert Neimeyer--deals with meaning making (Mahoney, 2003). This theoretical framework fits with what Judith Herman writes about recognition and restitution, especially related to combat veterans (Herman, 1997): "Sharing the traumatic experience with others is a precondition for the restitution of a sense of a meaningful world" (p. 70). As Herman writes about restitution and recognition, she

blends the theories of constructive psychotherapy with the importance of social support for military veterans dealing with the aftermath of traumatic military experiences. From a constructive approach, Mahoney writes that “we are capable of surviving and adapting to circumstances that stretch the imagination” and that “most change takes place in contexts of human relatedness” (pp. 1-2). Social-symbolic relatedness is listed as one of the five basic themes of constructivism because “persons exist in living webs of relationships” (Mahoney, p. 5). In understanding the human change process from a constructivist perspective, i.e., when experiences are beyond an individual’s ability to understand and process them, the individual can feel overwhelmed and experience disorder and even breakdowns (Mahoney). Military combat, for many individuals, involves experiences that lie outside the realm of natural order and easy processing, which results in difficulty reordering one’s world and reestablishing “a meaningful world” (Herman, p. 70).

Many military service members are dealing with grief on a variety of levels: grief over losses of their comrades in arms who have died in combat, loss of the military culture and way of life, and possibly loss of part of themselves due to injury. The constructivist theory also fits with meaning making related to grief and loss. For example, looking at mourning and meaning,

human beings seek meaning in mourning and do so by struggling to construct a coherent account of their bereavement that preserves a sense of continuity with who they have been while also integrating the reality of a changed world into their conception of who they must now be. (Neimeyer, Prigerson, & Davies, 2002, pp. 235-236)

Further, Neimeyer et al. stated, “Meaning making triggered by loss is pursued at the juncture of self and system . . . the self is constituted and reconstituted in relation to an embracing social world” (p. 239).

Additionally and specifically related to learning in a classroom environment, social constructivist theory has been utilized with school age children, especially those from diverse backgrounds (Palincsar, 1998). Some research (Needles & Knapp, 1994) described the success in writing among school age children when a social constructivist approach was utilized incorporating principles such as focusing on the writer's background and experience, interaction with classmates, and a sense that what's being written is meaningful. These same principles are being utilized in some military-only cohort college classrooms to help with the transition from warrior to college student (Langstraat, personal communication, August 2010).

Rationale for the Study

Given what we know about the importance of perceived social support for returning service members, especially combat veterans, we need to have a better understanding of the perceptions of student veterans and military. To better support service members who are making the transition to college life, we need to have a better understanding of who they are and what their military and college experiences have been. Even more important is research into the role their military experiences are having on their college experiences and transition to college life.

The current study examined how military deployments, especially multiple deployments, explained military service members' transition and adjustment to college life. The transition from a military lifestyle, which might have included deployment to a combat zone, to a college lifestyle can be a difficult one to navigate. Many of these service members were working their way through this life transition while also dealing with various added challenges such as PTSD, TBIs, and other mental health and physical

struggles. The overall environment on most college campuses is also much more liberal and open than it is on military bases. College students have more freedom of choice. While there are deadlines in the academic world, they are not the same as the rigid timelines and structure of the military.

The current study examined how an individual service member's deployment experiences and history--the number of deployments and the types of situations faced while deployed--related to that individual's adjustment to college life. Further information was gathered to examine how diagnoses of PTSD, TBI, and physical injuries might have compounded the adjustment from military to college life. Additionally, because past research has shown how important support is during and after experiencing traumatic events including wartime (Church, 2009; Fikretoglu, Brunet, Poundja, Guay, & Pedlar, 2006), this study examined how unit support while deployed and postdeployment support might have mitigated this lifestyle transition and adjustment to college for these individuals.

Implications for the current study included gathering important data and information that can be utilized to improve the programs and services offered for military service members on university campuses across the country. Mental health and counseling services are focus areas to be included for military service members at institutions of higher education nationwide. Having a better understanding of the impact of military deployments on college adjustment can help shape the need for postdeployment mental health screening and counseling before individuals enter college and once they arrive on college campuses.

Research Questions

- Q1 To what extent do previous military deployment experiences relate to a military service member's adjustment to college life at institutions of higher learning?
- Q2 Are military service members who have been deployed to combat zones multiple times more likely to have adjustment difficulties in college at institutions of higher learning than military service members deployed only once to a combat zone?
- Q3 To what degree does level of PTSD relate to a military service member's adjustment to college life at institutions of higher learning?
- Q4 To what extent does having experienced a physical injury or injuries such as traumatic brain injury, amputation, or other permanent physical disability relate to a military service member's adjustment to college life at institutions of higher learning?
- Q5 To what degree does level of unit support relate to a military service member's adjustment to college life at institutions of higher learning?
- Q6 To what extent does level of postdeployment support relate to a military service member's adjustment to college life at institutions of higher learning?

Limitations

One limitation of the current study was that military service members decided whether or not to participate. Therefore in this study, I was not able to account for differences in military service members related to their willingness or unwillingness to participate. This limitation was compounded by limited accessibility to this population. The invitation to participate in the study, which was sent through listservs, invited all student military service members on the listserv to participate. At some institutions, these listservs were limited to individuals who were receiving GI bill benefits. At other institutions, not every student who was a military service member was identified or a part of the listserv. So while all individuals on the available listservs at the participating

institutions were invited to participate, not all students who were service members at those institutions were guaranteed to be on the listservs.

A second limitation of this study was that even though the respondents' information was anonymous and individual records remained confidential for the study, some potential participants might not have been willing to disclose information about their mental health concerns and diagnosis, if they had any, because of existing stigmas regarding PTSD and other mental illnesses. Some respondents who were still members of the National Guard or reserves might not have fully disclosed difficulties they were having because of fears of how this could impact their military status.

An additional limitation was that only participants who had been deployed were included. There might have been some difficulties in adaptation to college for military members who were not deployed, that might not have been considered, or might have been masked by difficulties related to deployment in the participants selected for the study.

A further limitation was that data were limited to the institutions of higher learning investigated in this study and invited to participate. This sampling limitation could lead to limits in generalizability, even though military service members might have gone to college in areas different from their home states or military home of records. This in turn might have led to a higher level of background diversity among participants in this study. Moreover, some characteristics of participants could be different from military service members who attended institutions of higher learning in other parts of the country not included in this study.

An additional limitation was that data from this study were based on questionnaires. Questionnaires do not measure the actual behaviors but are a self-report of the behaviors. So data reflected each individual's assessment of his or her own behaviors, which made it subject to the individual's over- or underestimation.

Definition of Terms

Adjustment: Adjustment is the making of changes to something to make it fit or function better. For the purposes of this study, adjustment was measured by the Student Adaptation to College Questionnaire (SACQ), which is composed of four subscales-- Academic Adjustment, Social Adjustment, Personal-emotional Adjustment, and Attachment to the Learning Institution--and an overall composite score (Baker & Siryk, 1999).

Adaptation. Adaptation is how one changes to fit into a new environment and the process and end result of that change. For the purposes of this study, the overall encompassing change was one's adaptation to college, which was made up of several subsets, as measured by the subscales of the SACQ (Baker & Siryk, 1999).

Combat experiences. These experiences are the types of events a service member saw and participated in during combat: being under fire from small arms and other munitions, being attacked by terrorists, and seeing someone wounded or killed. Combat experiences are being measured by Section I of the Deployment Risk and Resilience Inventory (DRRI; King, King, & Vogt, 2003).

Combat zones. Combat zones are areas where U.S. military service members are deployed during hostilities, conflicts, and wars. Service members can be deployed on the ground, in the air, or at sea. Service members receive additional combat pay when

stationed in combat zones to reflect the added danger and risk while serving in such areas.

Deployment. Military members can be deployed throughout the world in a variety of missions, both peace-keeping and war-time. In peace-keeping missions, the U.S. military is usually in an area of hostilities in support of the United Nations or some other multinational peace keeping organization. The current conflicts in Iraq and Afghanistan, as well as the first Gulf War, the Vietnam War, and Grenada are all examples of war-time deployments or conflicts in which the United States military was involved.

Global War on Terror (GWT). After the terrorist attacks of September 11, 2001, the U.S. government launched the Global War on Terror consisting of three operations (Belasco, 2009).

1. Operation Enduring Freedom (OEF) has been focused primarily in Afghanistan but also includes other areas such as the Philippines and Djibuti (Belasco). OEF began just after the terrorist attacks.

2. Operation Noble Eagle (ONE) covers homeland security and enhanced security measures at military installations worldwide (Belasco).

3. Operation Iraqi Freedom began in the fall of 2002 with a troop buildup and then invasion into Iraq (Belasco). U.S. military service members are currently involved in all three missions.

Individual ready reserves. They are also called inactive reserves. When members of the Armed Forces leave active duty, they usually have a specified time commitment in the individual ready reserves. They are subject to recall to active duty by their branch of

service if additional troops are needed to support specific missions or conflicts while they are on the inactive reserves roster.

Institutions of higher learning. Institutions of higher learning can be either public or private two-year community colleges and four-year degree-granting colleges and universities.

Military educational benefits. Funding for educational and training programs is provided by the government as a result of military service when certain pre-designated conditions have been fulfilled. The most common form of benefit is the GI Bill; it has been in existence since the end of World War II and is primarily known as the Montgomery GI Bill. Congress recently passed the Post 9/11 GI Bill that went into effect in August of 2009.

Military reserves. Members of the reserves belong to units of all branches of the service--Army, Navy, Air Force, Marines, and Coast Guard--that fall under the jurisdiction and chain of command of the respective branch and the President of the United States as Commander in Chief. They can be called to active duty by the President to support missions throughout the continental United States and overseas including war zones.

Military service member. Anyone, male or female, who served or was serving in one of the branches of the U.S. military (other than the Coast Guard) was included in this study: military veterans, active duty military, and members of the National Guard and reserves, especially while activated to serve in combat zones. Military service members included in this study were individuals who had served in the Army, Navy, Air Force, or

Marines. Members of the Coast Guard were excluded from this study because they are not routinely deployed into combat zones outside the United States.

Military veteran. Anyone who has served in any branch of the United States Armed Forces: Army, Navy, Air Force, or Marines. As stated earlier, veterans of the Coast Guard were not included in this study. Military veterans could have served on active duty or in the National Guard or reserves. They might have been honorably or dishonorably discharged from service. Some military veterans might still have been subject to recall through the individual ready reserves.

National Guard members. Soldiers and Airmen are members of units of the Army or Air Force who fall under the jurisdiction of the various states in the United States. There are National Guard units for each state, territory, and the District of Columbia as provided for by the Constitution. National Guard units and members can be called to active duty service by the President of the United States and can be deployed throughout the continental United States or overseas including in war zones.

Postdeployment support. Postdeployment support is the social support service members receive after they return from a deployment from their family and friends as well as from their overall community and the nation. For the purposes of this study, postdeployment support was measured by Section L of the DRRI (King et al., 2003).

Posttraumatic stress disorder. Posttraumatic stress disorder (PTSD) is a diagnosable anxiety disorder based on criteria from the Diagnostic and Statistical Manual (DSM) of the American Psychological Association (APA; 2000). Diagnosis criteria include that the person had to have been exposed to a traumatic event that is persistently reexperienced, they avoid things that remind them of the trauma, and they have some

general numbing and increased arousal (American Psychological Association, 2000). For the purposes of this study, PTSD was measured by the PTSD Checklist--Military Version (PCL-M; Weathers, Litz, Herman, Huska, & Keane, 1993).

Traumatic brain injury. A traumatic brain injury is the result of either an open or closed wound head injury that can be caused by a blow to the head or jolt resulting from an explosion (Defense and Veterans Brain Injury Center [DVBIC], 2009). TBIs can be mild, moderate, or severe, depending on the damage done to the brain. Many mild TBIs resulting from closed head injuries might not even have been diagnosed. In most cases where a service member has been involved in an explosion as a result of an improvised explosive device (IED) and lost consciousness even briefly, the service member has probably suffered at least a mild TBI (Defense and Veterans Brain Injury Center).

Unit support. Unit support was measured by Section F of the DRRI (King et al., 2003). This is a self-report measure where service members indicate the level of support they felt they received from other service members of the unit they were deployed with, their leadership command, and the military in general (King et al.).

Veterans Affairs disability rating. Service members who have suffered and been diagnosed with a physical or mental health condition can submit paperwork through Veterans Affairs (VA) and receive a percentage disability rating. This disability rating is used to factor what types of benefits the service member is entitled to, including monthly disability payments and vocational rehabilitation training.

Summary

This study was conducted to gain information about a growing student population on many college campuses across America--military veterans and service members. With

increases in funding through the Post 9/11 GI Bill, many service members and prior service members who would not have gone to college in the past are entering college in growing numbers. Many of these individuals had been deployed and were in combat. This study examined the perceived impact of those deployments on their adjustment to college within a social constructivist theoretical framework. This was done to investigate what role social support played in the transition from warrior to college student. The six research questions covered various aspects of military deployments--number of deployments, PTSD symptoms and diagnosis, injuries, and support both during and after deployment--with regard to college adjustment. In the following chapter, the literature pertaining to military deployments and college adjustment is examined.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

This chapter examines literature pertaining to the following aspects related to military deployments and college adjustment: (a) a brief review of the history of Posttraumatic Stress Disorder (PTSD), (b) the rates of PTSD for service members and how PTSD can impact a service member's life, (c) the current conflicts in Iraq and Afghanistan and how they differ from previous conflicts, (d) increased suicide rates among military service members, (e) changes in warfare in the current conflicts, (f) rates of traumatic brain injuries (TBIs) and other physical injuries, (g) social support, (h) the history of military service members transitioning to college with the assistance of the GI Bill, (i) the transition for service members, (j) the broader changes in campus climate and safety, and (k) current trends related to military and veteran student services on campuses.

History of Combat and Deployment Related Stress and Trauma

Soldiers and military service members have been battling combat related stress and trauma under a variety of names for centuries. Prior to the existence of a *Diagnostic and Statistical Manual of Mental Disorders* (3rd Ed.; American Psychological Association, 2000) and the diagnosis of posttraumatic stress disorder, military service

members still suffered from the psychological effects of war. During the Civil War, the term used was “soldier’s heart,” which later became known as “shell shock” during World War I (Smith, 2008). The term “battle fatigue” was used during World War II, “war neurosis” was used during the Korean War, and soldiers from Vietnam were labeled as having “post-Vietnam syndrome” (Smith).

PTSD was first added to the third edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-III; American Psychological Association, 2000) in 1980, giving credibility to the symptoms many Vietnam War veterans were experiencing as a result of their combat. Over the intervening 25 years, the diagnostic criteria for PTSD have been revised and the application of this diagnosis has been broadened to encompass any traumatic situation and any individuals experiencing them, not just combat veterans.

Posttraumatic Stress Disorder (PTSD)
Diagnosis: Its Impact on One’s Life
and Learning Styles

Posttraumatic stress disorder (PTSD) is a diagnosable anxiety disorder that can result after a person faces death or serious injury or witnesses someone close to them threatened with or experiencing serious injury or death (American Psychological Association, 2000). Additionally, the person diagnosed with PTSD experiences feelings of helplessness, horror, fear, and struggles with various symptoms for at least a month that cause significant distress and/or impairment in his or her life (American Psychological Association). The symptoms fall into three major areas: re-experiencing of the trauma, numbing and avoidance of reminders of the event, and hyperarousal (American Psychological Association).

In the past, only combat soldiers were considered for diagnosis with PTSD because of the nature of war and the types of events experienced in combat. Since Vietnam and now with the current conflicts, there is less of a discernable front line. Military service members who serve in all types of units with various missions are susceptible to PTSD, although the rates still tend to remain higher for combat troops (Cantrell & Dean, 2005; Grieger et al., 2006). Some service members have also been involved in handling the remains of not only fellow service members, but also civilian casualties and/or dealing with prisoners of war and refugees (Bryan, 2008; Tanielian & Jaycox, 2008).

For military service members, PTSD and its symptoms can manifest in a variety of ways: anger, isolation, nightmares, difficulty sleeping, concentration and memory problems, extreme jumpiness, hyper-vigilance and hyper-alertness, emotional distancing from others, suicidal ideations, risky behaviors, and flashbacks (Cantrell & Dean, 2005). These symptoms can be expressed and experienced in a variety of ways for military service members. Various triggers can occur that bring the symptoms to the surface, e.g., sights, sounds, and smells reminiscent of the event. For example, loud explosions, helicopters, cars backfiring, smells of blood or jet fuel, and being surrounded by noisy groups of people can all trigger a flashback for a service member with PTSD (Cantrell & Dean).

Some symptoms of PTSD can be more problematic or pervasive for military service members because of training and personality characteristics that were essential survival skills for being a warrior. Military mentality and training focuses on strength versus weakness and the importance of being able to function and perform one's mission

regardless of danger and circumstances. Thus, losing control of one's emotions can feel very vulnerable for a service member, resulting in compartmentalization and emotional numbing (Cantrell & Dean, 2005; Sherman et al., 2005). Roughly half of the service members deployed in OEF/OIF have suffered the loss of one or more friends and colleagues in war, some may have died right beside them, and others may have suffered severe physical injuries requiring long term rehabilitation and lifelong disability (Tanielian & Jaycox, 2008). As a result, these service members often struggle with what is called survivor guilt--wondering why they survived when others did not (Cantrell & Dean).

Another symptom of PTSD--with which many service members struggle and that impacts family members and all those around them--is anger: in general or directed at specific authority figures or specific groups such as Arabs as a whole (Cantrell & Dean, 2005). Anger can be expressed in a variety of ways such as road rage, which may be directly related to the trauma one may have experienced in a convoy that was ambushed or was hit by an improvised explosive device (IED; Cantrell & Dean). Because most military service members have been trained to kill by one or more means, many of them remain quite physically fit and muscular. When angry, they can be quite frightening to others. Cantrell and Dean noted that they tell veterans with whom they work "that you have no idea how intimidating you can appear just by your body posture and your eye contact" (p. 41).

Estimates vary on what percentage of those deployed to Iraq and Afghanistan are at risk for developing PTSD. One study showed that combat soldiers and Marines who were deployed to Iraq met screening cutoffs for PTSD at 9.8% in the Post-Deployment

Health Assessment (PDHA) compared to 4.7% of those deployed to Operation Enduring Freedom (OEF; Hoge et al., 2006). In addition, the rates varied depending on the location deployed and when deployed; the variance appeared to be related to the levels and types of combat activity that took place in the different theaters (Hoge et al.). Another study showed that service members reporting higher levels of exposure to combat were 4.8 times as likely to report symptoms meeting criteria for PTSD diagnosis as those with lower levels of combat exposure at one month after deployment, but not at 4 or 7 months after deployment (Grieger et al., 2006).

Estimated rates of PTSD also varied depending on the screening tools used to determine the estimates. The Department of Defense (DOD) conducts health care screenings of service members and civilian employees returning from deployments using the Post-deployment Health Assessments (PDHA) and Post-deployment Health Re-Assessments (PDHRA), which are completed electronically by the service member and a healthcare provider conducting an interview (PDHRA form; Hoge et al., 2006). These forms include demographic information, deployment, and military information such as rank, status, number, and location of deployments. There are general physical health questions as well as questions to discern possible TBIs. Also, four questions are asked related to mental health that cover conflicts with family, friends, or coworkers; PTSD symptoms; alcohol use; anhedonia; and depression (PDHRA form). Based on the answers a service member provides, the health care provider assesses suicidal and homicidal ideations and conducts a risk assessment if needed (PDHRA form). Finally, after review of the form and interview with the service member, the health care provider may identify physical and exposure concerns as well as concerns about depression, PTSD,

anger/aggression, suicidal ideation, social/family conflict, and alcohol use (PDHRA form). The health care provider can make referrals for follow up in 24 hours, 7 days, or 30 days for physician, behavioral health, mental health specialty clinic, substance abuse, chaplain, and family support (PDHRA form; Hoge et al.).

Based on these screenings, the joint DOD and Veterans Affairs (VA) guideline considers individuals to be at risk for PTSD if they answer affirmatively to three of the four screening questions (U.S. Government Accountability Office, 2006). Using this screening tool and guideline, roughly 5% of service members from all branches who were deployed to OEF or Operation Iraqi Freedom (OIF) from fall of 2001 through fall of 2004 were assessed to be at risk for PTSD (U.S. Government Accountability Office).

One study found that approximately one-third of military service members who had been deployed to OIF in early 2003 to early 2004 accessed and utilized mental health services during the year following their deployment (Hoge et al., 2006). This is a higher number than from other theaters including Afghanistan (Hoge et al.). Another interesting finding from Hoge et al.'s research is that the number of service members who had been deployed to OIF accessing mental health care the year following their return was much higher than what would have been expected based on the screening of the Post-Deployment Health Assessment (PDHA; Hoge et al.). In fact only 7.6% of OIF service members seen for mental health appointments in the year following their return from deployment were referred by means of the PDHA (Hoge et al.).

The Department of Defense has continued to focus attention on mental health issues and has been working toward reducing the stigma of mental health problems and seeking counseling, which it continues to do with the newest program the "Real Warriors

Campaign” (Lopez, 2009b). Their efforts reflect some success as indicated by results from Mental Health Advisory Team surveys; the number of those who reported they would not seek mental health counseling due to stigma dropped from 41% in 2004 to 32% in 2007. Among those same respondents, the number who viewed seeking counseling services as being weak dropped from 64% in 2004 to just under 50% in 2007 (Lopez). However, the numbers of suicides among active duty and reserve component soldiers in the Army continue to climb (as will be discussed later). Overall, higher numbers of OEF and OIF service members are seeking mental health assistance than did service members from any previous conflicts as a direct result of the efforts being made by the DOD and the VA and other veterans’ organizations (Stiglitz & Bilmes, 2008).

These statistics do not capture the entire population of service members seeking any type of mental health assistance. Those seeking counseling through less formal means, such as chaplains and family assistance programs, are not captured in medical referral databases; nor are those service members who choose to seek mental health counseling outside official military channels and pay out of pocket (Hoge et al., 2006).

Past research indicates that the rates of PTSD tend to increase over time (Grieger et al., 2006). This finding was supported by a recent study that showed the rates of PTSD for combat soldiers a year after deployment at almost 17%, much higher than pre-deployment rates or rates immediately post deployment (Hoge, Terhakopian, Castro, Messer, & Engel, 2007).

Much of the research on PTSD rates for service members is based on self-report questionnaires rather than in person interviews. There has been some discussion about whether utilizing questionnaires results in inflated numbers of individuals meeting

criteria for PTSD (Englehard et al., 2007). Englehard et al. found that when they used diagnostic interviews with their participants, the rates of PTSD were 41% lower than the rates based on questionnaire assessment. Additionally, they found the rates were cut almost in half when they controlled for trauma not related to deployment or which did not cause impairment in daily life (Englehard et al.). In fact, of the participants who screened positive for PTSD based on the structured clinical interview, almost 37% reported that their symptoms did not cause more than slight impairment in their daily lives (Englehard et al.). The authors noted that there may be a change in levels of functional impairment for service members when they leave active military service (Englehard et al.).

The focus of many of the studies has been directed at diagnosable levels of PTSD and discussion around how accurate rates of PTSD are based on self-reports (Englehard et al., 2007; Marshall et al., 2001). One study looked at screening responses on National Anxiety Disorders Screening Day in 1997 to compare impairment, comorbidity, and suicidal ideation among individuals with subthreshold PTSD (having one to three symptoms) and full PTSD (Marshall et al.). Their findings showed that subthreshold PTSD contributed to impairment in daily life. Even without any other diagnoses and when comorbid with other disorders, the levels of impairment went up (Marshall et al.). Additionally, the risk for suicidal ideation was higher with subthreshold PTSD than for individuals with no PTSD symptoms (Marshall et al.). In summary, the authors stated that the “important public health implication of these findings is that substantially greater numbers of individuals experience disability after trauma than is suggested by simply considering rates of full PTSD” (Marshall et al., p. 1472).

PTSD diagnosis can become more complicated when service members are married or partnered because of the nature of certain PTSD symptoms such as emotional numbing. The numbing, emotional distancing, and isolation can lead to distance and strain in the intimate relationship as well as isolation of the family unit from friends, extended family, and social activities (Mabray, Bell, & Bray, 2009; Sherman et al., 2005). How a service member has been trained to survive in combat (battlemind training) causes problems once the service member has returned home without efforts to transition back into civilian and family life (Mabray et al.). One of the best ways to work through this transition for service members with families is through marriage and family therapy (Mabray et al.).

When the family system is struggling because the service member has been diagnosed with PTSD, the struggles and needs of the partner can be ignored and the focus placed only on the service member (Sherman et al., 2005). This is reinforced in families where the service member receives some compensation through the VA for her or his disability; thus, there is less incentive for the person to get better if he or she and the family system fear the loss of that financial support (Sherman et al.).

The importance of family support as a protective measure against development or severity of PTSD has been discussed in the literature (Naparstek, 2004; Sherman et al., 2005). Military service members who are struggling with PTSD, TBIs, and other aspects of the aftermath of military deployments also face struggles with intimacy and relationships, thus not providing protective measures but also increasing the distress and difficulties of the service member and all family members (Sherman et al.). Research has also shown that levels of instability in intimate relationships among military service

members with marital problems are greater; there can be higher levels of abusiveness in the relationships (Bryan, 2008; Kessler, 2000; Sherman et al.). Deployments to war zones and combat increase the likelihood of domestic abuse in the families of veterans after their return (Bryan). These stressors and difficulties within an intimate relationship can be exacerbated if one or both of the partners are also transitioning into the role of college student, especially because the pursuit of a college degree, even with VA educational benefits, may be marked with financial strain (DiRamio, Ackerman, & Mitchell, 2008).

Additionally, for younger single veterans from OEF and OIF who are transitioning to civilian life and specifically college life, struggles establishing intimate relationships limit their access to these protective measures, which also can add strain as they look to move on with their lives, date, and find a life partner. This is especially true because some service members may be struggling with survivor guilt, lack of trust in intimate relationships with civilians, and emotional numbing and isolation (Sherman et al., 2005).

The impact deployments have on military retention rates overall is unclear. One study that examined rates of PTSD based on the Defense Medical Surveillance System (DMSS) database showed that within one year after returning from deployment, 16.7% of the participants in their study (total of 303,905 in study) had separated from the military (Hoge et al., 2006). This same study showed that the participants whose responses to the PDHA reflected a positive screening for a mental health concern left the service within one year of return from deployment at higher rates than service members who screened negative (Hoge et al.). Research conducted prior to operations in Iraq and Afghanistan showed that mental health diagnoses contributed to attrition from military service more

than other medical conditions (Hoge et al., 2002, 2006). Statistics and rates of attrition from military service impact not only the Veterans Affairs health care system but also health networks and mental health services at institutions of higher learning for service members who go to college upon separation from the military (Hoge et al., 2006).

Related to these statistics is research showing that over 60% of returning OIF service members who screened positive for PTSD and other mental health concerns reported not seeking any treatment for their mental health conditions (Hoge et al., 2004). A recent study showed that service members who sought mental health treatment through Veterans Affairs did so mostly due to symptoms related to depressive symptoms and not PTSD symptoms. This finding led the authors to surmise that those with PTSD who were not suffering distress related to depression may be less likely to seek services (Erbes, Westermeyer, Engdahl, & Johnsen, 2007).

The National Comorbidity Survey (NCS) done in the 1990s found that those who had PTSD were 40% more likely than other respondents to have failed in high school or college (Kessler, 2000). In a general, non-military study of the impact of preexisting psychiatric disorders on educational attainment, Kessler, Foster, Saunders, and Stang (1995) found that approximately half of the individuals with a psychiatric disorder did not even begin college; of the half that did, approximately half of them did not complete a college degree. Overall, based on the participants from the Kessler et al. study, the authors gauged the cumulative effect for individuals with a preexisting psychiatric disorder as 10% less likely to graduate from college than individuals without a psychiatric disorder. The authors further noted that the impact of a psychiatric disorder

was probably underestimated because it did not take into account grade point average, which was likely to be lower for many with a preexisting condition (Kessler et al.).

PTSD and other psychological disorders can directly influence a service member's ability to function effectively in the classroom due to difficulties with memory, concentration, and organizational and prioritization skills (Church, 2009). Additionally, service members struggling with PTSD, depression, or anxiety while attending college may struggle with allowing themselves to relax their guard in a classroom so they can focus on the information being presented (Kattner, 2009).

If the service member has been diagnosed and is on medication, there may be side effects of the medication such as drowsiness or numbness, leading to lower responsiveness (Church, 2009). Flashbacks and nightmares can contribute to disrupted sleep, resulting in increased drowsiness when trying to focus in class and study out of class (Church). A service member's perception of faculty or classmates being more liberal and less understanding can result in problems with authority figures, difficulty speaking up in class, or approaching instructors (Church). All of the above can also lead to service members having unpredictable absences in class, which can directly impact their grades if attendance is factored through missing assignments, incomplete notes, and corresponding difficulty on exams.

One study showed that younger service members (those under the age of 25) were more likely to meet screening criteria for PTSD than those over the age of 25 (Grieger et al., 2006). This information is significant for institutions of higher learning where there may be higher numbers of service members who fall in the under 25 category beginning

college. This is especially likely considering that over half of those who have or are serving are under 24 (Stiglitz & Bilmes, 2008).

In addition to the PTSD itself, a recent study showed that of active duty service members who met criteria for a PTSD diagnosis, a third of them also reported high levels of severe physical symptoms such as headaches, chest pains, and shortness of breath, even after controlling for combat related injuries (Hoge et al., 2007). Among this group of soldiers, those meeting criteria for PTSD also reported higher levels of sick call visits and missed work days (Hoge et al.).

Many military service members who are seeking treatment while still in the military or after discharge through the VA are being seen for multiple concerns, usually a mixture of physical and psychological problems (Stiglitz & Bilmes, 2008). In fact, the average VA claim lists five different conditions, usually all of them disabling to a degree; a fourth lists eight or more disabling conditions (Stiglitz & Bilmes).

*Impact of Current Conflicts in Iraq
and Afghanistan on the Military
and Rates of PTSD*

Since September 11, 2001, Congress has appropriated approximately \$864 billion to fund the United States' war on terror, the bulk of which has gone to support Operation Iraqi Freedom (74%), Operation Enduring Freedom (22%), and a small percentage for security enhancements in the United States and at embassies throughout the world (Belasco, 2009). If the requested funding levels are approved by Congress for the remainder of fiscal year 2009 and fiscal year 2010, the spending levels for the war on terror will reach \$1.07 trillion. The proposed funding levels reflect a shift from the bulk of the funding going to Iraq to levels approaching a 50/50 split between Iraq and

Afghanistan (Belasco). Of the \$864 billion already allocated over the past eight years, over 90% of it has gone to the Department of Defense (DOD). Less than 1% (roughly \$4.2 billion) has gone to the Veterans Administration to fund medical care for veterans of OEF, OIF, and other operations in the global war on terror (Belasco). In fact, there was no war funding for VA medical care until fiscal year 2005 for Iraq veterans and fiscal year 2007 for Afghanistan veterans (Belasco).

The bulk of the combat troops who are fighting on the ground in Iraq and Afghanistan are Army combat units and Marines (Hoge et al., 2006). Ground combat troops account for roughly 40% of active duty Army and Marines deployed to OEF and OIF, and about one quarter of all the service members of these two branches when the National Guard and Reserves are included (Hoge et al., 2004). These types of units and service members are the ones who are routinely exposed to more dangerous situations, are sustaining higher casualties, and are at risk for higher rates of PTSD (Hoge et al., 2004; U.S. Government Accountability Office, 2006). Based on research findings regarding rates of somatic complaints related to PTSD levels, Hoge et al. (2007) recommended that service members who served in combat units and are being seen through primary care for high levels of physical complaints should be screened for PTSD.

Combat experiences were described in one study as involving being shot at, being in contact with dead bodies, having friends killed, or killing an enemy soldier (Hoge et al., 2004). The Rand study (2008) found that individuals who had five or more of the most common traumas--being injured, having a friend killed or injured, and seeing dead noncombatants--were four times more likely to be at risk for PTSD and depression as service members who had no traumas (Tanielian & Jaycox, 2008). Hoge et al. (2004)

found that the rates of PTSD increased with the number of fire fights in which the service members were involved during their deployments: those not involved in any fire fights had a PTSD rate of 4.5%, those involved in one to two fire fights had a PTSD rate of 9.3%, those involved in three to five fire fights had a PTSD rate of 12.7%, and those involved in more than five fire fights had a PTSD rate of 19.3%. Additionally, the study conducted by Hoge et al. based on surveys done during 2003 showed much higher rates of fire fights for service members deployed to Iraq (71% for Army and 86% for Marines) than Afghanistan (31%) based on the types of operations being conducted in both theaters at the time. These percentages would be expected to vary over time in relation to changes in operations. As of the publication of their research, Stiglitz and Bilmes (2008) reported that 90% of the deaths and injuries of U.S. troops occurred in Iraq.

Service members serving in OEF and OIF are being called upon to serve multiple tours of duty in one or both areas of operation. One third of the military service members who have been deployed to Iraq have been deployed two times or more--sometimes in Afghanistan and other locations, sometimes just in Iraq (Stiglitz & Bilmes, 2008). As the number of deployments and time in theater increase, so do the chances of being involved in and witnessing combat, being injured, seeing friends die, and the risks of being killed (Lapierre, Schwegler, & LaBauve, 2007). Along with this, the rates of psychological problems increase, with depression and anxiety increasing from rates of 12% to 27% for individuals deployed once to those deployed three times (Church, 2009).

In addition to multiple deployments, the length of deployments has been extended at different periods during the conflicts. Many service members have had their discharges delayed or been recalled to active duty from the individual ready reserve (Stiglitz &

Bilmes, 2008). All of these additional stressors plus the lack of a clearly defined front line--meaning threat and death can come at any place in theater--as well as combatants dressed in civilian clothing have led to increased rates of trauma and mental health conditions among military service members (Stiglitz & Bilmes). According to Stiglitz and Bilmes, 38% of veterans treated through the VA have been diagnosed with PTSD or some other psychological condition.

Increasing Rates of Suicide Among Military Service Members

Military service members, especially combat veterans, are at higher risk for suicide for a number of reasons: medical and psychiatric conditions, lack of social support, and knowledge of and access to firearms (Kaplan et al., 2007). As Kaplan et al. noted, the studies and statistics based on VA samples are limited because three-fourths of service members do not go to or receive health care from the VA. Their research on veterans in the general population indicated that veterans were twice as likely to die by suicide as their male non-veteran counterparts (Kaplan et al.).

The numbers of suicides and attempted suicides are more difficult to determine for those service members not on active duty because many of them are no longer affiliated with a unit and some of them may not be seeking services through the VA or other organizations that would track these statistics. As a result, there are no accurate statistics on suicide rates among military veterans of OEF in Afghanistan and OIF in Iraq who have returned home and separated from the service (CNN.com, 2007).

Each reported suicide or suicide attempt needs to be investigated and confirmed if the statistics are to reflect an accurate number; that is difficult to do, especially with suicide attempts, even if the service member is hospitalized. Recently the VA was sued

over lack of care and high suicide rates (Military.com, 2008). One internal email that was made public during the trial stated that VA suicide prevention coordinators were reporting about 1,000 suicide attempts by veterans per month at VA medical facilities (Military.com). The VA estimates that roughly 18 veterans a day commit suicide; that number includes military service members from all wars, not just the current conflicts (MSNBC.com, 2008). Additionally, suicides by veterans are 58% more likely to involve the use of firearms (Kaplan et al., 2007).

The Army recently released statistics for the first half of 2009 (January through July). There were 96 reported suicides among active duty Army soldiers (62 have been confirmed and 34 are still pending final determination) compared to 79 suicides for the same period in 2008 (Hall, 2009). Among reserve components of the Army not currently on an active duty status, there were 45 reported suicides (17 of them confirmed so far and the remaining 28 still being investigated) compared to 32 suicides for the same time period in 2008 (Hall). The 96 reported active duty suicides in the first half of 2009, combined with the reported 580 reported from the beginning of the global war on terror through the middle of 2008, brings the total of suicides among active duty Army soldiers to over 650 pending final determinations on some of the reports (Hall; MSNBC.com, 2008). In addition, the Army has reported that 10 to 20 times as many soldiers have had suicidal ideations (MSNBC.com).

One recent study looked at how Joiner's (2005) interpersonal-psychological theory of attempted and completed suicide could be applied to veterans (Brenner et al., 2008). Specifically, Brenner et al. looked at how combat experiences increased veterans' habituation to pain, added to struggles adjusting to life after combat, and related to a

sense of belongingness and/or burdensomeness (Brenner et al.). Brenner et al. conducted qualitative research with 16 OEF and OIF veterans to understand how their combat experiences related to habituation to pain, which could lead to an increased ability for suicidal behavior. The study also asked the participants about their feelings of being a burden to loved ones after their return from deployments and a sense of failed belongingness or having a place in society; these, in conjunction with habituation to pain, are the three main aspects of Joiner's theory (Brenner et al.).

In his interpersonal-psychological theory of attempted and completed suicide, Joiner (2005) suggests that when a person has had multiple or continual exposure to pain and fear through experiences (such as one might have in combat), this can lead to a habituation to pain, which can result in one's being more likely to engage in suicidal behavior because he or she has a higher threshold for pain and fear. In Brenner et al.'s (2008) study, the participants did provide answers that indicated a high exposure to pain and fear and an increased pain tolerance. Other veterans referenced utilizing strategies such as numbing and dissociation to get through their combat experiences (Brenner et al.), which became problematic when individuals continued to use such strategies after returning home (Sherman et al., 2005). Some participants in Brenner et al.'s study indicated that they continued to use the strategies of numbing and dissociation postdeployment, contributing to social isolation. Others reported they recognized what they did and have sought support and assistance upon their return to prevent social isolation (Brenner et al.).

Support of family and friends can be a double-edged sword for many veterans. While it is protective and critical for veterans working through their postdeployment

struggles to transition and provide a protective buffer against PTSD, some veterans also worry that they are a burden on their family, especially if they are struggling financially or have some physical and psychological wounds of war (Brenner et al., 2008). This can be especially true for military service members who are forced to leave the service due to an injury. However, it can impact even those who voluntarily choose to separate from the military (Brenner et al.; DiRamio et al., 2008). A big piece of this, which impacts both burdensomeness and belongingness, is that many service members struggle with defining their sense of self after the military and after combat (Brenner et al.). This can be exacerbated by reactions of family, friends, and strangers back home who do not follow any type of military rank structure for respect, honor, and deference to one's status (Brenner et al.); this can be especially true in many typical college settings. Some participants disclosed that one reason for going to college was to redevelop a sense of self (Brenner et al.). Consistently, participants reported that their lives in the civilian world were less meaningful than their role and missions in combat and the military (Brenner et al.).

In Brenner et al.'s (2008) study, there was a consistent theme among the participant responses of feeling disconnected from civilians and a lack of belongingness. In addition, the veterans consistently responded that they felt a common bond and feelings of connection to other military service members--those with whom they served as well as other veterans they met (Brenner et al.). The only non-military connections the participants really talked about were with family and friends (Brenner et al.), which is important to note for younger, single military service members who can be geographically removed from family and friends if they choose to go away to college.

Overall in their study, Brenner et al. (2008) found that even though they did not specifically mention suicide in the interviews with participants, the theme continually emerged in relation to habituation to pain, sense of burdensomeness, and lack of belongingness. In addition to suicide, some respondents spoke of other self-harming behaviors such as abusing drugs and alcohol and self-directed and other-directed violence (Brenner et al.). Brenner et al. cited the importance of vocational rehabilitation and assistance for military service members as they make the transition to civilian life, many by way of a college education. They also noted the importance of taking into consideration the sense of camaraderie that service members feel with each other as well as the lack of connection felt with non-military members (Brenner et al.), which is critical when looking at easing a military service member's transition into a college environment. This is especially important in light of the implications that increased habituation to pain, increased feelings of burdensomeness, and lack of a sense of belongingness are all likely to lead to increased risk of suicide among the veteran population (Brenner et al.).

Based on studies showing that individuals with comorbid diagnoses of PTSD and Major Depressive Disorder (MDD) differ from individuals diagnosed with one or the other, Sher (2009) has advanced the psychobiological condition of "posttraumatic mood disorder" (PMD). Individuals who fit the criteria for dual diagnosis of PTSD and MDD, or rather PMD, have higher levels of suicidality and increased difficulties in social and work settings (Sher). Based on these factors, Sher has proposed a model of suicidal behavior in service members with PMD.

*Impact of Changes in Warfare and
the Battlefield on Military Service
Members*

The current conflicts in Iraq and Afghanistan have been marked by a change in warfare due to the utilization of high numbers of improvised explosive devices (IEDs). The development and increased usage of IEDs has led to an increase of service members being involved in explosions and blasts; this is the signature cause of injuries for OEF and OIF service members (Church, 2009). As U.S. military armor and countermeasures have improved, so has the technology and lethality of the IEDs (Wilson, 2007). There are specialized IEDs called explosively formed projectiles (EFPs), which have an end cap that is a metal disk that will turn into molten metal during the denotation and can penetrate armor (Wilson). IEDs have been so successfully used by the insurgents in Iraq and Afghanistan that there are specialized cells which make and detonate IEDs; often times, these cells include a cameraman to take videos of the explosions and killed and wounded U.S. military to be shown on the Internet for recruiting (Wilson).

Improved body armor being utilized by the military services in the current conflicts, and continued advancements in vehicle and body armor, has led to an increased survival rate for military service members deployed in OEF and OIF (Church, 2009; Warden, 2006). However, one of the consequences of improved body armor is that while service members are surviving blasts and explosions they would not have in the past, there are higher rates of lost limbs and amputations (Church). The number of amputations for OEF and OIF service members is already higher than that for Vietnam (Church). In addition to that, there are even higher rates of TBIs than amputations (Warden).

Due to advancements in treatment and medicine, there are greater numbers of service members serving in Iraq and Afghanistan who have been wounded and survived those wounds than in previous conflicts and wars (Stiglitz & Bilmes, 2008). These medical advancements, quicker evacuation from battlefields, and improved armor have resulted in much higher ratios of service members injured to those killed in action than has been the case with past military conflicts (Church, 2009; Tanielian & Jaycox, 2008). The numbers vary depending on whether the number of injured includes non-combat injuries. The ratios have been shown to be anywhere from 7/1 injured/killed up to 16/1 (Church; Glasser, 2007; Hildreth, 2009; Stiglitz & Bilmes). Whichever number is used, the ratios are much higher than in past conflicts: 1/8 injured/killed for World War I, 1/6 for World War II, 2/6 for Vietnam, and 2/8 for Korea (Stiglitz & Bilmes). Military service members who have been wounded and survive face higher risk and rates of developing PTSD (Hoge et al., 2004). Research has shown that over time, the rates of PTSD tend to go up for service members, especially those who were injured as a result of combat (Grieger et al., 2006). Service members who reported more severe physical problems were more likely to report higher levels of PTSD and depression at 1, 4, and 7 months after deployment (Grieger et al.).

During the course of Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF), over 61,000 soldiers have been in the Army's medical system (Leipold, 2009) and the number continues to grow. Many of these individuals will have a combination of mental and physical health problems because if they have suffered any type of physical injury, they are also more likely to be struggling with adaptation, grief, and trauma issues (Hoge et al., 2004). One study assessing PTSD rates in Army combat

soldiers one year after their deployment had just over 17% self-report that they had been wounded or injured during their last deployment (Hoge et al., 2007). Hoge et al.'s study also showed that rates of PTSD were higher for those service members who had been wounded or injured--almost 32% compared to almost 14% for those never injured.

*Traumatic Brain Injuries (TBIs) and Other
Physical Injuries and Ramifications
for Learning*

There are a variety of physical and psychological wounds of war with which service members may struggle during and after their deployment to Iraq and Afghanistan. These include, but are not limited to, vision and hearing loss, loss of limbs, PTSD, TBI, depression, and anxiety. All of these physical and psychological injuries can influence the affected service member's ability to function in a college setting, both in the classroom and outside of it (Church, 2009). Examples of how war-sustained injuries may affect a service member in college include "unpredictable attendance due to pain or other symptoms, scheduled absences due to required travel to VA facilities for medical care, and medication-related issues that impair performance" (Church, p. 44).

TBI is being called one of the signature wounds of the wars in Iraq and Afghanistan (Church, 2009; Tanielian & Jaycox, 2008).). Estimates vary on the percentage of military service members suffering from traumatic brain injuries (TBIs). While some studies reflect a relatively small percentage of TBI incidence, not dissimilar to the rates among peacetime military (Hoge et al., 2004), numbers of military service members returning from Iraq and Afghanistan with traumatic brain injuries have been estimated at 20% (Tanielian & Jaycox, 2008). Another recent investigation found that military testing is missing as many as 40% of concussions and that diagnosed head

injuries are not being noted in service members' files (Miller & Zwerdling, 2010).

Additionally, Walter Reed Army Medical Center statistics indicate that 30-33% of patients treated for combat injuries in 2008 also met diagnostic criteria for TBIs (Lopez, 2009a).

In past wars, about 75% of similar injuries caused by blasts resulted in death (Stiglitz & Bilmes, 2008). One of the major causes of TBIs in OEF and OIF service members is IED explosions and blasts, accounting for about two-thirds of combat injuries (Stiglitz & Bilmes). TBIs are so common in OEF and OIF service members that those being treated in VA hospitals report being affected by between 6 and 24 bomb blasts during their deployments (Stiglitz & Bilmes).

Some service members experience severe TBIs and open head wounds as a result of explosions when they are hit by debris from the explosion or are thrown from their vehicle and have a physical blow to their head. Additionally, service members can receive mild to moderate TBIs because of the change in pressure or rapid pressure shifts (often referred to as blast waves) created by the blasts. The blast waves can cause a change in the air pressure that affects the fluid around the brain, resulting in the brain hitting against the inside of the skull (Church, 2009; Stiglitz & Bilmes, 2008). This change in pressure can also affect other fluid filled organs in the body and result in various problems such as tinnitus and abdominal pain (Warden, 2006). The types of blast injuries described above are divided into three levels: primary--caused by the change in pressure, secondary—the result of objects propelled by the explosion hitting someone, and tertiary—result from a person being thrown by the force of the explosion and hitting something else (Warden).

TBIs can result in physical symptoms such as headaches and migraines, dizziness, seizures, fatigue, and vision and hearing difficulties that can cause significant problems for a service member trying to function in a classroom setting (Church, 2009). However, TBIs can also cause slight to significant impairment in cognitive abilities such as slower processing speeds, short-term memory loss, reduced attention and concentration, and difficulties manipulating language and numbers, as well as behavioral problems such as anger management (Church; Stiglitz & Bilmes, 2008). A TBI can affect a person's ability (emotionally and cognitively) at a time when self-pacing is critical to one's academic success (Church). All of the symptoms of TBIs can also be more severe when the person affected is fatigued or overloaded with stimulus, which is often the case in higher education, especially at critical times such as midterms and finals (Church).

Service members can unknowingly struggle with various symptoms of TBIs. If there has not been a diagnosis or they are not familiar with the symptoms and implications of a TBI, they may not recognize their struggles as the result of a TBI and not seek the assistance they need and deserve (Madaus, Miller, & Vance, 2009; Vance & Miller, 2009). In addition, many of the symptoms of TBI are also common symptoms for PTSD. Thus, it can lead to confusion among providers if a service member is suffering from one or the other or both (Stiglitz & Bilmes, 2008; Warden, 2006). Research has also shown that service members who have suffered mild TBIs have a higher chance of also being diagnosed with PTSD, especially if the injury was sustained as a result of a blast or explosion (Warden). In one study, almost 44% of individuals who stated they had lost consciousness also met screening criteria for PTSD (Hoge et al., 2008).

Importance of Perceived Social Support with Trauma

Perceived social support has been shown to be critical in multiple ways for people who are dealing with trauma: buffering and protecting against the effects of trauma, decreasing the severity of PTSD, and facilitating the healing from trauma (Brewin et al., 2000; Church, 2009; Fikretoglu et al., 2006; Naparstek, 2004; Ozer et al., 2003; Sherman et al., 2005). Secondly, it has been demonstrated in research findings from multiple studies that perceived and actual social support after trauma has a buffering effect on preventing and lessening PTSD symptoms and severity (Naparstek; Sherman et al.; Thrasher, Power, Morant, Marks, & Dalglish, 2010). In addition, perceived social support was the one variable associated with improvement in PTSD treatment in a recent study (Thrasher et al.). The support can come from family, friends, fellow service members, and the community at large.

For the person who has experienced a trauma, the presence or absence of social support can influence how she or he handles the resulting feelings of helplessness, horror, fear, and the level of distress and the effect these feelings have on his or her life (Cantrell & Dean, 2005). Social support can be critical for mitigating symptoms in the area of numbing, avoidance of reminders of the event, and hyperarousal (Cantrell & Dean). In a meta-analysis looking at risk factors for PTSD, overall and specifically in military populations, lack of social support was one of the leading risk factors for PTSD (Brewin et al., 2000; Ozer et al., 2003).

Regarding the importance of social support, especially for combat veterans, Herman (1997) writes about the importance of restitution through connections with others: “Sharing the traumatic experience with others is a precondition for the restitution

of a sense of a meaningful world” (p. 70). As Herman writes about restitution and recognition, she blends the theories of constructive psychotherapy with the importance of social support for military veterans dealing with the aftermath of traumatic military experiences. Mahoney (2003) looks at social support from a constructive approach as he writes, “Most change takes place in contexts of human relatedness” (pp. 1-2). Social-symbolic relatedness is listed as one of the five basic themes of constructivism because “persons exist in living webs of relationships” (Mahoney, p. 5).

For many individuals, military combat involves experiences that lie outside the realm of natural order and easy processing, which results in difficulty relating to others and sharing experiences to achieve a sense of connection and restitution (Herman, 1997; Rose, 2010; Schumacher, 2009b; Sherman, 2010). As a result of the feelings that combat and military experiences set them apart from others, even loved ones, many service members feel a deep connection and sense of community with their fellow service members (McBain, 2008; Schumacher; Sherman). As a result of the current technologies, OEF and OIF service members can be better connected to their fellow veterans through email, texting, and webpages specifically for veterans (Schumacher, 2009a).

The importance of family support as a protective measure against development or severity of PTSD has been discussed in the literature (Naparstek, 2004; Sherman et al., 2005). At the same time, military service members who are struggling with PTSD, TBIs, and other aspects of the aftermath of military deployments also face struggles with intimacy and relationships, i.e., not providing protective measures and also increasing the distress and difficulties of the service member and all family members (Sherman et al.). This can make support of family and friends a double-edged sword for many veterans.

While it is protective and critical for veterans working through their postdeployment struggles to transition and provide a protective buffer against PTSD, some veterans also worry that they are a burden on their family, especially if they are struggling financially or have some physical and psychological wounds of war (Brenner et al., 2008).

Military service members, especially combat veterans, are at higher risk for suicide for a number of reasons: medical and psychiatric conditions, lack of social support, and knowledge of and access to firearms (Kaplan et al., 2007). In Brenner et al.'s (2008) study, a consistent theme among participant responses was feeling disconnected from civilians and a lack of belongingness. As mentioned above, veterans consistently responded that they felt a common bond and feelings of connection to other military service members--those with whom they served as well as other veterans they met (Brenner et al.). The only non-military connections the participants really talked about were with family and friends (Brenner et al.). The protective strength of social support in the form of a therapeutic relationship can be what prevents a veteran from committing suicide because he/she has an appointment the following week (Schumacher, 2009b).

Even student veterans and military who may not be dealing with PTSD and TBIs can struggle with the transition from military life to college life. One article indicated that student veterans and military are quite similar to all other students--they need support to be successful in college. The authors (Hassan, Jackson, Lindsay, McCabe, & Sanders, 2010) indicate that the need for support in the transition actually makes service members normal college students and they need not be pathologized.

History of GI Bill and College-Bound Military Veterans

Many of the service members from OEF and OIF have already begun receiving educational benefits under the old GI Bill. In fact, VA numbers from 2008 put the figure at 436,000 military service members consisting of veterans, active duty, National Guard, and reservists who received educational benefits, along with an additional 80,000 dependents and survivors (Lum, 2009). Based on those numbers, including service members who have returned and are returning from Iraq and Afghanistan, and those leaving the service who have not been deployed, the VA estimates that number could go up by 25% with the new Post 9/11 GI Bill (Lum).

Current and future college students who are military veterans will fall under one of two GI Bills, depending on when they served. Most current veterans who are in college have a choice of GI bill under which they wish to receive benefits: Chapter 30--the Montgomery GI Bill or Chapter 33--the Post 9/11 GI Bill.

Some early legislation paved the way for veterans in higher education. Beginning with the early days of World War I (WWI), Congress set up the Commission on National Aid to Vocational Education (Madaus et al., 2009). A few years later as WWI was ending, Congress passed the Vocational Rehabilitation Act of 1918, which was the ground work for vocational rehabilitation for disabled WWI veterans (Madaus et al.). Much of the focus of this vocational rehabilitation for disabled veterans focused on trade schools and basic skills such as learning to write; however, a portion of already college educated disabled veterans did receive higher level professional training (Madaus et al.). One of the most significant outgrowths of these early efforts was the establishment of the Disabled American Veterans organization (DAV; 1995).

During World War II (WWII), ground-breaking legislation was passed that changed higher education in America and the lives of countless military veterans of WWII to the present. This legislation, the Servicemen's Readjustment Act of 1944, is what became known as the GI Bill (Madaus et al., 2009). Beginning in 1946 as a result of the passage of the GI Bill, more than \$2 billion a year was spent on veterans' college education; over half of the college student population nationwide was WWII veterans (Strom, 1950). The benefits provided to veterans through the GI Bill helped them to rise above their non-veteran counterparts (Madaus et al.). An increased focus on disabled veterans and their special needs on college campuses eventually paved the way for not only other disabled veterans, but also non-veterans with disabilities (Madaus et al.).

After the Korean War, funding available to veterans was no longer as lucrative as it had been at its inception. College costs continued to increase and benefits of the GI Bill had not only not kept pace, but been reduced; the result was that fewer veterans took advantage of their GI Bill benefits after their service (Madaus et al., 2009). Consequently, some institutions of higher education developed their own programs and services to assist veterans, especially disabled veterans at their institutions; this was especially true of institutions located near VA hospitals (Madaus et al.).

During the Vietnam War, Congress passed legislation to improve the benefits of the GI Bill for Vietnam veterans. In addition to physical disabilities, there was an increased recognition that after the Vietnam War some veterans were struggling with psychological disabilities (Madaus et al., 2009). There was an increased focus on the educational needs of disabled veterans as studies began showing significantly higher rates of unemployment and homelessness for disabled Vietnam veterans (Madaus et al.).

In 1984, Senator Montgomery put forth legislation to improve GI Bill benefits to help them keep pace with the continually increasing costs of education. This resulted in the current version of the GI Bill, also known as the Montgomery GI Bill. Even with this newer version, the educational benefits provided to military service members under the GI Bill did not cover all of the costs of a college education.

By 2004 and the 60th anniversary of the GI Bill, the Secretary of the VA provided statistics that 21 million veterans, military service members, and family of service members and veterans had received over \$77 billion in educational benefits (U.S. Department of Veterans Affairs, 2004). Even with the lauding of the successes of the GI Bill, Congress recognized in 2008 that the current version of the Montgomery GI Bill was not adequate to provide for the educational needs of returning OEF and OIF military service members. Thus, new legislation was proposed and passed: the Post 9/11 or New GI Bill that went into effect on August 1, 2009.

Student Veteran Adaptation and Adjustment to College

Many service members who leave the military and head to college are first generation students who do not have personal or family experience with college applications and admission processes, let alone what it is like to be a college student (Opportunity, 2009).

Qualitative studies have included multiple comments by service members on how difficult the transition was to college and how they were not prepared for the academic challenges (DiRamio et al., 2008). Individuals noted difficulties with study habits, math skills, and concentration and focus, many of them related to PTSD and TBIs (DiRamio et al.). One respondent to a recent survey of disability services offices at college campuses

noted that at their institution there was a significant attrition rate. Student veterans who were registered for services dropped out before the add/drop deadline, noting that “it appears they may not be ready yet for the stress of returning to classes” (Vance & Miller, 2009, p. 25).

One study conducted with OEF and OIF veterans in the Minneapolis area examined the impact of PTSD, depression, and risky drinking on quality of life (Erbes et al., 2007). The authors found that PTSD influenced quality of life in a number of areas: social functioning, energy, emotional role limitation, emotional well-being, and overall health. Just over half of the individuals in the Erbes et al. study who met positive screening criteria for PTSD were receiving some type of treatment, meaning just under half were not. Problematic drinking behaviors were also reported by a third of the participants (Erbes et al.).

Although the new Post 9/11 GI bill covers most of a service member’s education-related financial needs, some student veterans still struggle. As the numbers of student veterans utilizing the Post 9/11 GI bill increased, the VA has been working out problems with the new system. The first semester it was in place (Fall 2009), the benefits were initially running 10 weeks behind (G. Vance, personal communication, 23 August 2009). For student veterans with families and who are struggling with any kind of physical or psychological disability, they may not be able to work and go to school full-time. Finding affordable child care might also increase the financial burden on the service member.

Top priorities to assist student veterans returning to institutions of higher education noted in a recent survey included

effective referrals, connections to other student veterans, ensuring smooth transitions, coordination of services, eliminating/reducing red tape, providing

faculty and staff awareness trainings, and providing a safe environment (e.g., a veteran's lounge to relax, study). (Vance & Miller, 2009, p. 25)

Additional needs noted in the survey included easier access to financial assistance, family support, support groups, advocates in a designated veterans resource office, assistance with housing, and websites providing information (Vance & Miller).

Branker (2009) noted that student veterans with disabilities have not historically been well served at institutions of higher learning. The author added that "student veterans with disabilities may not be as prepared as their civilian non-disabled peers and may need campuses to rethink and reframe existing paradigms if they intend to reintegrate, retain, and eventually graduate this population of students" (p. 64). One recommendation was to have mentoring programs for student veterans with disabilities (Branker). Another important piece was informed advising that takes into consideration the deployment experiences of a student veteran and how those experiences and any resulting disabilities will impact them academically (Branker).

Changes in Campus Climate and Safety Concerns

Across the nation, institutions of higher learning are finding increased numbers of students who arrive with preexisting mental and behavioral diagnoses and problems (Elmore, 2009). The increased needs and demands for service from non-veteran students are already taxing the resources of college health and counseling centers. Now they will be tasked with meeting the mental and physical health needs of increasing numbers of military service members who are coming to campus, many of them almost directly from Iraq and Afghanistan (Elmore). A recent broadcast by National Public Radio (NPR) noted the many student veterans are not utilizing mental health services through the

Veterans Administration, which places the burden to address the psychological needs of these veterans on the university counseling centers (Brown, 2009).

Although a panel of college administrators addressed issues such as risky drinking and pandemic flu as the biggest threats they are faced with on their campuses, the focus of the panel was related to campus shootings as evidenced by the presence of Charles Steger, President of Virginia Tech, on the panel (Selingo, 2008). The tragic fatal shootings at Virginia Tech in 2007 raised many legitimate concerns on college campuses across the nation about mental health issues. While advocating the importance of raising awareness, mental health care professionals worry about balancing safety, preparation, and precaution with confidentiality and concerns that people will view all those struggling with mental illnesses as violent (Vail, 2007). This confusion over pairing mental illness with violence is compounded by misunderstandings and depictions of military service members as inherently violent and troubled people. All of this comes at a time when colleges and universities are facing the same economic crunch hitting the entire country and are forced to make cuts rather than hire additional staff in counseling centers.

These concerns have been further compounded at community colleges where faculty and staff may have even less overall contact with students on a daily basis (Hoover, 2008). At non-residential institutions, it is harder for staff to get to know students and less likely they will spot a student in crisis (Hoover). The lack of connection that is a result of a community college lifestyle can compound the isolation a military service member may feel attending school at one of these institutions. These same

concerns and lack of connection and insight can also take place for service members at four-year institutions.

Current Trends on College Campuses Related to Military and Military Veteran Services and Programs

Grossman (2009) noted that as many as 40% of service members from OEF and OIF who will be going to college are individuals with physical and psychological disabilities. The Americans with Disabilities Act of 2008 (ADA), which went into effect in January 2009, has made some changes in defining constructs and broadens coverage, all of which may have a great impact on service members on college campuses (Grossman). The ADA continues to define a current disability as a physical or mental impairment that substantially limits one or more major life activities, although using medications, prosthetics, and assistive technology may no longer be taken into account when evaluating the impact of an individual's impairment (Grossman). Further, the ADA says that even episodic impairments can be substantially limiting and has expanded the list of major life activities to include such things as learning, reading, concentrating, thinking, and communicating (Grossman). In addition, the ADA expands coverage to those who are perceived as disabled and discriminated against based on that perception (Grossman).

Grossman (2009) noted that the changes in the ADA will have a greater impact for mental health because individuals with depression and PTSD will still be covered if they take medication, have only episodic difficulties, and have their concentration and memory affected. He added that both PTSD and TBI, signature wounds of the war, will more likely be covered under the ADA than they would have been in the past (Grossman).

Institutions of higher learning and various organizations and foundations across the country are turning their focus to the needs of returning service members who are utilizing or will utilize their Post 9/11 GI Bill benefits to pursue degrees. Foundations in conjunction with the American Council on Education (ACE) are awarding grant money to institutions establishing programs and innovative programs for student veterans (American Council on Education, 2008). In addition, ACE has held a presidential summit, developed some information and services for veterans via the Internet, and has begun conducting national surveys and publishing reports (American Council on Education; Cook & Kim, 2009). Branker (2009) noted that “‘homecoming’ should be more than an event, it should be a process fueled by various campus resources to seek to connect the student veterans with the institution” (p. 60). Branker further noted that for many service members, college is a means to find new meaning and direction for their lives, especially if the course of their lives has been altered as a result of physical or psychological disability related to their military service and deployment experiences.

In the past several years, there has been an outgrowth of student veteran organizations and offices geared toward veteran services at institutions across America. One such organization, the Student Veterans of America, has only been in existence since January 2008; yet, it was instrumental at the national level to help push through passage of the new Post 9/11 GI bill. Since its inception, it has grown to over 200 chapters nationwide (Student Veterans of America, 2009). At the same time, although student veterans have repeatedly stated the importance of being connected with other student veterans, only 32% of the institutions surveyed who have veterans’ programs actually have an established student veteran club or organization (Cook & Kim, 2009).

In May 2009, Dr. Jeffery Pollard from George Mason University testified before Congress on behalf of the American Psychological Association about the importance of meeting the needs of military service members on campuses (Elmore, 2009). Dr. Pollard highlighted the importance of providing resources to meet the demands of incoming student veterans including increased suicide risk, providing education and training for staff about integration and adjustment issues for student veterans, and outreach to student veterans who are online students (Elmore).

Based on their recent survey of 723 institutions of higher learning, the American Council on Education found that over three-fourths identified financial aid, retention, and graduation as the most significant needs of student veterans (Cook & Kim, 2009). The next most pressing need identified was health care, including mental health (Cook & Kim).

Some service members have been diagnosed and treated for a variety of physical and psychological concerns in the military and by the VA before they arrive at institutions of higher learning. Some of them will continue to receive medical and mental health treatment through the VA or private providers once they arrive at college campuses. However, only about half of them have seen a medical or mental health provider in the past year; of those, only half received the care they needed (Church, 2009). This means that a significant number of service members from OEF and OIF are students at institutions of higher learning across America, or will be enrolling and arriving shortly, are or will be in need of mental health and medical assistance (Church).

The physical and psychological needs being brought to college campuses by students who are service members are many and varied. Some of them are already

diagnosed and being treated while others are not. Those without diagnosis will need access to assessment resources for testing of cognitive disabilities related to injuries they suffered while deployed (Grossman, 2009). Even those service members with diagnoses may not fully understand the limitations and ramifications of their disability (Shackelford, 2009). In addition to the service members who are suffering from PTSD and TBIs, other health conditions will add to and exacerbate difficulties for service members on campus as well as increase the demands at college health centers. For example, higher rates of chronic fatigue syndrome-like illnesses have been found in Gulf War veterans than in the non-veteran population. In one study, among those diagnosed with these health problems, half of them also suffered from PTSD (Kang, Natelson, Mahan, Lee, & Murphy, 2003).

One recent study (Vance & Miller, 2009) surveyed disability services offices at institutions of higher education. Based on the results from 237 institutions, Vance and Miller found that psychological disabilities accounted for the highest percentage of disabilities among the wounded warriors they were serving; 34% of the males and 11% of the females identified psychological difficulties. Interestingly enough, this same survey showed that only a third of the institutions' disability services' intake forms asked about veteran status (Vance & Miller).

When considering student veterans with any kind of physical or psychological disability, they tend not to disclose their disabilities freely and openly (Shackelford, 2009). In addition, veterans as a group tend to be less inclined to seek help and assistance than other populations; they grapple with seeing themselves as disabled or struggling to perform (Burnett & Segoria, 2009; Shackelford). An additional concern for some military

service members is the fear of psychological disabilities and treatment impacting on future background checks and security clearances if they are pursuing a degree and future career in law enforcement (Burnett & Segoria). Shackelford noted that it is critical for faculty and staff at institutions to remember that student veterans who do not self-identify as disabled are not doing so to cause problems for themselves or the institution.

In addition to developing programs and services to meet the needs of individual student veterans, survey results from the American Council on Education (2008) show that the top priorities noted by all institutions responding to their survey were (a) training and education for faculty and staff on issues with which military service members in higher education are dealing, and (b) pursuing grants and funding to help develop and expand programs and services for student veterans.

Grossman (2009) stated at the end of his foreword to a special issue dedicated to veterans with disabilities that “America cannot squander its considerable investment in any returning veteran, merely because of disability, thereby relegating him or her to dependency or even homelessness” (p. 8). Further, Madaus et al. (2009) explained,

It should be understood that combat veterans with disabilities have challenges only those who have served in combat can understand. Veterans with disabilities bring with them different experiences, and thus, different perspectives than traditional college-aged students. (p. 14)

In addition, Shackelford (2009) stated, “Under the best of circumstances, the transition of military veterans back onto college and university campuses can present difficult academic and developmental challenges for faculty, administrators and staff, and for the student veterans themselves” (p. 41). Burnett and Segoria (2009) added with regard to student veterans that “these students have served our nation, and they should have a fair chance to succeed with their educational goals” (p. 58).

Summary

At this point, no one knows the exact number of military service members who will be making the transition from the military to college classrooms across America. All of these students will have some struggles with adjusting and adapting to college and civilian life. Beyond that total number, the subset of those who have been diagnosed with or are dealing with symptoms of any psychological or physical problems as a result of their military deployments, such as PTSD or TBI, are also unknown. Some of these individuals will be receiving some sort of treatment through the VA or other sources and some will be seeking assistance through college health and counseling centers. Regardless of diagnosis and treatment status, a large number could be accessing various services through institutions such as occupational therapy, resources for disabled services, financial aid, and other offices with needs for specific services that more traditional non-military students do not have.

Because of the complexities of the backgrounds and experiences (many of them combat related) these service members bring to a college environment, as much information as possible should be gathered to assist them in this transition. Without information and data regarding this population and their needs, institutions of higher learning cannot be adequately prepared to meet those needs. The purpose of this study was to gather the following information and data: (a) the extent to which deployment experiences relate to college adjustment; (b) if multiple military deployments affect the level of college adjustment; (c) how PTSD symptoms relate to college adjustment; (d) if permanent physical disabilities from military deployments relate to levels of college adjustment; and (e) how unit support and postdeployment support affect service

members' adjustment to college. The current study was designed to help institutions of higher learning better understand and assist service members transitioning from military to college life. Supporting these service members with their transition to college will assist them in life beyond college as well as beyond the military.

CHAPTER III

METHODOLOGY

Introduction

This chapter describes the methodology for the current study. A description of the research design, the recruitment of participants, variables, instruments, procedures, and data analysis is presented. The specific statistics used to answer the research questions are discussed. The purpose of this study was to examine the extent to which the effect of military deployments explains a service member's adjustment to college. Further, various aspects of military deployments--combat experiences, unit support, postdeployment support, physical injuries, posttraumatic stress disorder (PTSD), and the number of deployments--were examined to see what contributions, if any, they make to our understanding of college student adjustment.

Methodology

The data for this study were collected electronically via survey through Survey Monkey. The informed consent was incorporated into the beginning of the online survey; completion of the survey served as informed consent for participation.

A pilot project was conducted consisting of nine participants. The invitation to participate in the pilot was initially sent out to 20 selected individuals at one institution. These individuals completed the survey with a couple of additional feedback questions at the end. Feedback was solicited from these individuals on how the online survey worked.

Specific questions were asked concerning overall format, length of time required to complete, questions, and concerns. To encourage participation and feedback, those who participated in the pilot were entered into the final drawing of all participants to win one of five iPod Shuffles.

For the full study, data collection was done through veterans' representative(s) at 1 two-year and 2 four-year institutions of higher learning in the Rocky Mountain region. The two-year institution has roughly 5,500 students, is a public institution serving a rural population, and has a Carnegie classification of medium size offering associate degrees. The 2 four-year institutions are both classified as large four-year public institutions, primarily residential, which are selective with higher numbers of students transferring in. One institution has just under 29,000 students and the other has just under 13,000 students. Both are classified as research universities under the Carnegie classification, with one having high research activity. All three institutions are located in smaller urban to somewhat rural areas and none of them are co-located near a military installation. The veterans' representatives were invited to ask their student veterans and military members to participate. An email invitation with a link and instructions to access the online survey was provided to the veterans' representatives who agreed to invite their students to participate. The veterans' representatives then forwarded this email invitation to the appropriate listservs at their institutions.

Research Design

This study used a correlational research design to collect data and examine if there appeared to be any identifiable pattern between reported military deployment experiences and a service members' subsequent adjustment to college life. Since there

has been little research conducted specifically related to how military deployments might impact college adjustment, various common aspects of military deployments examined in the literature were selected for inclusion in the current study. These aspects--support, PTSD, combat experiences, number of deployments, and injuries--were then examined via a selected instrument to see if there were any correlations between the military deployment aspects and college adjustment.

Participants, Desired Sample Size, Effect Size, and Power Analysis

Participants were military service members attending participating Rocky Mountain region two- and four-year institutions of higher learning. Individuals were recruited to participate in the study through an email invitation sent out over veteran listservs at their institutions, usually by someone who was either a veteran support coordinator or a GI Bill certifying official. The invitation email specified that only individuals who had been deployed, in wartime or in a peacekeeping mission, were being asked to participate; it also thanked others who have not been deployed for their valuable service to the nation. Further, the invitation email asked for participants who had served or were currently serving on active duty, or in the National Guard or Reserves in any branch of the U.S. services except the Coast Guard. The email invitation also asked those who received it to pass it along to other military service members who might meet the selection criteria. In the invitation email, participants were informed that their responses would be aggregated and individual information would be anonymous. I have kept individual responses confidential. A more complete description of the participants is presented in Chapter IV.

Based on Green's (1991) work regarding numbers of subjects needed for regression analysis, the formula he derived of " $L=6.4+1.65m-.05m^2$ " (p. 504), and based on six variables in the research questions with a medium effect size ($R^2 = .13$), the desired sample size was 109. Due to anticipated incomplete response sets, the target sample was greater than 109, set at 150 or more.

Typical survey response rates run below 25%. However, a 27% response rate resulted from an initial pilot survey done at a four-year institution in the Rocky Mountain Region in Spring 2008 (see Appendix E for IRB permission to use). To achieve the desired sample size, three institutions were initially recruited to participate in the survey. These three institutions had a total of just over 700 student veterans and military on their various veteran listservs. Additional contact was made with two veterans' representatives at other two- and four-year institutions in the event that the desired sample size was not reached with the initial three institutions and word of mouth. In addition to a variable response rate, it is unknown what percentage of service members on the student listservs of the recruited institutions had been deployed, making them eligible to participate. Consequently, it was not possible to compute an accurate response rate for the current study. Estimating worst case scenario, if all 700 of the student veterans and military had been deployed and if 150 surveys were completed, that would give a response rate of 21%. It is unlikely that all 700 student veterans and military had been deployed; thus, the response rate, if 150 surveys were completed, would be higher than 21%.

Independent and Dependent Variables

Independent variables for this study included (a) number of military deployments as reported on the demographic questionnaire; (b) PTSD diagnosis or reported symptoms

as reported on the demographic questionnaire and measured on the Posttraumatic Stress Disorder Checklist--Military version (PCL-M); (c) TBIs and other physical injuries as reported on the demographic questionnaire; (d) types of combat experiences as reported on Section I: Combat Experiences of the Deployment Risk and Resilience Inventory (DRRI); (e) level of unit support as measured by Section F: Unit Support of the DRRI; and (f) level of post-deployment support as measured by Section L: Post-Deployment Support of the DRRI. The dependent variable for this study was levels of college adjustment as measured by the Student Adaptation to College Questionnaire (SACQ) overall score.

Instruments

The survey consisted of four main parts: three sections of the Deployment Risk and Resilience Inventory (DRRI; King et al., 2003), the Posttraumatic Stress Disorder Checklist--Military Version (PCL-M; Weathers et al., 1993), the Student Adaptation to College Questionnaire (SACQ; Baker & Siryk, 1999), and a demographic and background section. The survey consisted of 151 total questions--38 for the DRRI, 17 for the PCL-M, 67 for the SACQ, and 29 for the demographic and background. The average completion time to take the entire survey was 15 to 20 minutes.

Deployment Risk and Resilience Inventory (DRRI)

The Deployment Risk and Resilience Inventory (DRRI--Sections F: Unit Support, I: Combat Experiences, L: Post-Deployment Support; see Appendix A) was developed by a research team working for the Department of Defense and the Department of Veterans Affairs (King et al., 2003). The research team developed a variety of research measures that could be used collectively, individually, or in any combination to help assess the

possible effects of military deployments on veterans (King et al.). The measures, or sections of the DRRI, were designed to look at psychosocial risk and resilience aspects and see how they related to veterans' physical and mental health after the deployments (King, King, Vogt, Knight, & Samper, 2006). The DRRI consists of 14 different measures of risk and resilience broken down into the following factors: predeployment/prewar (2 factors), deployment/war-zone (10 factors), and postdeployment/postwar (2 factors; King et al., 2003). Each section ranges from 7 to 20 items, most having a total number of items in the mid-teens (King et al., 2003). The total number of items among the 14 different measures is 201 (King et al., 2003). The researchers wanted to include not only the risk factors related to military deployments, but also resilience factors in response to recent focus on how negative events such as war-time experiences can have positive results such as increased gratitude for and love of life and closer relationships (King et al., 2003). The authors also felt it was important to provide measures that take into consideration the impact of events in the veteran's life before he or she deployed to war as well as support and stressors experienced after deployment (King et al., 2003). The measures were also developed with awareness that current and future conflicts may differ greatly from past war experiences and include stressors for military members who are not directly involved in combat (King et al., 2006).

In the first category--Predeployment/Prewar, the two measures were Prior Stressors (15 items) and Childhood Family Environment (15 items; King et al., 2003). The bulk of the measures fell within the second category--Deployment/War-Zone and consist of Preparedness (14 items), Difficult Living and Working Environment (20

items), Concerns About Life and Family Disruptions (14 items), Deployment Social Support (12 items), Sexual Harassment (7 items), General Harassment (7 items), Perceived Threat (15 items), Combat Experiences (15 items), Aftermath of Battle (15 items), and NBC (Nuclear, Biological & Chemical) Exposures (20 items; King et al.).

The third category-- Postdeployment/Postwar Measures was comprised of Postdeployment Social support (15 items) and Postdeployment Stressors (17 items; King et al.). Of these 14 measures, 10 of them were considered to be indicators of risk (Prior Stressors, Difficult Living and Working Environment, Concerns About Life and Family Disruptions, General Harassment, Sexual Harassment, Perceived Threat, Combat Experiences, Aftermath of Battle, NBC Exposures, and Postdeployment Stressors); the other four (Childhood Family Environment, Preparedness, Deployment Social Support, and Postdeployment Social Support) were considered measures of resilience (King et al., 2006).

The authors (King et al., 2006) noted that the various sections of the DRRI were an attempt to be inclusive of “both subjective and objective aspects of the deployment experience, to capture both high- and low-intensity stressors, and to accommodate events and circumstances encompassing both mission-related and interpersonal dimensions” (p. 93). King et al. (2006) further noted that they were not trying to develop measures to capture personality characteristics but rather to evaluate situational factors specific to military deployments. For some of the measures, the response format was a 5-point Likert scale, for some a 4-point Likert scale, and for others a dichotomous yes/no response format; one measure (NBC) had a polytomous scale including a *don't know* option (King et al., 2003).

During the development and testing of the DRRI, a variety of studies and focus groups were conducted utilizing groups of Gulf War veterans recruited through the Veterans Affairs medical facilities (King et al., 2006). For several of the studies, the participants were stratified based on status (active duty versus National Guard/Reserves), gender, and if they had participated in one of the Gulf War registries or not (King et al.). Based on the initial testing during DRRI development, internal consistency reliability for scores from the 14 measures resulted in coefficients alpha ranging from .72 up to .94; scores from 12 of the measures exhibited reliability estimates of .82 and higher and seven of them had .89 and higher (King et al.).

To examine validity of scores from the various measures, another study was conducted with additional Gulf War veterans who were given the DRRI along with various measures of physical and psychological health including the Posttraumatic Stress Disorder Checklist (PCL) to measure PTSD (King et al., 2006). Correlations were obtained between the DRRI and number of symptoms, number of conditions, Center for Disease Control multisymptom illness, neurocognitive scores, PTSD, depression, and anxiety (King et al.). Utilizing these different measures, the authors stated that the highest association was between the DRRI and measures of mental health (PTSD, Depression, and Anxiety), much more so than with measures of physical health or illness (King et al.). The correlations varied widely between measures and in different directions based on risk or resilience factors. For the three sections being utilized in the current study, the correlations with the PTSD measure ranged from -.22 and -.45 for unit support and postdeployment social support to .32 for combat experiences (King et al.). Correlations with the abbreviated Beck Depression instrument ranged from -.30 to -.47 for the same

two support measures to .16 for combat experiences (King et al.). Finally, correlations with the abbreviated Beck Anxiety measure ranged from -.25 to -.39 for the support measures to .18 for combat experiences (King et al.). The fairly low correlations for unit support and postdeployment support were what would be expected in supporting the validity of the DRRI: correlations for the combat experiences measured somewhat higher.

Noting the importance of having measures that are adapted for National Guard and Reservists as well as active duty soldiers, additional research was conducted with the DRRI and OIF veterans (Vogt, Proctor, King, King, & Vasterling, 2008). This more recent study utilized nine of the DRRI measures including Combat Experiences and Postdeployment Social Support as well as other measures for physical and psychological health including the PCL (Vogt et al.). The Cronbach's alpha reliability coefficients for scores from the two DRRI scales were .85 for Combat Experiences using the original yes/no format, .90 when using a 5-point Likert scale for the Combat Experiences, and .88 for the Postdeployment Social Support (Vogt et al.). Utilizing the PCL for criterion-related validity evidence, the correlation between the DRRI combat experiences scale using the dichotomous variable was .23 and .29 using a 5-point Likert scale (Vogt et al.). The correlation between the PCL and the DRRI postdeployment scale was -.32 (Vogt et al.). The authors (Vogt et al.) noted that "overall, results provided compelling psychometric support for the use of these DRRI scales in studies of Iraq War veterans" (p. 10). Given the estimated rates of PTSD diagnosis among veterans, the correlations between the subscales of the DRRI and the PCL were what would be anticipated in support of validity--negative correlations with postdeployment support and positive

correlations with combat experiences. For the current study, the original yes/no format was used with the combat experiences scale.

For the three measures from the DRRI used in the current study, as with all of the 14 measures of the DRRI, the scores were summed. For example, higher scores were indicative of greater levels of that trait: higher scores on combat experiences reflected increased numbers of combat experiences, higher scores on unit support indicated higher levels of perceived unit support, and higher scores on postdeployment support reflected higher levels of perceived postdeployment social support. So for the combat experiences measure, the scores ranged from 0 to 10. For the unit support measure, scores ranged from 12 to 60 and for postdeployment support, the scores ranged from 15 to 75.

In the current study, exploratory factor analysis was conducted with all three sections of the DRRI. For the Combat Experience measure, all 10 items were utilized and all loaded onto the one factor. Reliability estimates for the Combat Experiences scores for the current sample resulted in a Cronbach's alpha of .848 based on 157 valid cases. Five cases were excluded because of missing items. Due to the low number of items, non-response on one item was considered justification for exclusion.

For the Unit Support measure, 12 items were utilized and all loaded onto the one anticipated factor of unit support. Because of the limited number of items in the scale, if any items were skipped by a participant, that participant's answers were excluded for statistical analysis in the study. Only four individuals did not complete all 12 items; thus, the factor analysis and reliability statistics were based on 158 cases. A Cronbach's alpha of .925 was the reliability estimate for the Unit Support measure.

The Postdeployment Support measure consisted of 15 items and all loaded onto the one expected factor of Postdeployment Support. Cronbach's alpha coefficient for all 15 items was .892. If a participant skipped one of the items on the measure, that respondent's answers were not considered in the statistical analysis. Reliability coefficients were based on 160 participants; only two cases were omitted due to skipped items. Reliability coefficients and descriptions for all measures are listed Table 1.

Table 1

Measure Descriptions and Reliability Coefficients

Measure	Mean	Standard Deviation	Reliability	Number of Items
Combat Experiences	4.69	3.01	.848	10
Unit Support	44.17	10.39	.925	12
Postdeployment Support	55.15	10.85	.892	15
Posttraumatic Stress Disorder Checklist--Military Version	34.80	17.02	.963	17
Student Adaptation to College Questionnaire	3.69	1.19	.950	64

*Posttraumatic Stress Disorder Checklist—
Military Version (PCL-M)*

The Posttraumatic Stress Disorder Checklist (PCL; see Appendix B) was developed by researchers at the National Center for PTSD in a self-report format (Blanchard, Jones-Alexander, Buckley, & Forneris, 1996). The PCL has three versions: the Civilian version (C), Specific Event version (S), and the Military version (M; Norris & Hamblen, 2003). The Military version (PCL-M) was utilized in the current study.

Since the 17 questions are basically the same in all three versions, the instructions are what differentiate the versions with slight variations on the specifics among some of the questions. In the PCL-M version, the instructions referred to *problems and complaints that veterans sometimes have in response to stressful military experiences* rather than a specific event *or stressful life experiences* as in the other versions (Weathers et al., 1993).

The questions are based on the Diagnostic and Statistical Manual (DSM-III-R and now DSM-IV-TR) criteria for PTSD and are broken down according to the three symptom clusters of the PTSD diagnosis (Weathers et al., 1993). Respondents are asked to rate how much they have been bothered by each complaint in the past month: *not at all, a little bit, moderately, quite a bit, and extremely* (Weathers et al.). Examples of questions from the PCL-M include the following: *Avoiding thinking about or talking about a stressful military experience or avoiding having feelings related to it; Feeling distant or cut off from other people, and Having difficulty concentrating* (Weathers et al.).

An overall severity score can be totaled for the scale and then cutoff scores are applied which vary according to the population in which the respondent falls. For military populations, the cutoff score for being PTSD “positive” is an overall score of 50 out of a possible score range from 17 to 85 (Norris & Hamblen, 2003). Another scoring method is to consider only answers of 3 and above on individual items as indicative of endorsing a symptom and then require a respondent to meet DSM criteria by endorsing at least one item from cluster B (corresponds to questions 1-5), at least three items from cluster C (corresponds to items 6-12) and at least two items from cluster D (corresponds to questions 13-17; Norris & Hamblen). The recommended scoring involves combining these two methods and requiring the requisite number of symptom endorsements along

with meeting the overall cut off score (Norris & Hamblen). For the current study, the items were totaled for an overall severity score to give an indication of low to high PTSD symptoms rather than attempting to ascertain if criteria were met for diagnosis of PTSD.

Initial evaluation of the PCL involved the Military version that was utilized with Vietnam veterans and resulted in high internal consistency coefficients scores for the total scale (.97) and for the subscales (ranged from .92 to .93; Norris & Hamblen, 2003). The PCL-M correlated highly with other measures: the Mississippi Scale for Combat Related PTSD with a correlation of $r = .93$, $r = .77$ with the PK scale of the Minnesota Multiphasic Personality Inventory (MMPI), and $r = .90$ with the Impact of Event Scale (Norris & Hamblen).

When King et al. (2006) were validating scores from the DRRI, they utilized the PCL to measure PTSD; scores from the PCL for their sample of military veterans produced a coefficient alpha of .96. The authors explained that they utilized the PCL because it is brief, highly correlated with the Clinician Administered PTSD scale, and well-regarded (King et al.).

In the current study, exploratory factor analysis was conducted on the PCL-M, resulting in the one factor expected. The reliability estimate for the current study, based on 153 participants and excluding 9 individuals who skipped at least one item, was a Cronbach's alpha of .963 (see Table 1 above). There were 17 items in the PCL-M. The scores on the PCL-M ranged from 17 to 85.

Student Adaptation to College Questionnaire (SACQ)

The Student Adaptation to College Questionnaire (SACQ) was developed to evaluate how well college students were adjusting to college (Baker & Siryk, 1999).

Appendix C contains the licensing information regarding utilization of the SACQ, which cannot be reprinted in its entirety in this document. The SACQ is a 67-item questionnaire that consists of four subscales--Academic Adjustment, Social Adjustment, Personal-Emotional Adjustment, and the Goal Commitment/Institutional Attachment subscale (called the Attachment subscale)--and a total score (Baker & Siryk). Each of the 67 statements has a 9-point response scale: 1--*applies very closely to me* to 9--*doesn't apply to me at all* (Baker & Siryk). The scores ranged from less adaptive to more adaptive; roughly half of the items were reverse coded. Overall full scale high scores were indicative of higher levels of college adjustment (Baker & Siryk). For the current study, only full scale scores were utilized as an overall measure of college adjustment.

The first subscale--Academic Adjustment is comprised of 24 items that break down into four cluster areas: motivation, application, performance, and academic environment (Baker & Siryk, 1999). Examples of items from the first subscale are as follows: *I am finding academic work at college difficult* and *My academic goals and purposes are well defined* (Baker & Siryk).

The second subscale--Social Adjustment consists of 20 items from four cluster areas: general, other people, nostalgia, and social environment (Baker & Siryk, 1999). Statements include *I have several close social ties at college* and *I have been feeling lonely a lot at college lately* (Baker & Siryk).

The Personal-Emotional Adjustment subscale includes 15 items such as *My appetite has been good lately* and *I have been getting angry too easily lately* (Baker & Siryk, 1999). The items in this subscale contribute to either the psychological or physical clusters (Baker & Siryk).

Examples from the 15-item Attachment subscale include *I am pleased now about my decision to go to college* and *I find myself giving considerable thought to taking time off from college and finishing later* (Baker & Siryk, 1999). This subscale is made up of two clusters: general and this college (Baker & Siryk).

Two statements contributed to the full scale score but were not contained in any of the subscales (Baker & Siryk, 1999): *I feel I have good control over my life situation at college* and *I feel confident that I will be able to deal in a satisfactory manner with future challenges here at college* (Baker & Siryk). Nine of the items contributed to two different subscales: the Attachment subscale and the Social Adjustment subscale (eight items) and Attachment and Academic (one item; Baker & Siryk). Concerns about these nine items also factored into the decision to utilize only the overall total score for data analysis in the current study.

Baker and Siryk (1999) designed the SACQ to be used to guide counseling and for basic research purposes; it was utilized for the latter purpose in this study. The questionnaire was not designed to assess any particular college environment, but rather how an individual student was adapting to the college environment in which he/she was located and college in general (Baker & Siryk). The SACQ was originally designed for use with freshmen; however, its use has been expanded so that it can be used at any point in a student's college experience (Baker & Siryk).

Baker and Siryk (1999) cautioned against using just the full scale score from the SACQ because the intended interpretation and use is for the full scale score and all four subscale scores to be taken into consideration when administered. In fact, the validity of

scores from the SACQ requires all four subscale scores be used in conjunction with the full scale score (Baker & Siryk).

An earlier 52-item version of the SACQ showed good reliability for scores overall; however, the authors added 15 items to increase the reliability, especially in the Personal-Emotional Adjustment subscale (Baker & Siryk, 1999). Studies conducted by the authors with the expanded version of the SACQ produced scores resulting in alpha coefficients of .81 to .90 for the Academic Adjustment subscale, .83 to .91 for the Social Adjustment subscale, .77 to .86 on the Personal-Emotional Adjustment subscale, and .85 to .91 on the Attachment subscale (Baker & Siryk). The alpha coefficients for the full scale scores of the SACQ ranged from .92 to .95 (Baker & Siryk). The authors reported comparable, although slightly lower, reliability alpha coefficients from studies by other researchers; Cronbach's alpha reliability estimates for full scale scores ranged from .89 to .94 (Baker & Siryk).

Additional studies, conducted primarily with traditional age college students, have looked at the relationship between SACQ scores and various other items to examine the correlations. For example, significant correlations were found between scores on the Academic Adjustment subscale and GPAs as well as between higher Academic Adjustment scores and Phi Beta Kappa selection (Baker & Siryk, 1999). Studies found significant relationships between the Social Adjustment subscale and social activities checklists, amount of extracurricular activities, and selection for dormitory assistant positions (Baker & Siryk). Another study found significance of a negative nature between scores on the Social Adjustment subscale and the number of times a student visited home (Baker & Siryk). Further studies showed a significant relationship between lower scores

on the Personal-Emotional Adjustment subscale and an increased relationship with the psychological services center on a campus (Baker & Siryk). Finally, significant correlations were found between all four subscales and the full scale scores, with college attrition rates in the expected direction, in various studies (Baker & Siryk).

As noted earlier, since there were some concerns regarding the loading of a few items of the SACQ, exploratory factor analysis of the SACQ was especially important for the current study. Additionally, although the SACQ was originally developed for use with college freshmen, its use has been expanded for all individuals in college. However, the SACQ has not been extensively used with nontraditional student populations, of which military service members are a subgroup. Military service members and other nontraditional students tend to be older and have more life experiences than traditional age students, resulting in some clear distinctions between these populations. The initial exploratory factor analysis resulted in 16 factors, based on number of eigenvalues greater than one, which was contrary to expectations based on prior research with the SACQ. This initial EFA was based on only seven cases as a result of missing data. Patterns of missing data were examined and three questions were excluded due to their lack of relevance to the population represented in the current study (described in more detail later in this chapter). The EFA rerun resulted in 15 factors. The analysis was rerun forcing both four and five factor solutions using Promax rotation. These solutions were both examined. Based on the sample in the current study, the forced five factor model was determined to be a better fit than the forced four factor model or the four factors identified by Baker and Siryk (1999).

For this study, the five factors identified in the exploratory factor analysis were similar to the original four subscales with some additional nuances and splits. The first and largest factor was along the lines of the Personal-Emotional Adjustment subscale identified by Baker and Siryk (1999). Some additional items seemed to fit more with aspects of TBI, PTSD, depression, and anxiety: problems with concentration and functioning during exams and loneliness. In all, 28 items aligned with this first factor. For analysis purposes, an individual had to have answered at least 25 of these 28 items to be included in the overall statistical analysis.

The second factor consisted of 17 items that were mostly related to academic performance from a personal perspective, i.e., if the respondent was interested in his or her course work and had well defined academic goals. Both of the overall items, which Baker and Siryk (1999) only utilized in the overall score, also fit in with this factor for the current sample as well as a couple of the social adjustment items from Baker and Siryk's factor analysis, e.g., contact with professors. For inclusion in the statistical analysis, an individual had to have responded to 16 of the 17 items in this factor.

Some, but not all of Baker and Siryk's (1999) social adjustment subscale items, made up the third factor for this sample. There were nine items in this factor--all nine items had to have been completed by an individual for inclusion in the statistical analysis.

Most of the remaining academic adjustment items formed the fourth factor in the current sample and were related to general or overall academic adjustment as opposed to the personal academic performance of the second factor. This factor consisted of five items; all five items were needed for inclusion in the statistical analysis.

The remaining factor aligned closely with Baker and Siryk's (1999) attachment subscale that was designed to measure attachment to college and the particular institution. Six items made up this factor. However, item 47, which asked the respondent's intentions of staying at the current institution for a bachelor's degree, was determined not to contribute to college adjustment, probably because a portion of the respondents were working on second bachelors or graduate degrees. Thus, they were unsure how to answer this question. As a result, this item was excluded. All five remaining items of the fifth factor were required for inclusion in the statistical analysis.

As a result of the exploratory factor analysis looking differently than Baker and Siryk's (1999), items loading on the above five forced factors, and concerns noted earlier, only an overall score for the SACQ was utilized for the sample in this study as a measure of college adjustment. Three items of the original 67 were excluded: item 47, mentioned above, and items 26 and 33 that related to living in a college dormitory and with roommates, which did not pertain to a majority of the respondents. Therefore, in the current study, 64 items were utilized to measure college adjustment. A respondent had to have answered at least 60 of the items, as specified above in the factor breakdowns, for inclusion in the statistical analysis. This resulted in possible scores ranging from 60 to 576; higher scores indicated higher levels of college adjustment. For the current study, reliability estimates for the total score on the SACQ resulted in a Cronbach's alpha of .950 (see Table 1) based on 64 items after the three items discussed above were excluded.

Demographic and Background Questionnaire

For the current study, basic demographic information (Appendix D) was collected along with some additional information pertaining to participants' military service, health

status, and college related variables. To be consistent with previous studies conducted on military service members, these questions were asked for a more complete understanding of the population. The basic demographic information included age, gender, ethnicity, and family status. Studies have shown varying rates of PTSD based on age (Hoge et al., 2002; LaBash, Vogt, King, & King, 2009; Lapierre et al., 2007), gender (Hoge et al.; LaBash et al.; Lapierre et al.; Munsey, 2009), ethnicity (Brewin et al., 2000; Lapierre et al.), and marital/family status (Hoge et al.; LaBash et al.; Lapierre et al.).

Military service background information consisted of branch (Army, Navy, Air Force, Marines), component (various aspects of active, National Guard and reserves), time in service, length of time since separation if individual was no longer serving, rank, role (combat arms, combat support, combat service support), location, type and number of deployments as well as likelihood of future deployments, disabilities suffered during deployments, and VA disability rating status.

The military background questions were asked based on various studies that have shown higher levels of PTSD for junior enlisted personnel (Lapierre et al., 2007); higher rates for individuals who served in the Army and Marines, in combat units, and in OIF (Hoge et al., 2006; Grieger et al., 2006); longer time deployed (Lapierre et al.); increased rates of PTSD diagnosis over time (Grieger et al.); higher rates of PTSD for National Guard and Reservists in some cases (LaBash et al., 2007); more PTSD for service members who were deployed multiple times (Church, 2009; Lapierre et al.); and higher rates of PTSD for service members who were injured (Hoge et al., 2007).

Background information pertaining to education that was collected included year in college, major field of study, first generation status, first time or returning student, type

of institution attending (two- or four-year), and transfer status. In addition, since military service members come from around the country and do not always return to the geographical region from whence they came, the participants were asked where their home state of record was when they entered the military to possibly broaden the geographical representation of the study.

A few additional questions were asked to expand on information gathered during an initial pilot survey done at one of the four-year institutions in the Rocky Mountain region in Spring 2008 (see Appendix E for IRB permission): how participants view challenges in transitioning from military to college life; how they felt their military experience sets them apart from nonmilitary college peers; and the level of respect they felt for their military service from fellow students, faculty, and staff (see Appendix E for survey summary). More specific and detailed information about feelings of connection and acceptance at the institution was collected in response to similar questions from the initial pilot survey that gives more specific and detailed information about feelings of connection and acceptance at the institution. This type of specific information was beyond what was gathered by the SACQ and related to how military service members felt their military service was viewed and how they felt they were treated specifically as service members.

Finally, literature showed that more than 60% of the service members from OIF who screened positive for PTSD and other mental health concerns reported that they did not seek any treatment for their mental health conditions (Friedman, 2004; Hoge et al., 2004). Based on Friedman's and Hoge et al.'s studies, participants were asked if they had sought any mental health counseling.

Procedure

First Pilot Study

The first pilot survey was conducted via the GI Bill benefit recipients' listserv at one of the four-year institutions in the Rocky Mountain region in Spring 2008 (see Appendix E for IRB permission). Questions were developed by individuals in the Vice President for Student Affairs Office and me based on similar surveys that had been conducted at other institutions. The email invitation to take part in the survey was sent out to the student veterans' listserv of 267 students. The survey was completed by 70 students--a 27% response rate. Questions asked in the initial pilot survey and aggregate results from that survey are provided in Appendix E. No changes to the survey or the procedures were suggested by pilot participants or made based on the pilot study.

Second Pilot Study

The second pilot study was conducted at another four-year institution chosen for the full study (not the institution chosen for the first pilot study). Institutional Review Board (IRB) approval for the second pilot study was given on October 28, 2009. Twenty individuals on the institution's GI Bill certifying official listserv were sent an email invitation to take part in the second pilot study. The email invitation explained that additional feedback was being sought about the survey instruments, time for completion, and any other comments. Additional questions were built in at the end of the survey on Survey Monkey to elicit feedback about how the survey worked, the instruments used, and any other feedback the participants wished to provide. Nine of the 20 individuals responded to the invitation and took the survey; one did not complete the demographic

and background section. This resulted in a 40% completion rate based on eight individuals completing the entire survey.

The participants averaged between 15 and 20 minutes to complete the survey, most reporting approximately 15 minutes. The only feedback provided regarding survey instruments or questions was that the questions were straightforward and that there was a slight redundancy among some of the questions. A couple of the participants added comments wishing me luck in the research and thanking me for looking at this topic. No concerns were noted about the topic, questions, or instruments.

Full Study

Invitations to participate were sent out via listservs at selected accredited two- and four-year institutions of higher learning in the Rocky Mountain region. Permission for participant recruitment was requested from the IRB offices at these institutions. Three institutions--2 four-year and 1 two-year institution--granted IRB permission (see Appendix G for full study permission) to send out the email invitation to their student veteran population. In the event that the minimum number of participants ($N = 109$) was not reached, plans and initial contacts were made for additional schools to participate in the study. Email invitations were sent by the certifying official at the institution through the listserv to students receiving GI Bill benefits. Additionally, for one institution that had an expanded or separate office for veteran programs and services, the email invitation was sent out over an additional veteran listserv to student service members, some of whom were not receiving GI bill benefits. Because military service members are a fairly tight knit group, included in the email invitation was a request to pass the email with survey link along to anyone the reader knew might fit the criteria for participation.

To increase the response rate, participants who completed the survey (full study and second pilot study participants) were entered into a drawing to win one of five iPod Shuffles. The survey was set up online through Survey Monkey. All surveys were completed and data were collected electronically. The informed consent was incorporated into the beginning of the online survey; completion of the survey served as informed consent to participate. After completion of the survey, participants were given instructions to enter the drawing for the iPod shuffles by sending a separate email to the researcher. This email ensured their anonymity because it was not part of the survey; thus it was not linked to their survey responses. When replying to register for the drawing, one participant asked to be provided with information about the study after completion. Approximately one-third of the participants who completed the survey did not register for the drawing. To increase willingness for institutions of higher learning to send out email invitations and encourage participation in the study, an offer was made to provide aggregate data to them regarding the responses of their students who participated in the study.

Data Analysis

The rest of this chapter discusses the analysis conducted to answer the research questions and test the research hypotheses.

Research Questions

- Q1 To what extent do previous military deployment experiences relate to a military service member's adjustment to college life at institutions of higher learning?
- Q2 Are military service members who have been deployed to combat zones multiple times more likely to have adjustment difficulties in college at institutions of higher learning than military service members deployed only once to a combat zone?

- Q3 To what degree does level of PTSD relate to a military service member's adjustment to college life at institutions of higher learning?
- Q4 To what extent does having experienced a physical injury or injuries such as traumatic brain injury, amputation, or other permanent physical disability relate to a military service member's adjustment to college life at institutions of higher learning?
- Q5 To what degree does level of unit support relate to a military service member's adjustment to college life at institutions of higher learning?
- Q6 To what extent does level of post-deployment support relate to a military service member's adjustment to college life at institutions of higher learning?

Hypotheses

- H1 Military service members, who report having faced more dangerous situations while deployed, as reported by the DRRI Section I: Combat Experiences, will report lower scores for college adjustment as measured by the SACQ at institutions of higher learning
- H2 Military service members, who report having been deployed to combat zones multiple times, as measured by the demographic questionnaire, will have more adjustment difficulties in college, as measured by the SACQ than military service members deployed only once to a combat zone.
- H3 Military service members, who report higher levels of PTSD, as measured by the PCL-M will report more difficulties adjusting to college life, as measured by the SACQ.
- H4 Military service members, who have experienced one or more physical injuries, such as traumatic brain injuries (TBIs), amputations, or other permanent physical disabilities, as measured by the demographic questionnaire, will report more difficulties adjusting to college life, as measured by the SACQ.
- H5 Military service members, who report higher levels of unit support while deployed, as measured by the DRRI Section F, will report higher levels of college adjustment, as measured by the SACQ.
- H6 Military service members, who report higher levels of postdeployment support, as measured by the DRRI Section L, will report higher levels of college adjustment, as measured by the SACQ.

As discussed earlier, exploratory factor analysis (EFA) was conducted with all of the instruments--DRRI (sections F, I, and L), PCL-M, and the SACQ--after data collection was complete. Each EFA was based on principal components analysis. Criteria for determining the number of factors included (a) examination of Cattell's scree plot, (b) eigenvalues > 1.0 , (c) percent common variance, (d) salient loadings $\geq .3$ (based either on pattern coefficients or for single factor solutions, based on coefficients from the component matrix), and (e) interpretability of components. Where more than one interpretable factor was suggested based on these criteria, Promax rotation was used to assist in interpretation of the factors.

Prior to conducting any statistical analysis, specific items on some of the measures were reverse coded and item scores were summed to derive the total scores for each measure. Frequencies were continually checked. Specific content for each of the measures was described above. Within the demographic and background section, the number of deployments was coded first as a dichotomous variable and then as a continuous variable. Descriptive statistics were examined prior to the research questions being answered.

To answer all six of the research questions, multiple regression analysis was run on the data after factor analysis was completed. Current literature does not provide any basis for establishing priority among the independent variables; therefore, simultaneous entry multiple regression was used in which all six explanatory variables (i.e., combat experiences, number of deployments, PTSD, prior injury, unit support, and postdeployment support) were entered into a single regression model with SACQ total scores as the dependent variable.

Prior to interpreting the regression results, several diagnostic procedures were conducted to assess tenability of the regression assumptions: linearity, homoscedasticity, normality and randomness of residuals, and absence of measurement error. A histogram of residuals assessed the normality assumption and a scatterplot between standardized predicted values and standardized residuals assessed linearity, homoscedasticity, and randomness of residuals. Absence of any apparent pattern in the scatterplot suggested these assumptions were met. The histogram of residuals was examined and appeared to be relatively normal. In addition, reliability estimates based on Cronbach's alpha (reported earlier in Table 1) were used to determine the extent to which the absence of measurement error assumption was met. The final diagnostic procedures included checking for possible outliers and collinearity among the independent variables. Tests for the overall model R^2 value and for individual regression coefficients were conducted at $\alpha \leq .05$.

In addition to the multiple regression conducted to answer the research questions, three independent samples t -tests were run on the data. The first was used to check for any significant differences in data derived from respondents attending two-year institutions of higher learning versus those attending four-year institutions of higher learning. A second independent samples t -test was used to examine the mean differences in college adjustment (SACQ total score) based on the dichotomous variable of self-reported PTSD reported on the demographic and background questionnaire. The third independent samples t -test was conducted to compare self-reported PTSD diagnosis in the demographic and background section with scores from the PCL-M. These latter comparisons were conducted as validity checks on the accuracy of the self-reported

PTSD measure. Prior to examining results of these supplementary *t*-tests, Levene's test was used to assess the homogeneity of variance assumption. Skew/kurtosis values were examined with respect to the normality assumption. Skew/kurtosis values falling within + or – 1.0 suggested relatively normal distributions (Huck, 2008). To maintain the desired type 1 error rate ($\alpha \leq .05$) across the three *t*-tests, each test was conducted using a Bonferroni-adjusted alpha of .017.

Summary

This chapter provided the methodology of the study including information about the pilot studies and the overall study as well as the basics of the survey. The research design, participants, and sample size were covered as well as the independent and dependent variables. The instruments utilized in this study--the Deployment Risk and Resilience Inventory (DRRI), the Posttraumatic Stress Disorder Checklist-Military Version (PCL-M), and the Student Adaptation to College Questionnaire (SACQ)--were discussed along with the demographic and background questionnaire developed for this study. Some of the questions for the demographic and background questionnaire were based on questions posed in the initial pilot survey conducted in Spring of 2008. The second pilot study procedures were also discussed. The procedure utilized for recruiting participants for both pilot studies and the full study have been included in this chapter. The final items covered in this chapter concerned the data analysis of the hypotheses and research questions examined in the study. In Chapter IV, a detailed description of the results is presented.

CHAPTER IV

ANALYSIS

Introduction

This chapter presents the data analysis results for the study in three sections. The first section provides demographic and descriptive information of the sample utilized to conduct the study. The next section presents the results of the analyses conducted to test the hypotheses and answer the research questions. The concluding section discusses additional analysis conducted.

Description of the Sample

Data were collected on 162 military service members, ages 21 to 69 years old. Some participants skipped certain questions throughout the survey; 146 completed most of the survey and the demographic and background section. Sixteen of the participants did not complete any of the demographic and background section, presumably because of concerns that this information would make them identifiable to the researcher or others even though they did not provide their names and they were assured the data would be kept confidential. Thus, these individuals were not included in the analysis. In addition, some participants who skipped too many questions in other sections of the survey were also not included in the analysis, bringing the number of participants for full statistical analysis to 128.

Data are included on all participants who completed the demographic and background section as a representative sample of student veterans and service members. There appeared to be no discernable pattern to questions that were skipped or other missing data, other than those who chose not to complete the demographic and background data.

Table 2 provides the breakdown of percentages and frequencies for gender, ethnicity, and family status. Of the 145 participants who provided their age, the average age was 30.26 ($SD = 8.49$). The range of reported ages was between 21 and 69 years old. Consistent with the data that the military services are comprised of a majority of men, 81.5% of the sample was identified as male, 17.8% identified as female, and one individual identified as transgendered. The vast majority of participants identified their ethnicity as White/Caucasian. The largest family status category was Married/partnered, which accounted for just under half of the sample (46.9%). Approximately one quarter of the sample indicated they had children (23.4%).

Table 2

Gender, Ethnicity, and Family Status of the Overall Sample

Factor	Percentage	Number Responded
Gender Male	81.5%	119
Female	17.8%	26
Transgender	0.7%	1
Total		146
Ethnicity most identified with		
White/Caucasian	84.6%	121
Hispanic/Latino(a)	7.0%	10
Asian/Pacific Islander	4.2%	6
Native American Alaskan Native	2.8%	4
Black/African American	2.1%	3
Other	1.4%	2
Total		143
Family Status		
Single	42.8%	62
Married/partnered	46.9%	68
Divorced	11.0%	16
Separated	1.4%	2
Widowed	0.0%	0
With kids	23.4%	34
Without kids	15.9%	23
Total		145

Note. Demographics based on individuals who answered most of the demographic questions. Percentages do not always total 100% due to individuals who may fit in more than one category.

While all three of the participating institutions were in the Rocky Mountain region, reported home states when entering military duty of the participants were scattered across the United States. This is likely due to the frequent moves within the military and people relocating to states such as Colorado that have legislation granting in-state tuition to military service members and their family members. Some of this variety in regions can also be accounted for by snowball sampling since the email invitation

specifically asked those student service members reading the invitation to pass it along to others they knew who might qualify. Those reporting home states in the Rocky Mountain region accounted for the majority at 38% (see Table 3 below).

Table 3

Home State When Entered Military

Region of United States	Percentage	Number Responded
Rocky Mountain	38%	55
Eastern	23%	33
Central	23%	33
Western	16%	23
Other	1%	1

Note. Demographics based on individuals who answered most of the demographic questions. Percentages do not always total 100% due to individuals who may fit in more than one category.

Of the individuals who participated in the research, half of them had served or were serving in the United States Army. Two individuals had served in more than one branch of the service. The majority of the participants served in the enlisted ranks. Table 4 presents all numbers and percentages.

Table 4

Military Branch, Component, Time Since Separation, Time in Service, and Rank of Overall Sample

Factor	Percentages	Number Responded
Branch		
Army	50%	73
Navy	11.6%	17
Air Force	14.4%	21
Marines	25.3%	37
Total		146
Component		
Currently Active Duty	8.2%	12
Currently National Guard	9.6%	14
Currently Reservists	14.4%	21
Active Duty Veteran	45.2%	66
National Guard Veteran	10.3%	15
Reserve Veteran	13.7%	20
Inactive Ready Reservists	22.6%	33
Total		146
If separated from the service, how long in years		
Less than One year	70.2%	66
One to Five years	13.8%	13
Over Five years		94
Total		
Total Time in Service		
Less than 5 years	33.8%	49
5-10 years	46.2%	67
More than 10 years	20%	29
Total		145
Rank		
Enlisted –		
E3	6.8%	9
E4	29.3%	39
E5	43.6%	58
E6	10.5%	14
E7	8.3%	11
E8	1.5%	2
Total Enlisted	91.1%	133
Officer –		
O2	14.3%	2
O3	14.3%	2
O4	28.6%	4
O5	28.6%	4
O6	14.3%	2
Total Officer	9.6%	14

Note. Demographics based on individuals who answered most of the demographic questions. Percentages do not always total 100% due to individuals who may fit in more than one category.

Of the 146 participants who completed the demographic and background section, 91.9% had been deployed no more than three times, 80.9% had been deployed only once or twice, and just under half (42.5%) had been deployed only one time (see Table 5). When taken in combination with the total time in service reported by participants, this could be reflective of overall shorter total times in service, i.e., fewer deployments, than many career military service members who are still in uniform and reporting multiple redeployments. Twelve respondents reported four or more deployments; three of them reported 10 or more deployments.

When asked about the type of deployments, 95.2% indicated having been deployed in combat zones. There was some overlap because individuals with multiple deployments could have been deployed to both combat zones and peace keeping missions. Of the 146 who responded, 95.9% replied they had been deployed as combat arms or combat support--the components that are more likely to see conflict even though battle lines are much more blurred in the current conflicts than in past wars. Again, the total percentage was greater than 100 because people had served in different roles on different deployments and were asked to check all that applied.

Table 5

Number of Deployments, Mission Type, Role, and Future Deployments Expected

Factor	Percentage	Number Responded
Number of Deployments		
One	42.5%	62
Two	38.4%	56
Three	11.0%	16
Four	4.1%	6
Five	0.7%	1
Seven	0.7%	1
Eight	0.7%	1
Ten or more	2.1%	3
Total		146
Mission Type		
Combat Zone	95.2%	139
Peace-Keeping	24.7%	36
Total		146
Role		
Combat Arms	47.3%	69
Combat Support	48.6%	71
Combat Service Support	26.0%	38
Total		146
Future Deployments Expected		
Yes	22.1%	32
No	63.4%	92
Unsure	14.5%	21
Total		145

Note. Demographics based on individuals who answered most of the demographic questions. Percentages do not always total 100% due to individuals who may fit in more than one category.

When asked the open ended question--*Where were you deployed, please enter all deployment locations*, 146 participants responded, many of them with multiple locations. Of those, 74.7% specifically indicated Iraq or Operation Iraqi Freedom (OIF) once or more. Another 18.5% indicated deployments to Afghanistan or Operation Enduring

Freedom (OEF). An additional 25.3% indicated other locations in Southwest Asia such as Kuwait, Saudi Arabia, Qatar, and United Arab Emirates. Thus, the vast majority was deployed in southwest Asia; only 6.2% (9 individuals) indicated deployment locations not in Southwest Asia and 1 of the 9 reported a pending deployment to Afghanistan. Looking at reported deployment locations, many of the individuals deployed multiple times had been deployed more than once to southwest Asia and Afghanistan: 20.5% reported more than one OEF/OIF deployment and 37% reported more than one OEF/OIF and/or other southwest Asia deployments.

Participants were specifically asked if they had suffered any permanent physical injuries while they were deployed in the military. Those individuals who indicated they had suffered a permanent disability were given a listing of disabilities as well as the option to select *other* in the open-ended response section. None of the participants indicated an amputation or loss of limb; however, in the *other* comments, one person indicated they had kept their hand but could not use some fingers. None had suffered vision loss but one person indicated some vision problems. Less than one-fifth of respondents (18.8%) reported TBIs. With changing criterion for diagnosing TBI by the military and the VA, some additional participants may have suffered at least mild TBIs but had not yet self identified as having a TBI. One participant reported shrapnel injury to the leg, one reported having a high explosive artillery round dropped on his/her hand, and one reported nine back surgeries. Table 6 provides the breakdown of the responses for this study.

Table 6

Permanent Physical Injuries, PTSD Diagnosis, VA Disability Rating, Mental Health Counseling, and Prescription Medications

Factor	Percentage	Number Responded
Permanent Physical Injuries		
No	75.4%	95
Yes	25.4%	32
TBI	18.8%	6
Internal Injury	12.5%	4
Hearing loss	53.1%)	17
Upper Respiratory	9.4%	3
Chronic Fatigue Syndrome	6.3%	2
Other	20.6%	26
Total		126
PTSD Diagnosis		
Yes	25.4%	35
No	74.6%	103
Total		138
VA Disability Rating		
Yes	37.0%	54
No	63.0%	92
Total		146
Sought Mental Health Counseling		
Yes	35.0%	50
No	65.0%	93
Total		143
Currently Taking Prescriptions for PTSD, Depression, Anxiety, or Sleeping		
Yes	13.2%	18
No	86.8%	118
Total		136

Note. Demographics based on individuals who answered most of the demographic questions. Percentages do not always total 100% due to individuals who may fit in more than one category.

Individuals were asked if they had received a VA disability rating, although they were not asked the level of rating if they had one. Of the 146 participants who responded, 63% did not have a VA disability rating and 37% had one. The process of completing the paperwork for a VA disability rating can be quite lengthy. Many individuals are initially turned down, have to appeal the decision, or have to appeal the level or percentage of disability rating. After data collection for this research was completed, the VA published new guidelines on ratings for PTSD, making it possible for many additional service members to qualify for service disability for PTSD. As a result, the percentages reported by individuals in the current study are subject to fluctuation over time, especially given the adjustments the VA has recently made to PTSD disability ratings.

Participants were asked if they had “sought any type of mental health counseling since (their) deployment, including relationship counseling, or counseling from a chaplain or minister.” The final demographic/background question asked if participants were currently taking any prescription medications for PTSD, depression, anxiety, or prescription sleep aids. Respondents were not asked if they had ever taken any prescription medications in the past. Some who replied negatively to currently taking such medications may have been prescribed them in the past.

Participants were asked their year in college, if they were a first time or returning student, if they were attending a two- or four-year institution, and if they were a transfer student (see Table 7). In addition, they were asked if they were a first generation student, indicating which of them had parents who had gone to college. The GI Bill, especially the Post 9/11 GI Bill, makes it possible for many individuals to attend college who might not

have been able to afford it otherwise. As a result, a fairly high number of service members are going to college and are the first in their immediate families to do so.

Table 7

Year in College, First Generation, First Time vs. Returning, Type of Institution, and Transfer Status

Factor	Percentage	Number Responded
Year in College		
Freshman	13.8%	20
Sophomore	12.4%	18
Junior	19.3%	28
Senior	33.8%	49
2 nd Bachelor's	6.9%	10
Master's	7.6%	11
Doctoral	6.2%	9
Total		145
First Generation		
Yes	41.4%	60
No	58.6%	84
Total		145
1 st Time vs. Returning		
First Time College Student	34.0%	49
Returning College Student	66.0%	95
Total		144
Type of Institution		
Two-year	33.1%	46
Four-year	71.2%	99
Total		139
Transfer Student		
Yes	56.3%	81
No	43.8%	63
Total		144

Note. Demographics based on individuals who answered most of the demographic questions. Percentages do not always total 100% due to individuals who may fit in more than one category.

Because a percentage of the service members are first generation and/or first time college students and it may have been four or more years since they have been in a classroom, some service members choose to begin their academic careers at two-year institutions. Others may not initially qualify for admission into some four-year institutions. They are advised to begin at a community college to establish a college level grade point average (GPA) that will be assessed for admission, rather than their high school transcripts and test scores. There was an overlap of six individuals, indicating some of them might be taking classes at both while they were transitioning. It is not uncommon for service members to attend a four-year institution while taking their math or basic science courses at a nearby community college.

Individuals were also asked an open-ended question concerning their major field of study. Of the total participants, 144 individuals replied, reporting a wide variety of majors; some put down undecided and “no direction right now.” Fifteen of the 144 indicated a medical profession of some sort including nursing, pre-med, and veterinary sciences. Another nine individuals indicated some form of an engineering degree, while 24 of them were pursuing a type of business degree.

On the first pilot survey, several questions were asked related to needs and challenges faced in transitioning from the military to college life. These questions were blended together and included on the survey for the current study as follows: “Which of the following, if any, challenges have you faced transitioning from the military to college life?” Individuals were asked to check all that applied. Responses to this question are shown in Table 8. Fifteen individuals chose to mark "other" and filled in additional

information including dealing with effects of TBI, domestic violence, family life plus school, finding work, and dealing with a desire/need for change and wanting to move.

Table 8

Challenges Faced Transitioning from Military to College

Transitioning Challenges	Percentage	Number Responded
Getting Accepted to College	18.9%	25
Housing	24.2%	32
Transfer of Credits	34.8%	46
Assimilating to Student Life	51.5%	68
Relationship Issues	41.7%	55
Financial Concerns	67.4%	89
Stress	57.6%	76
Potential Recall to Active Duty	31.1%	41
Feeling Safe (standing down from combat training)	27.3%	36
Other	11.4%	15

Note. Demographics based on individuals who answered most of the demographic questions. Percentages do not always total 100% due to individuals who may fit in more than one category. $N = 132$.

Another question from the preliminary pilot survey resulted in information related to how service members feel they differ from traditional college students. Participants of the current survey were asked to check all that applied in response to what, if anything,

they thought set them apart from their college peers. Table 9 presents percentages and numbers responding to each factor.

Table 9

What, If Anything, Do You Think Sets You Apart From Your College Peers?

Factors	Percentage	Number Responded
Experience	95.8%	137
Age	83.9%	120
Maturity	82.5%	118
Experience of Traumatic Events	63.6%	91
Injury/Disability	18.2%	26
Attitude/bearing	83.2%	119
Values	76.9%	110
Discipline	85.3%	122
No Difference	0.7%	1
Other	11.2%	16

Note. Demographics based on individuals who answered most of the demographic questions. Percentages do not always total 100% due to individuals who may fit in more than one category. $N = 143$.

Of the 143 individuals who answered this question, only one individual indicated he/she felt there was no difference. Sixteen of the participants added comments in the other section including “everything,” “feeling privileged to be in college,” “if nobodies dead then it ain’t that big a deal so relax,” and “enlightenment of reality real REALITY.”

Finally, participants were asked their level of agreement with a statement about if they feel their fellow students, faculty, and staff respect their military service (see Table 10 for frequencies in each category).

Table 10

Overall I Feel My Fellow Students, the Faculty and Staff Respect My Military Service to the Nation

Agreement Level	Percentage	Number Responded
Strongly Agree	23.1%	33
Agree	42.0%	60
Neutral	22.4%	32
Disagree	9.8%	14
Strongly Disagree	2.8%	4

Note. Demographics based on individuals who answered most of the demographic questions. Percentages do not always total 100% due to individuals who may fit in more than one category. $N = 143$.

Hypotheses Results

As discussed in the previous chapter, the research hypotheses were evaluated utilizing multiple regression. An alpha level of .05 was used to determine statistical significance throughout the analyses. The data were examined to check for violations of assumptions as well as outliers and multicollinearity. Normality of residuals was examined with a histogram, suggesting the assumption of normality was met for the multiple regression analysis. Since one outlier was identified in the histogram, statistical analyses were rerun with the outlier eliminated. This resulted in little difference in the

results; thus, results reported on the regression analysis include the outlier. The assumptions of linearity, homoscedasticity, and randomness of residuals appear to have been met based on a visual examination of the scatterplots of the standardized residuals by the standardized predicted values, which resulted in a fairly even distribution around 0.

Descriptive statistics were presented in Chapter III in Table 1 for the dependent variable and the four other measures included in the regression analysis. Two things were of interest. First, the overall item mean for the Student Adaptation to College Questionnaire (SACQ) was relatively high, indicating that the respondents reported overall higher levels of college adjustment. Also, the mean for combat experiences was lower, indicating lower levels of combat experiences reported for the current sample. The PTSD mean was below the cutoff for PTSD “positive” of 50, although individuals falling on the higher end of the mean and those within one standard deviation of the mean are within the range of PTSD “positive.” For the multiple regression, number of deployments was regarded as a dichotomous variable of one deployment versus more than one; the mean reflects that fact. While number of deployments was measured as a continuous variable, it was converted to a dichotomous variable for overall statistical analysis because most respondents in this sample reported only one or two deployments. For the primary statistical analysis, deployments were based on one deployment versus multiple deployments. However, supplemental analysis was conducted with number of deployments as a continuous variable as discussed later in this chapter. Appendix H provides the descriptive statistics for the regression variables.

Table 11 shows the Pearson correlations for the dependent and independent variables used in the regression analysis for the current study. There were no unusually high correlations between any of the independent variables. The highest correlation between independent variables was between PTSD and postdeployment support at $r = -.49$. The correlation between PTSD and prior injuries was also higher than some of the others, which would be expected based on prior research. Also notable was that the correlations between unit support and both combat experiences and number of deployments, while quite low, are in a positive direction. This might seem opposite of what would be expected, except that in a military unit, combat experiences and deployment experiences can result in higher levels of unit cohesion.

Table 11

Pearson Correlations for Variables

Variable	SACQ	Combat Experiences	Number of Deployments	PTSD	Prior Injuries	Unit Support	Postdeployment Support
SACQ	1.00						
Combat Experiences	-.17	1.00					
Number of Deployments	-.07	.06	1.00				
PTSD	-.64	.40	.05	1.00			
Prior Injuries	-.24	.31	.19	.32	1.00		
Unit Support	.41	.09	.08	-.19	-.07	1.00	
Postdeployment Support	.60	-.20	-.08	-.49	-.11	.43	1.00

Collectively, combat experiences, number of deployments, PTSD symptoms, prior injury, unit support, and postdeployment support explained a statistically significant proportion of the variance in college adjustment among military service members, $R^2 = .561$, $F(6, 121) = 25.78$, $p < .05$. Thus, these variables accounted for over half the variation in the dependent variable of respondents' college adjustment (as measured by total score on the SACQ). However, only PTSD symptoms, unit support, and postdeployment support contributed uniquely to explaining college adjustment. Student veterans and military with higher levels of PTSD symptoms tended to have lower levels of college adjustment, while individuals who reported higher levels of unit support and postdeployment support reported higher levels of college adjustment.

- H1 Military service members, who report having faced more dangerous situations while deployed, as reported by the DRRI Section I: Combat Experiences, will report lower scores for college adjustment as measured by the SACQ at institutions of higher learning.

As shown in Table 12, although a negative coefficient suggests that combat experience could partially explain college adjustment, no significance was found, $p = .18$. Therefore, based on the results, those facing more dangerous combat experiences did not report lower college adjustment scores.

Table 12

Regression Coefficients of Simultaneous Entry Multiple Regression for Testing Hypotheses One through Six

Model	Unstandardized Coefficients		Standardized Coefficients	Squared Parts Correlation
	B	Std Error		
(Constant)	5.263	.645		
Combat experiences	-.037	.028	-.093	.007
Number of Deployments	-.070	.148	-.029	.001
PTSD	-.035	.006	-.474**	.141
Prior injury	-.148	.169	-.058	.003
Unit Support	.022	.009	.176**	.023
Postdeployment Support	.036	.009	.308**	.059

Note. Dependent variable: SACQ total score

** indicates significance at $p < .05$.

- H2 Military service members, who report having been deployed to combat zones multiple times, as measured by the demographic questionnaire, will have more adjustment difficulties in college, as measured by the SACQ than military service members deployed only once to a combat zone.

Number of deployments was examined as a dichotomous variable differentiating between one deployment and more than one. Based on the non-significant results, $p = .64$, number of deployments was not related to levels of college adjustment.

- H3 Military service members, who report higher levels of PTSD, as measured by the PCL-M will report more difficulties adjusting to college life, as measured by the SACQ.

For hypothesis three, those individuals who reported higher levels of PTSD, as measured by the PCL-M, did report significantly lower levels of college adjustment as

measured by the SACQ total scores. PTSD contributed to variation in college adjustment at the $p < .05$ level of significance as noted in Table 12.

- H4 Military service members, who have experienced one or more physical injuries, such as traumatic brain injuries (TBIs), amputations, or other permanent physical disabilities, as measured by the demographic questionnaire, will report more difficulties adjusting to college life, as measured by the SACQ.

Having reported a permanent physical injury did not contribute to explaining variance in college adjustment at a statistically significant level. For hypothesis four, the alpha level was $p = .38$.

- H5 Military service members, who report higher levels of unit support while deployed, as measured by the DRRI Section F, will report higher levels of college adjustment, as measured by the SACQ.

As predicted, higher reported levels of unit support while deployed, as measured by Section F of the DRRI, contributed to explaining college adjustment at a statistically significant level, $p < .05$. Those individuals who reported higher levels of unit support while deployed reported significantly higher levels of college adjustment as measured by the SACQ total score.

- H6 Military service members, who report higher levels of post-deployment support, as measured by the DRRI Section L, will report higher levels of college adjustment, as measured by the SACQ.

Finally, for hypothesis six, post-deployment support, as measured by Section L of the DRRI, contributed to explaining variance in college adjustment at a statistically significant level, $p < .05$. As predicted, those individuals who reported higher levels of postdeployment support also reported higher levels of college adjustment as measured by the total score on the SACQ.

Supplementary Analyses

As noted in the previous chapter, three independent samples *t*-tests were conducted. The first checked for any significant differences in college adjustment levels in data derived from participants who reported attending a two-year institution versus those who reported attending a four-year institution. No significant difference was found between the two groups of student veterans and military in the current study.

The second independent samples *t*-test was used to examine differences in college adjustment based the dichotomous variable of self-reported PTSD from the demographic and background questionnaire. Using the Bonferroni-adjusted alpha of .017, statistical significance was found, indicating a difference in college adjustment between those respondents who self-reported having a PTSD diagnosis versus those who did not self-report having PTSD in a negative direction. Those who self-reported having a diagnosis of PTSD ($N=32$) had lower reported levels of college adjustment than respondents who did not report having a diagnosis of PTSD ($N=102$).

The final independent samples *t*-test was utilized to compare scores on the Posttraumatic Stress Disorder Checklist-Military version (PCL-M) with the dichotomized self-reports of PTSD diagnosis from the demographic and background questionnaire. For this *t*-test, Levene's test for equality of variances was not met, indicating a violation of homogeneity of variance. Therefore, an alternative and more robust *t*-test, for which equal variances were not assumed, was used. Statistical significance was found, indicating differences between self-reported PTSD and the level of PTSD symptoms from the PCL-M. This suggests there was a statistically significant mean difference on the PCL-M scores between those who did versus those who did not self-report having

PTSD. Those who self-reported having PTSD had significantly higher means on the PCL-M than those who did not self-report having PTSD. Additionally, the mean for those who did not self-report PTSD diagnosis was 29.24 ($SD=12.88$), indicating that the majority of those who reported they did not have a PTSD diagnosis fell below the PTSD “positive” cutoff of 50, even plus one standard deviation. For the group that reported PTSD diagnosis, the mean was 51.47 ($SD=17.25$), indicating that the average score for this group fell above the cutoff for PTSD “positive.” Thus, the third independent sample t -test confirmed that the self-reported yes/no PTSD question from the demographic and background questionnaire was consistent with scores on the PCL-M. Table 13 presents the results of the three supplementary t -tests.

Table 13

Independent Samples t-Tests for College Adjustment and Self-Reported PTSD

Independent Variable (DV)	t	df	p -value
2 year vs. 4 year (SACQ)	.556	134	.579
self-reported PTSD (SACQ)	-3.802	132	.001**
PCL-M score (self-reported PTSD)	-6.897	46.022	.001**

**Statistically significant at the $p < .017$ level.

Because the data gathered in the demographic and background questionnaire for this survey included peace-keeping deployments as well as war-time deployments, it was determined that number of deployments alone did not accurately capture the true nature

of deployments to a combat zone as indicated in hypothesis two. As a result, additional statistical analysis was conducted by including the number of deployments, deployments to a combat zone, role of combat arms, as well as the interaction of these variables.

Number of deployments was reanalyzed as a continuous variable rather than a dichotomous variable. Number of deployments as a continuous variable was not significant for explaining variation in college adjustment (see Table 14).

Table 14

Coefficient Statistics for Supplementary Regression Analysis

Model	Unstandardized Coefficients		Standardized Coefficients
	B	Std. Error	
(Constant)	5.264	.743	
Number of Deployments – Continuous	-.013	.045	-.018
Deployed to Combat Zone	-.119	.383	-.021
Role of Combat Arms	-.113	.176	-.048
Interaction of Number Deployments/Combat Zone/Combat Arms Role	-.149	.299	-.057

Note. Dependent variable: SACQ total score.

** indicates significance at the $p < .05$ level.

Deployment to a combat zone, as reported on the demographic and background questionnaire, was also not significant for explaining differences in college adjustment. Role of combat arms while deployed (as opposed to combat support or combat service support) was also examined and did not significantly explain differences in college adjustment in the current sample. Finally, the interaction among number of deployments

(as a dichotomous variable), deployment to a combat zone, and role of combat arms was examined and found not to be significant in explaining differences in college adjustment.

That no significance was found examining deployments a variety of ways--trying to isolate and differentiate between more traumatic combat experiences during deployments and fewer such experiences--seemed to indicate that no significant difference was found in the current sample or it could not be isolated based on the measures utilized in the current study. The current sample may not include service members who experienced greater levels of traumatic combat experience. Individuals with higher levels of traumatic combat experiences may have self selected out of participating in the survey or may not be currently attending college in the same numbers as those who experienced lower levels of combat.

Summary

This chapter provided a thorough examination of the demographics and background statistics of the sample completing the survey for the current study. Following this presentation of demographic characteristics, the findings related to each of the research hypotheses based on the statistical analysis were delineated. There was statistical significance at the $p < .05$ level for three of the six research hypotheses. The variables of PTSD, unit support, and postdeployment support each contributed uniquely to the explanation of college adjustment. Student veterans and military with higher levels of reported PTSD symptoms had lower levels of college adjustment, while those who reported higher levels of unit support and postdeployment support had higher levels of college adjustment.

The following chapter examines conclusions and findings based on the results presented in the current chapter. Implications of the current study and findings, along with limitations and directions for further research, are discussed.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

For those who understand what you do, no explanation is necessary. For those who don't, none is possible. Operation Iraqi Freedom Soldier

Introduction

The previous chapter provided demographic and background information regarding the population for the current study and the results of the statistical analyses. The statistical results related to each of the six research hypotheses were presented. The following chapter examines the conclusions and findings based on these results and how they fit with previous research. Additionally, implications for theory and practice, limitations of the study, and future directions are covered in this chapter.

Discussion

As stated at the beginning of this study, increasing numbers of military service members are leaving military service to attend college or shifting back and forth between military service in the National Guard and reserves and college life. Military service members include individuals who are veterans and no longer in the service in any capacity; those individuals who are still members of the National Guard, reserves, inactive ready reserves; and individuals on active duty status. Many of these transitioning service members have been deployed one or more times to combat zones in Iraq or Afghanistan, or both. In the past couple years, there have been increasing efforts to assist

these individuals with the transition from military to college financially through improved GI Bill benefits. Other ways include grant money from organizations such as American Council of Education/Wal-Mart Foundation and the Department of Education to help institutions of higher learning to better serve student veterans and military. At the same time, a limited amount of research has been conducted specifically looking at military service member transitions from warrior to college student and the impact that military deployments and other aspects of military life in a time of war have on the individual's adjustment to college.

The current study was an attempt to shed some light on the impact that various aspects of military deployments have on college adjustment for military service members in the Army, Navy, Air Force, and Marines. This study was designed to gather important data and information that can be utilized to improve the programs and services offered for military service members on university campuses across the country. Mental health and counseling services are focus areas to be included for military service members at institutions of higher education nationwide. Having a better understanding of the impact of military deployments on college adjustment can help shape the need for postdeployment mental health screening and counseling before individuals enter college and once they arrive on college campuses.

Much of the focus on student veterans and military is related to the problems they bring to college campuses, specifically Posttraumatic Stress Disorder (PTSD) and other issues (Hassan et al., 2010). PTSD is a reality for a percentage of student veterans, especially those from the Army and Marines returning from OEF and OIF. Although

PTSD does not affect the majority, researchers estimate it affects approximately 11% (Hoge et al., 2006) to 20% (Tanielian & Jaycox, 2008) of OEF and OIF service members.

At the same time, service members who are not suffering from PTSD, or have mild symptoms, can still have difficulties navigating the transition from military to college life. Little is known about what other factors, in addition to PTSD, may play a part in this transition, either in assisting with it or impeding it. The current study examined some of these factors, including PTSD, with special interest in the role support plays in college adjustment.

Psychologists and researchers believe that a critical component to trauma recovery is support from family, friends, and the greater community (Herman, 1997; Naparstek, 2004; Sherman et al., 2005). In fact, perceived and actual social support can be a protective measure for preventing PTSD development or limiting symptom severity (Naparstek; Ozer et al., 2003; Sherman et al.). The ongoing wars in Iraq and Afghanistan involving thousands of United States service members raises the likelihood that increasing numbers of service members are and will be dealing with the aftermath of trauma related to war experiences.

Summary of Findings

Q1 To what extent do previous military deployment experiences relate to a military service member's adjustment to college life at institutions of higher learning?

No significance was found regarding a relationship between previous military deployment experiences, specifically combat related experiences, and college adjustment. For the current sample, participants who reported greater numbers of combat experiences did not report significantly lower levels of college adjustment. Deployment experiences

related to combat included such things as participating in combat patrols, being involved in incoming fire (hostile or friendly), being attacked by terrorists, encountering mines or booby traps, being part of a unit that suffered casualties, or witnessing a fellow soldier seriously wounded or killed. For the current sample, the mean for self-reported combat experiences was 4.7 ($SD=3.01$) on a scale of 1 to 10, 10 being the highest. This indicated that the self-reported combat experiences of the current sample were in the middle of the possible range of the scale. There is not a standard score for combat experiences on the Deployment Risk and Resilience Inventory; thus, it is not known how the scores from this sample would compare to scores from a sample of active duty military members. The levels of combat experiences for the current sample could possibly have resulted in less impact on college adjustment. Based on the current sample, it is not possible to determine if individuals with higher levels of self-reported combat experiences could have more difficulties adjusting to college or are even attending college. For example, they may be individuals who are taking only online college courses rather than attending traditional classroom-based courses.

Q2 Are military service members who have been deployed to combat zones multiple times more likely to have adjustment difficulties in college at institutions of higher learning than military service members deployed only once to a combat zone?

A higher number of deployments by individuals did not significantly explain increased adjustment difficulties in college compared to individuals with only one deployment. In the current study, the overall number of deployments was gathered through the demographic and background questionnaire. Included in this number were peacetime deployments as well as wartime deployments. As a result, data for total number of deployments to combat zones were not as readily accessible. Even with

supplemental analysis to look at the interaction of number of deployments, deployment role as combat arms, and deployed to a combat zone, there was no significance in the current study in relation to number of deployments. Including peacetime deployments could still have affected the data for this question by diluting the experiences of deployments to combat zones.

Peacetime deployments, while involving separations from home and family, do not always involve the risk and danger involved in combat deployments. Many times, they are simply training missions, e.g., deployments to the National Training Center in the desert in California for a month or longer to train and “fight” against United States units trained as the “enemy.” These peacetime deployments were included because some peace keeping missions are difficult to neatly categorize as peacetime or combat deployments. Even for deployments to southwest Asia, and specifically Afghanistan and Iraq, the danger varies greatly depending on the actual location and time of deployment. For example, being deployed to Fallujah in 2006 was much more dangerous than at other times. Because of the difficulty in categorizing deployments, participants were encouraged to report all their deployments without defining combat only deployments.

Overall, there were lower numbers of combat deployments and total deployments for the sample than would probably be the case with a sample from an active duty military unit that would include individuals who are career military. For the current sample, 33.8% of the participants had spent less than five years in the military; whereas, 46.2% had spent between 5 and 10 years in the service. Less time in service would correspond with fewer deployments. The findings of the current study indicated that multiple deployments to combat did not significantly explain college adjustment.

Q3 To what degree does level of PTSD relate to a military service member's adjustment to college life at institutions of higher learning?

Higher levels of PTSD significantly related to increased college adjustment difficulties. PTSD symptoms included intrusive thoughts, dreams, and flashbacks, physical symptoms of anxiety, avoidance, anhedonia, numbing, hyperarousal, and difficulties concentrating and with memory. Those individuals who reported higher levels of PTSD symptoms reported lower levels of college adjustment. For the current study, the guideline of an overall score of 50 or more was used as the cutoff for being "positive" for PTSD. The mean for the current sample was 34.8 with a $SD = 17.03$, i.e., those individuals one standard deviation above the mean and at the higher end of the mean group had scored 50 or above on the PCL-M, indicating a "positive" score for PTSD symptoms and diagnosis. Higher scores on the PCL-M are not necessarily indicative that the participant has been diagnosed with PTSD by the military, VA, or other mental health or health care provider. Based on self-report of PTSD diagnosis from the demographic and background questionnaire, 25.4% of the participants had been diagnosed with PTSD. These numbers are consistent with and support the 20% estimates by Tanielian and Jaycox (2008) in the Rand study for OEF and OIF soldiers.

Q4 To what extent does having experienced a physical injury or injuries such as traumatic brain injury, amputation, or other permanent physical disability relate to a military service member's adjustment to college life at institutions of higher learning?

No significant relationship was identified between self-reported permanent physical disabilities and college adjustment. Just over a quarter of the current sample (25.4%) reported suffering permanent physical disability or disabilities related to deployments. Of the total sample, only 18.8% reported a Traumatic Brain Injury (TBIs)

and no one reported loss of limb. Diagnosis of TBIs is difficult; indications are that many TBIs are as yet undiagnosed (Miller & Zwerdling, 2010). Self-reports of permanent physical injuries is subject to considerable fluctuation and inaccuracies because a number of individuals suffering from TBIs have not been diagnosed. Additionally, a percentage of the service members suffering from visible permanent physical disabilities might not feel comfortable in a traditional college classroom and might be concentrating more on online degree programs. Both of these could have affected the results and lack of significance for hypothesis four.

Q5 To what degree does level of unit support relate to a military service member's adjustment to college life at institutions of higher learning?

A significant relationship was found between unit support and college adjustment. Individuals who reported higher levels of unit support while deployed reported higher levels of college adjustment. Unit support was specifically support individuals felt from other members in their units while they were deployed as opposed to support from family and friends back home. Unit support items included feeling one's unit was like family, a sense of camaraderie, being understood, perceiving one's military service was important and appreciated, and feeling heard and supported by superiors in one's unit. Unit support while deployed was one aspect of perceived social support, which has been shown in various research to be related to lower levels of PTSD and improved recovery (Brewin et al., 2000; Napersteck, 2004; Ozer et al., 2003; Sherman et al., 2005; Thrasher et al., 2010).

Q6 To what extent does level of post-deployment support relate to a military service member's adjustment to college life at institutions of higher learning?

A significant relationship was also found between postdeployment support and college adjustment. Student veterans and military in the current study who reported higher levels of postdeployment support also reported higher levels of adjustment to college life. Postdeployment support included items such as having someone to talk to among family or friends; someone to go to for advice, money, assistance with moving, or illness; and the kind of reception upon returning from deployment. Individuals who reported higher levels of postdeployment support might be individuals who have connected to a network of some sort at college or through family and friends, which has contributed to their adjustment to college life. This network of perceived social support, in addition to acting as a buffer during the transition to college life, might also be related to fewer symptoms of and improved recovery from any trauma experienced while deployed in the military (Thrasher et al., 2010).

Several factors related to military deployments appeared to contribute, either negatively or positively, to a military service member's adjustment to college life. Collectively, the independent variables (combat experiences, number of deployments, PTSD symptoms, prior injury, unit support, and postdeployment support) in the current study explained a statistically significant proportion ($R^2 = .561$) of the variance in college adjustment among student veterans and military. In summary, the factors statistically significant for contributing uniquely to college adjustment were symptoms and diagnosis of PTSD and elements of support-- unit support while deployed and postdeployment support. As anticipated in the current study, statistical analysis supported (a) PTSD symptoms having a negative effect on college adjustment and (b) both types of support having a positive effect on college adjustment for military service members who have

been deployed. Combat experiences, number of deployments, and prior injury were not found to significantly explain college adjustment in the current study.

Interpretation of the Findings

The results of the current study indicate that support is critical in multiple ways for service members' transition from the military to college. It is important in and of itself to help service members who are going to college to successfully navigate the transition from one environment and lifestyle to the other. This was shown by the significant positive correlations between both kinds of support (unit support and postdeployment support) and college adjustment. Support is especially critical to student veterans and military; in this study, many of them identified how different and separate they felt from their non-military college peers. This separation theme is one that has been identified in other research as well (American Council on Education, 2010; Brenner et al., 2008). These feelings of separation, in part, begin with a different lifestyle because most student veterans and military do not live in residence halls; thus, they do not have a readily available support network of peers that most typical college freshmen may have. Feeling different and separate from their non-military college peers goes beyond the residence halls to include age differences and differences in maturity and life experiences.

For those individuals who are dealing with symptoms or diagnoses of PTSD, the importance of support is compounded. First, the current study demonstrated a significant, negative relationship between PTSD symptoms and diagnoses and college adjustment. Secondly, it has been demonstrated in literature that support has a buffering effect on preventing and lessening PTSD symptoms and severity (Brewin et al., 2000; Naparstek, 2004; Ozer et al., 2003; Sherman et al., 2005; Thrasher et al., 2010). In addition,

perceived social support was the one variable that was associated with improvement in PTSD treatment in a recent study (Thrasher et al.).

While all the independent variables in the current study collectively contributed significantly to explaining variance in college adjustment, variables other than PTSD, unit support, and postdeployment support (combat experiences, number of deployments, and permanent physical injury) did not contribute significantly on an individual basis. While some of this lack of significance may have resulted in measurement problems related to inclusion of peacetime deployments and limits of the Student Adaptation to College Questionnaire (SACQ) for a non-traditional military population as well as a sample with less severe physical injuries and lower numbers of overall deployments, this gives us a direction for assisting with the transition from military to college life and where efforts need to be focused. The results of the current study suggest that the most important elements in the transition are PTSD symptoms and perceived social support. The other variables are still important, especially for a student veteran struggling with the transition to college life while also adapting to a permanent physical disability. Assistance in these areas cannot be ignored. Institutions of higher education have limited financial, personnel, and time resources. To best assist military service members in the transition to college life, the focus can be on providing various kinds of support for student veterans and assisting with management of PTSD symptoms and diagnosis.

Findings Related to Previous Research

Posttraumatic Stress Disorder

There are a variety of difficulties in accurately pinpointing the number of OEF and OIF veterans who may be suffering from diagnosable PTSD as well as symptoms of

PTSD. The rates have been shown to vary depending on branch of service, the deployment location, and timeframe of deployment (Hoge et al., 2006). The variance appears to be related to the levels and types of combat activity that took place in the different theaters (Hoge et al.). According to another study, service members who reported higher levels of exposure to combat were at greater risk than individuals exposed to lower levels of combat of reporting symptoms meeting criteria for PTSD diagnosis at one month after deployment but not at four or seven months after deployment (Grieger et al., 2006).

Although it is difficult to determine an estimate of OEF and OIF service members who suffer from PTSD (Hoge et al., 2006; Tanielian & Jaycox, 2008), the current study fell within the range of estimates. According to self-reports of PTSD diagnosis from the demographic and background questionnaire, 25.4% of participants indicated they had received a diagnosis of PTSD. Additionally, based on the scores from the Posttraumatic Stress Disorder Checklist-Military version (PCL-M), the average score was 34.80 ($SD=17.02$), which fell below the cutoff for military populations of PTSD (positive of 50). However, those on the upper edge of the mean group and within one standard deviation above the mean did fall within the positive range for PTSD.

Estimated rates of PTSD also vary depending on the screening tools used to determine the estimates, especially between self-report measures and diagnostic screening tools; the current study included only self-report measures. To further complicate gathering accurate data, some individuals choose to seek counseling outside formal military and VA channels: chaplains, family assistance programs, or private providers they pay out of pocket (Hoge et al., 2006). These individuals and their

treatment for PTSD symptoms are not captured in military and VA referral databases. In the current study, self-reports from the demographic and background questionnaire of participants who sought any mental health counseling resulted in 35% who reported having sought counseling of some sort since their deployments including relationship counseling or counseling from a chaplain or minister.

Past research also has shown that the rates of PTSD tend to increase over time (Grieger et al., 2006). For example, in one study, the rates of PTSD for combat soldiers a year after deployment was almost 17%, much higher than pre-deployment rates or rates immediately post deployment (Hoge et al., 2007).). In the current study, the length of time since deployment varied and was not examined related to PTSD diagnosis or symptoms.

In addition to the difficulty of accurately estimating rates of diagnosable PTSD, sub-threshold PTSD (having one to three symptoms) is also of concern. It is even more difficult to estimate the rates of sub-threshold PTSD, even though it has been shown to contribute to impairment in daily life and increase the risk of suicidal ideation (Marshall et al., 2001). For the current study, the average PCL-M score of 34.80 ($SD=17.02$), while below the cutoff score for military of 50, indicated some symptoms of PTSD, reflecting possible sub-threshold PTSD for some participants. In summary, Marshall et al. stated that the “important public health implication of these findings is that substantially greater numbers of individuals experience disability after trauma than is suggested by simply considering rates of full PTSD” (p. 1472).

PTSD has been shown to increase the likelihood of suicides, be related to concentration and memory difficulties, lead to isolation and anger problems, impact

sleep, and be tied to emotional distancing and numbing, and even increased physical health problems (Cantrell & Dean, 2005; Church, 2009; Hoge et al., 2007; Mabray et al., 2009; Sherman et al., 2005). Findings from the current study indicated that PTSD also had a negative effect on college adjustment and was negatively correlated with perceived social support. The latter supports previous findings that have shown PTSD leading to isolation and emotional distancing (Cantrell & Dean; Church; Hoge et al.; Mabray et al.; Sherman et al.).

Given that many of the service members attending college are younger than career military (average age of participants for current study, as noted in Chapter IV, was 30.26, $SD = 8.49$), it is important to note that younger age and male gender are both associated with increased risk of PTSD (LaBash et al., 2009; Lapierre et al., 2007). While the current study did not run any correlations between age and PTSD, a recent study of Veterans Affairs (VA) mental health services related to OIF and OEF veterans found that younger males (less than 25 years of age) were more likely to be diagnosed with PTSD (Seal et al., 2010). In addition, the authors reported that these same younger, male veterans were less likely to continue with sustained mental health treatment, possibly due to other commitments including school and the stigma of mental health diagnosis and treatment (Seal et al.). Seal et al.'s study is especially important for institutions of higher learning because these findings could translate into student veterans who are too busy with school to seek mental health treatment at all or they may seek treatment through university counseling centers because of increased convenience.

Support

Previous studies have examined the importance of perceived social support for individuals dealing with trauma and undergoing significant life transitions. Higher levels of perceived social support have been shown to be related to lower levels of PTSD development, decreased symptom severity, and improved recovery (Brewin et al., 2000; Naparsteck, 2004; Ozer et al., 2002; Sherman et al., 2005; Thrasher et al., 2010). For those dealing with the aftermath of trauma, social support can lessen symptoms of numbing and avoidance, which are tied to diminished levels of social support and relationships (Cantrell & Dean, 2005).

The current study adds to the importance of perceived social support related to service members' transitions from the military to civilian life. Results of this study indicate that higher levels of perceived social support, as measured by self-reported unit support while deployed and postdeployment support, are significantly related to increased levels of college adjustment for student veterans and military.

For both unit and postdeployment support, the participants of the current study reported levels of perceived social support on the upper ends of both possible ranges of scores. On a range of possible points from 12 to 60 for unit support, the mean score for the current study was 44.17 ($SD=10.39$). For postdeployment support, the possible points ranged from 15 to 75 and the mean for the current study was 55.15 ($SD=10.85$). Both of these averages revealed that the overall levels of perceived social support for the participants were on the higher end of the range of possible points, indicating relatively higher levels of perceived social support for most of the participants. As indicated by the statistical analysis, this related to the overall relatively high levels of college adjustment

reported for participants of the current study. The average item score for the Student Adaptation to College Questionnaire (SACQ) was 6.31 ($SD=1.19$) on a scale of 1 to 9 (9 being the highest), indicating overall high average levels of self reported college adjustment for the sample. For the current sample, the respondents reported levels of perceived social support on the upper end of the range of possible scores and also relatively good levels of college adjustment. This would indicate that student veterans, at least on average for the three institutions in the sample and a scattered group of additional participants across the country, are successfully making the transition from warrior to college and reporting they believe they have received adequate social support along the way. In a recent article, a group of military and veteran educators wrote, “It is both useful and appropriate to address the favorable and effective adjustment that the vast majority of veteran students have made” (Hassan et al., 2010, p. 31). They advocated for the support that student veterans, as all other students, need to be successful in college and push for a shift from a pathology focus for these students to one that is more realistic and inclusive of everything military service members bring to campuses (Hassan et al.).

In all probability, the service members who are most struggling with the transition and college adjustment, the ones who have the lowest levels of perceived social support, may be individuals who chose not to participate in the current study or possibly are not attending college currently for various reasons. In addition, service members with the most severe injuries and the most traumatic combat experiences might not be as likely to attend college or respond to surveys related to their military experiences and adjustment. As with all research based on self selection, no definitive statements can be made about the individuals who chose not to participate in the study.

Implications: Theoretical, Methodological, and Practical Applications

From a theoretical perspective, the current study supported the work of social constructivism and the writings of Judith Herman. Similar to Herman's (1997) writings about recognition and restitution related to combat veterans, one author, when writing about promising PTSD practices for working with veterans, wrote about

the warriors search for meaning, purpose, and quest for resolution and redemption. Redemption? Yes, in the biopsychosocial sense, redemption and one's return to life at home as someone who is honored and thanked for the service and contributions. (Schumacher, 2008, p. 2)

In understanding the human change process from a constructivist perspective and when experiences are beyond an individual's ability to understand and process them, the individual can feel overwhelmed and experience disorder and even breakdowns (Mahoney, 2003). For many individuals, military combat involves experiences that lie outside the realm of natural order and easy processing, resulting in difficulty reordering one's world and reestablishing "a meaningful world" (Herman, 1997, p. 70). Included in these experiences are grief and loss related to watching comrades killed next to them and loss of the service members' own former levels of functioning on a physical, mental, or emotional level. Sherman (2010) stated that "soldiering, especially wartime soldiering, does not grow skin that a soldier sheds lightly. . . It is a role that is immersed and transformative and lingers long after a soldier takes off the uniform . . . – it embeds deep" (Sherman, p. 20).

Many of the experiences in combat fall outside the realm of the natural order and are difficult for the service members to express even to their loved ones. This struggle can seem overwhelming when trying to relate to traditional age college classmates, their

professors, and college administrators. This fits with what educator and author Mike Rose (2010) wrote about when describing a program for teaching Vietnam veterans how to help them transition. He explained that for a communications course, the veterans' stated goal was to explain to their loved ones how terrible their wartime experiences really were (Rose).

In addition to meaning making, many service members' experiences relate to grief and mourning. These losses range from survivor guilt to mourning the loss of comrades whose deaths they witnessed, grieving the loss of some of their own former functioning (mental, emotional, and physical), and the loss of a way of life and sense of brotherhood they cannot find in the civilian and college world.

Theoretical implications for the current study deal with how perceived social support relates to supporting and allowing student veterans tell their stories in college venues so that they can move forward, individually and collectively, to find some measure of recognition, restitution, resolution, and redemption. How can college communities come together to support this process and help integrate veterans back into not only college communities but the larger civilian communities to which they are returning? The results of the current study direct college communities toward the critical importance of social support in this transition. The significance of social support--combined with the disconnect many veterans feel with traditional college peers, faculty, and staff--points institutions of higher learning toward how important student veteran organizations, veterans offices and lounges, and veterans cohort classes can be for student veterans. The importance of higher reported levels of unit support, significantly relating to higher levels of reported college adjustment, shows how critical it is for institutions of

higher learning to incorporate programs such as peer mentoring--student veterans who provide assistance to their fellow student veterans. The shared military experiences and culture provide a basis of trust and credibility between veterans that often times is missing with civilians. At the same time, it is important for everyone involved in the transition process to work on assisting service members on bridging the gaps between the military and civilian worlds.

Methodological implications show that a clearer understanding and delineation of deployments, such as clearly differentiating between peacetime and wartime deployments, is important. To fully understand the relationship, if one exists, between combat experiences and the cumulative impact of multiple deployments, this information needs to be clearly articulated and not possibly diluted by peacetime deployments.

The current study illustrates that college adjustment for nontraditional groups of students, such as student veterans and military, is difficult to measure and does not cleanly fit the models and factors of many traditional measurement instruments such as the Student Adaptation to College Questionnaire (SACQ). Many aspects of college experiences and college adjustment are more complex when the participants are individuals with additional life experiences such as combat, spouses, children, and compounded financial burdens.

From a practical application standpoint, one implication--for institutions of higher education as well as the Veterans Affairs (VA) and the military--is the understanding that there is a variety of transition experiences. Based on comments from some respondents, the range of experiences ran from one extreme to the other. Some individuals felt the stress of college life was much worse than military life. According to one participant,

stress was the biggest challenge he/she faced in the transition: “college is worse than Iraq!” Yet other individuals remarked on the difficulty of focusing on mundane college life after the high of combat. For example, one individual wrote, “The depressing thing is that I’m considering returning to the Middle East for another deployment. Combat was the most over-the-top, scary and truly life-altering experience I’ve ever had.” Another individual commented that his/her “combat deployments were the most fulfilling and exciting experiences of my life. The greatest stress I felt was going from hero to zero.”

As a result of this range of experiences among military service members transitioning to college, individuals working with them cannot make any assumptions. Even looking at deployment locations and combat roles can be misleading. One individual reported that while she/he was deployed to the United Arab Emirates rather than Iraq or Afghanistan, “I feared for my life for three out of four months” because of the situations he/she was put in without being properly armed or trained.

The increasing interest in student veterans and military transition and adjustment, as well as an overall focus on returning OEF and OIF veterans, has shown a spotlight on some of the mental health limitations related to this population. These limitations include (a) shortages of psychologists and other mental health professionals in the military and the VA (Munsey, 2009), (b) continuing mental health stigma among military service members, (c) concerns regarding mental health treatment for individuals still in the military, (d) and complicated medical benefits and referral issues for individuals who fall within the VA treatment system and a university treatment system. These limitations and concerns make it imperative that there be an ongoing dialogue between the organizations and agencies who are working with student veterans and military. It is too tempting when

budgets are tight to pass the responsibility for these individuals onto other service providers. Yet the cost associated with letting individuals slip through the cracks untreated and underserved is too high. Institutions of higher learning need to work with the VA and military entities (such as National Guard and reserve units) to develop a streamlined referral process between their medical and mental health care providers to ensure timely and quality care (e.g., testing for cognitive problems related to TBIs) so that student veterans have access to necessary resources before they fail classes.

Even for institutions of higher learning that are working hard to establish veterans programs and services, there are student veterans who are wary of these programs. One participant wrote, “I feel rather patronized by the administration. I do not believe that the establishment really cares at all for our well being beyond collecting our money and giving us ‘lip service’.” Support cannot simply be offered to this population. There must be some consideration for how it is offered and by whom so the targeted population of military service members sees that the support and programs being offered are genuine and safe. To reiterate, it is important to incorporate veterans into the programs and services being offered. This can be done by hiring veterans as veteran coordinators, pulling in faculty and staff who are veterans themselves, developing peer mentoring programs, and hiring VA work-study students to staff veterans’ offices. Developing cohort classes for incoming student veterans and military for some entry level courses is another effective way to allow service members to work together and develop their social support networks with fellow veterans. Service members respond well to cohort classes; these programs build on the unit support dynamic that according to the current study relates to higher levels of college adjustment and transitions into postdeployment support.

Tapping into the military unit and team mentality of “no man left behind” and the sense of military bonds and *esprit de corps* can boost the morale of all the service members involved as well as ensure the academic success of all members.

Peer mentoring programs, integration of student veterans in providing services and programs, and veterans-only classrooms need to be done in a balanced manner. These types of programs and services, while important and demonstrating success, can be isolating for student veterans if they are the only types of programs provided. It is important for veterans programs and services to build bridges for student veterans and military with the non-military student population and faculty and staff, not be isolating and exclusive. For this reason, institutions that have had success with veterans-only classrooms provide some basic classes during the first year or two and move toward integration of the student veterans into regular classrooms. There is not a totally separate veterans-only track for an entire academic curriculum.

For institutions of higher learning developing programs and services, as well as therapists who are working with student veterans and military, in university counseling centers and VAs, it is important to remember that social support can take many forms. According to the National Child Traumatic Stress Network and the National Center for PTSD’s Field Operations Guide for Psychological First Aid (Brymer et al., 2006), the main types of social support are emotional support, social connection, feeling needed, reassurance of self-worth, reliable support, advice and information, physical assistance, and material assistance. With regard to student veterans and military, various individuals noted in the Veterans Success Jam sponsored by American Council on Education in May

2010 that important areas of support included academic advising and information about resources including navigating GI Bill benefits and transfer of credits.

Comprehensive programs that incorporate many facets of support are likely to be more successful. As Rose (2010) noted,

The key idea is to treat a complex educational issue in a comprehensive and integrated way. To respond adequately to educational needs, the program has to address psychological, social, and economic needs as well. And, hand in glove, some social and psychological problem--inability to concentrate, feelings of intellectual inadequacy--don't fully manifest themselves unless one is in a classroom, immersed in English or math or poli sci. (p. 1)

Limitations of Study: Internal and External Validity, Measurements, and Statistics

One limitation, for which concerns were noted in Chapter III, was the utilization of the Student Adaptation to College Questionnaire (SACQ) as the sole measure of college adjustment. Because of the inclusion of factors such as personal and emotional adjustment that the authors used as a subscale, this instrument seemed to be a broader and more applicable measure for college adjustment for the current study. Although the instrument has been expanded for use on all college populations, there were some concerns with how well it applied to nontraditional students, specifically military service members, whose life experiences can be so vastly different from traditional age college student populations. Life experiences rather than age appear to be the key factor differentiating the student veteran population from their non-military college peers. There may not be an instrument available that accurately captures college adjustment of the military service member population. Thus, something might need to be designed specifically for this population or elements of the SACQ and other existing instruments could be modified to better measure college adjustment for military service members.

As noted in Chapter III, the student veteran and military respondents in this study appeared to differentiate between overall academic adjustment and personal academic achievement and their responsibility and accountability for their academic successes and failures. One possible suggestion for future research would be to utilize the SACQ with a student veteran and military population and include qualitative research by asking respondents what questions and experiences fit or did not fit and what they were thinking as they responded to each question. Gathering such qualitative data, for the student veteran population as well as a broader adult learner population, would allow the instrument to be adapted to these populations to better measure their college adjustment and account for the complexities of their life situations.

Although it was not possible with the anonymous surveys in the current study to independently verify grade point averages (GPAs) and standardized test scores for service members attending college as a measure of academic adjustment, a self-report of current GPA could have been included in the demographic and background questionnaire. Future studies could examine self-reports or independently verified GPAs or standardized test scores for student veterans and military.

A portion of the military service members going to college are doing so as distance learners. This is especially the case for individuals still on active duty who are finishing bachelor's degrees or pursuing graduate degrees to improve their chances of promotion. These individuals could be working on their degrees while deployed. Another group of distance learners are those who have been diagnosed with physical or mental health conditions that may prevent them from being able to attend or being

comfortable with attending classes in traditional classroom settings; thus, they pursue their degrees online.

The current study had some respondents who were distance learners. However, it did not examine differences and similarities between this population of military service members attending college and those attending college in classrooms. In fact, one individual commented that she/he was a distance learner; therefore, many of the questions did not apply to her/his college experience. It is likely that there were some distinct differences based on the demographic sub-groupings discussed above. It is also possible that higher numbers of service members with permanent physical disabilities are attending college through online programs, distance only degree programs, or are not attending college. These possibilities could have impacted hypothesis four and resulted in a lack of significance. It is possible that service members with permanent physical disabilities were not included in large enough numbers in the current sample, which focused on institutions with traditional classroom environments. Individuals with permanent physical disabilities and more severe PTSD and TBIs may feel very discouraged with the prospect of or attempts at the transition to college, have not gone to college, or dropped/failed.

Another limitation was including peacetime deployments, which may have diluted some of the experiences and made for less clarity for examination of the impact of combat deployments. Future studies may want to limit examination to only combat deployments, possibly even combat deployments specifically for OEF and OIF, for cleaner, more interpretable data.

Future studies may wish to include a measure for assessing for TBIs. There is increasing confusion among the military and the VA regarding diagnoses and what the criteria should be for diagnosing and treating mild TBIs (Miller & Zwerdling, 2010). The presence and effects of a TBI may not be noticed or fully understood until an individual is in a college setting trying to focus, memorize, concentrate, and pass examinations. In addition to assessing TBIs, it would be important to determine what levels and types of assistance the individuals were receiving; with assistance through a university disability services center or assistive technology, individuals with disabilities can be very successful in college. Undiagnosed TBIs and individuals not utilizing services would be expected to have more difficulties in college.

As with any research based on participant self-selection, it remains unknown how the participants differed from those student veterans and military who chose not to participate in the study. The willingness to participate in such a study may be related to the respondents' level of adjustment, their mindset, and willingness to share and help other student veterans including the researcher. Overall, as a group, the student veterans who chose to participate in the current study may be more adjusted and more connected to their college education than individuals who chose not to participate. The adjustment and mindset of the population of student veterans who chose not to participate in the current study is unknown. Future studies could attempt to gather basic demographic information on the non-participating student veterans at institutions surveyed in an attempt for some comparison of demographic variables.

Future Directions in Counseling Psychology

Some subgroups related to military service members bear some additional scrutiny related to college adjustment specifically and adjustment in general: female veterans, National Guard and reserve members, and family members of active duty and activated National Guard and reserve members who are juggling college life and having a loved one deployed or are dealing with effects of past or future combat deployments. The current study did not separate female veterans, or those in the National Guard or reserves, from other military service members responding to the survey. In addition, it was beyond the scope of the current study to examine the effects military deployments of loved ones had on college students who are immediate family members of active duty and activated military service members.

Recent literature has indicated that female service members may be at higher risk for PTSD; in addition to combat experiences, they often suffer from sexual trauma while in the military, which their male counterparts are exposed to less frequently (Fitzpatrick, 2010; Munsey, 2009). Future studies could look specifically at levels of college adjustment for female veterans and military to see how they compare to the levels for male service members. For those female veterans who have been victimized by sexual abuse, the importance of perceived social support would likely be compounded by successfully navigating the transition to college.

The current study did not examine individuals who are still in the National Guard and reserves while also working on college degrees separately from other military service members in college. Because these individuals transition back and forth between military and civilian life on a regular basis with drill weekends, they could have some additional

concerns. At the end of the survey, one respondent wrote, “I get depressed from the thought of drill weekends.” Drill weekends could fall during midterm exams, significantly increasing the stress and emotions with which the individuals have to struggle. Professors and classmates do not understand the demands on time and emotions drill weekends place on these individuals. Moreover, many are awaiting future deployments to OIF and OEF. Another study found that service members in the National Guard who had been previously deployed to OIF or OEF reported lower levels of perceived unit support (Polusny et al., 2009).

One recent study looked at soldiers from OIF and found that self-reports of having killed someone while deployed was significantly related to PTSD symptoms, alcohol abuse, relationship problems, anger, and other psychosocial problems (Maguen et al., 2010). The authors also reported that 40% of the soldiers in their study had reported killing in combat. The current study, while examining the effects of combat experiences, deployment, and PTSD, did not look specifically at the combat experience of killing. Based on Maguen et al.’s study, the experience of killing in combat seems to be directly related to PTSD symptoms, which according to the current study affects college adjustment. This relationship could bear further direct examination. Based on the study by Maguen et al., it may not be combat experiences as a whole but rather specific combat experiences such as having killed someone that could significantly affect a service member’s college adjustment. The Combat Experiences section of the Deployment Readiness and Resilience Inventory (DRRI) used in the current study looked at various aspects of combat including participation in assaults, invasions, being involved in various combat missions, and being fired upon. One question asked about witnessing someone

from one's unit or an ally unit being seriously injured or killed. No questions directly asked if the service member killed someone in combat. According to Maguen et al., such a question might be the most salient combat-related question with regard to PTSD and other problems and might also have the most impact among combat experiences on college adjustment.

While the current study examined symptoms and self-reports of PTSD diagnosis, mental health counseling, and prescription medications, there were no specific questions relating to suicidal ideation or symptoms of anxiety or depression, which along with PTSD can tied in to suicidal thoughts and attempts. Another avenue for future research would be to explore symptoms and diagnosis of anxiety and depression, as well as related counseling and medication, to further explore the relationship with college adjustment. This information could also provide beneficial information related to suicidal trends and ideations among service members who are in college.

The current study found no significant relationship between number of deployments and college adjustment. Future studies could target service members with longer times in service, and thus usually greater numbers of deployments, for a more thorough examination of multiple deployments, specifically combat deployments, and college adjustment. Again, it is also possible that service members with a greater number of combat deployments are those who are not attending college for various reasons.

Summary

The current chapter discussed and summarized the findings from the statistical analysis of the survey results. Interpretations of the significance of PTSD and perceived social support, in the form of both unit support and postdeployment support, and how

these findings related to previous research in PTSD and support were examined. A variety of implications were delineated including theoretical, methodological, and practical applications for institutions of higher education. Finally, limitations of the current study and areas for future research were discussed.

The results of the study point in the direction of assessing perceptions of unit support and postdeployment support to mitigate the effects of trauma for student veterans. In addition, the findings of the current study provide evidence for the importance of unit support and postdeployment support to mitigate the transition and adjustment to college for veterans and military. Support in the form of having someone to talk to among friends or family, having someone to go to for advice, money, assistance with moving or illness, and positive reception upon returning from deployment makes a significant difference in overcoming trauma and adjusting to college. Military combat may overwhelm normal coping skills and lead to disorder and breakdowns. Perceived social support in a variety of forms can help overcome the disorder and assist in the restoration of a sense of order and resolution and recognition for veterans. The results of the current study call upon faculty, staff, administrators, friends and family, and the community at large to make a difference in the life of veterans and military returning to college and struggling to overcome trauma and reintegrate into society. The significance of unit support for college adjustment in the current findings highlights the importance of programs where veterans are involved in assisting other veterans in the transition to college life. The significance of postdeployment support illustrates that student veterans and military need support beyond their fellow veterans to ensure a successful transition from military life to college and civilian life.

“Our Nations Veterans—A True National Treasure” --
Sign outside the Dwight D. Eisenhower VA in Leavenworth, Kansas

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APPENDIX A

DEPLOYMENT RISK AND RESILIENCE INVENTORY

Deployment Risk and Resilience Inventory (DRRI)

DRRI: Section F: Unit Support

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

DRRI: Section I: Combat Experiences

1. I went on combat patrols or missions.	Yes	No
2. I or members of my unit encountered land or water mines and/or booby traps.	Yes	No
3. I or members of my unit received hostile incoming fire from small arms, artillery, rockets, mortars, or bombs.	Yes	No
4. I or members of my unit received “friendly” incoming fire from small arms, artillery, rockets, mortars, or bombs.	Yes	No
5. I was in a vehicle (for example, a truck, tank APC, helicopter, plane, or boat) that was under fire.	Yes	No
6. I or members of my unit were attacked by terrorists or civilians.	Yes	No
7. I was part of a land or naval artillery unit that fired on the enemy.	Yes	No
8. I was part of an assault on entrenched or fortified positions.	Yes	No

- | | | |
|--|-----|----|
| 9. I took part in an invasion that involved naval and/or land forces. | Yes | No |
| 10. My unit engaged in battle in which it suffered casualties. | Yes | No |
| 11. I personally witnessed someone from my unit or an ally unit being seriously wounded or killed. | Yes | No |

DRRI: Section L: Post-Deployment Support

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

SD is Strongly Disagree, SWD is Somewhat Disagree, N is Neutral, SWA is Somewhat Agree, and SA is Strongly Agree

APPENDIX B

POSTTRAUMATIC STRESS DISORDER CHECKLIST-- MILITARY VERSION (PCL-M)

Posttraumatic Stress Disorder Checklist – Military (PCL-M)

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

	Not at all	A little bit	Moderately	Quite a bit	Extremely
1. Repeated, disturbing <i>memories, thoughts</i> , or <i>images</i> of a stressful military experience?	1	2	3	4	5
2. Repeated, disturbing <i>dreams</i> of a stressful military experience?	1	2	3	4	5
3. Suddenly <i>acting</i> or <i>feeling</i> as if a stressful military experience <i>were happening again</i> (as if you were reliving it)?	1	2	3	4	5
4. Feeling <i>very upset</i> when <i>something reminded you</i> of a stressful military experience?	1	2	3	4	5
5. Having <i>physical reactions</i> (e.g., heart pounding, trouble breathing, sweating) when <i>something reminded you</i> of a stressful military experience?	1	2	3	4	5
6. Avoiding <i>thinking about</i> or <i>talking about</i> a stressful military experience or avoiding <i>having feelings</i> related to it?	1	2	3	4	5
7. Avoiding <i>activities</i> or <i>situations</i> because <i>they remind you</i> of a stressful military experience?	1	2	3	4	5
8. Trouble <i>remembering important parts</i> of a stressful military experience?	1	2	3	4	5
9. <i>Loss of interest</i> in activities that you used to enjoy?	1	2	3	4	5
10. Feeling <i>distant</i> or <i>cut off</i> from other people?	1	2	3	4	5
11. Feeling <i>emotionally numb</i> or being unable to have loving feelings for those close to you	1	2	3	4	5
12. Feeling as if your <i>future</i> will somehow be <i>cut short</i> ?	1	2	3	4	5
13. Trouble <i>falling</i> or <i>staying asleep</i> ?	1	2	3	4	5
14. Feeling <i>irritable</i> or having <i>angry outbursts</i> ?	1	2	3	4	5
15. Having <i>difficulty concentrating</i> ?	1	2	3	4	5
16. Being “ <i>super-alert</i> ” or watchful or on guard?	1	2	3	4	5
17. Feeling <i>jumpy</i> or easily startled?	1	2	3	4	5

APPENDIX C

STUDENT ADAPTATION TO COLLEGE QUESTIONNAIRE



Western Psychological Services
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 12031 Wilshire Boulevard
 Los Angeles, CA 90025-1251
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October 16, 2009

Ann Ingala
 Graduate Student
 School of Applied Psychology and Counselor Education
 University of Northern Colorado
 501 20th Street, McKee 248, Box 131
 Greeley, CO 80639

Re: Student Adaptation to College Questionnaire (SACQ)

Dear Ms. Ingala –

WPS has processed your license for a specific adapted application of SACQ material. By surface mail, you will soon receive paid-in-full WPS invoice/receipt #544991, which serves as your license to conduct on-line administration of the SACQ prevailing items and scoring key via a secure, password-protected website, up to fifty (50) times total. This authorization is for sole use within your registered dissertation study, *The Impact of Military Deployment on College Adjustment* -- with no authorization for continued or commercial use -- subject to the provisions of terms and conditions provided to you June 24, 2009.

With reference to condition (4) of WPS's June 24 terms letter, please affix the following copyright notice in its entirety, on the screen of item presentation, to each reprint/viewing of the SACQ:

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On behalf of WPS, I appreciate your interest in the SACQ, and send best wishes for success with your project, about which we anticipate learning of the results in due course.

Sincerely yours,

SusanW

Digitally signed by SusanW
 DN: cn=SusanW, o=WPS, ou=Admin,
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June 24, 2009

Ann Ingala
 Graduate Student
 School of Applied Psychology and Counselor Education
 University of Northern Colorado
 501 20th Street, McKee 248, Box 131
 Greeley, CO 80639

Re: Student Adaptation to College Questionnaire (SACQ)

Dear Ms. Ingala--

In follow-up to Dr. Softas-Nall's June 17 email on your behalf - and with reference to our previous contacts of October 15, 2008 - this serves to provide terms that will permit you to adapt the format of the SACQ for use as part of your registered dissertation project, "The Impact of Military Deployment on College Adjustment."

Western Psychological Services will authorize you to deliver the prevailing SACQ item content in its entirety via a secure, password-protected website, including permission to conduct database-style scoring on the item responses as based on our proprietary hand-scoring key. Our authorization is for the sole purpose of conducting the above-described study, and not for continued or commercial use, and is subject to satisfaction of the following conditions:

- (1) You must purchase from WPS a license for the anticipated number of SACQ administrations.
- (2) The license fee for this described use of the SACQ will be based on prevailing prices for the hand-scored SACQ Questionnaire (W-228A), less 20% Research Discount. Note that we license this instrument in units of twenty-five (25) with a fifty (50) unit minimum, and shipping and handling fees are not applicable to licensing costs (i.e., 250 total adapted SACQ administrations @ $\$43.50/25 = \$435.00 \times 80\% = \$348.00$ total license fee).
- (3) The license fee must be prepaid in U.S. dollars drawn on a U.S. bank or by international money order (Visa and MasterCard accepted and swiftest). To ensure proper handling of your licensing arrangements, and to guarantee the rate in condition 2 above, please send the payment to my attention with a copy of this letter, within the next sixty (60) days. *Allow the emphasis that you must contact WPS Rights and Permissions to arrange payment of your license fees; please do not contact WPS Customer Service for this purpose.*
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Ann Ingala
 Graduate Student
 School of Applied Psychology and Counselor Education
 University of Northern Colorado
 June 24, 2009
 Page Two of Two

- (5) You agree to provide WPS with one copy of all articles (including research reports, convention papers, journal submissions, dissertations, etc.) that report on the SACQ use in your research. The articles should be marked to the attention of the WPS Research Coordinator. WPS reserves the right to use or reference such reports; you will of course receive proper acknowledgment if we use your research results.

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WPS appreciates your research interest in the SACQ, as well as your consideration for its copyright. Please feel free to contact me if you have any questions. I look forward to your reply.

Sincerely yours,

SusanW

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SDW:se

APPENDIX D

DEMOGRAPHIC AND BACKGROUND QUESTIONNAIRE

Demographic and Background Questionnaire

1. Age: Current age
2. Gender: Female, Male, Transgender, Other
3. Ethnicity, which do you most identify with: White/Caucasian, Black/African American, Asian/Pacific Islander, Native American/Alaskan Native, Hispanic/Latino(a), Other_____
4. Family Status: Single, Married, Partnered, Divorced, Separated, Widowed;
With kids, without kids
5. Branch (check all that apply): Army, Navy, Air Force, Marines
6. Component (check all that apply): Currently Active Duty, Currently National Guard, Currently Reservists; Veteran – active duty; Veteran – National Guard, Veteran - Reserves, Inactive Ready Reserves
7. If you are separated from the military, for how long? Fill in the blank
8. Total time in the service? Fill in the blank
9. Rank (current or when you separated from the military): E-1, E-2, E-3, E-4, E-5, E-6, E-7, E-8, E-9, W-1, W-2, W-3, W-4, W-5, O-1, O-2, O-3, O-4, O-5, O-6, O-7, O-8, O-9, O-10
10. Were you deployed as: combat arms, combat support, combat service support
11. Were you deployed in (check all that apply): A combat zone; peace-keeping mission,
12. Number of deployments: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, more
13. Where deployed: fill in the blank
14. Future deployments expected: Yes, no, unsure
15. Did you suffer any permanent physical injuries while deployed in the military: Yes, No;
If yes, what type (check all that apply): Traumatic Brain Injury, Amputation/loss of limb, Internal injury, Vision problems/loss, Hearing problems/loss, Upper Respiratory problems, Chronic fatigue syndrome, Other_____
16. Have you ever been diagnosed with Posttraumatic Stress Disorder (PTSD) related to your military service? Yes, No
17. Do you have a VA Disability Rating? Yes, No
18. Year in College: Freshman, Sophomore, Junior, Senior, Second Bachelor's, Masters, Doctoral
19. What is your major field of study: fill in the blank
20. First Generation College Student: Yes, No
21. First time college student or returning: First time, Returning
22. Type of institution attending: Two year community college, Four year university
23. Were you a transfer student? Yes, No
24. What was your home state when you entered the military? Fill in the blank
25. Which of the following, if any, challenges have you faced transitioning from the military to college life? (Check all that apply) Getting accepted to college, housing, transfer of credits, assimilating to student life, relationship issues, financial concerns, stress, potential recall to active duty, feeling safe (standing down from combat training)

26. What, if anything, do you think sets you apart from your college peers? (Check all that apply) Experience, Age, maturity, Experience of Traumatic Events, Injury/Disability, Attitude/Bearing, Values, Discipline, No Difference
27. Please indicate your level of agreement with the following statement: Overall, I feel my fellow students, the faculty and staff respect my military service to the nation. Strongly agree, Agree, Neutral, Disagree, Strongly Disagree
28. Have you sought any type of mental health counseling since your deployment? Yes, No
29. Are you currently taking any prescription medications for PTSD, depression, anxiety, or prescription sleep aids? Yes/No

APPENDIX E

COLORADO STATE UNIVERSITY PILOT SURVEY--
SPRING 2008

Invitation letter to participate in survey:

Dear student:

Colorado State University is very interested in assessing the needs of veterans—those here now and those that will be returning from duty. Your name has been selected to participate in this very important survey. Only current students at CSU that appear on our list of veterans or students who are in the Reserve, or National Guard have been asked to participate, so your response is very important!

This survey should take less than approximately 10-15 minutes to complete. Your participation is voluntary and your responses will be kept completely confidential. Your responses will be combined with all other data for statistical analysis. The results of the survey will be used to assist the Colorado State University staff in planning programs and services for students who are returning veterans.

To participate in this study: Please click on the survey link below to begin the survey, or copy and paste the link into the address bar of your web browser.

<http://studentvoice.com/p/?UUID=c490f425dba24d1899c1cc608a2e13c3>

Completion of the survey by April 11, 2008 is greatly appreciated.

Please direct any questions concerning the actual survey to:

Anne Hudgens
Executive Director
Campus Life
201 Administration
970.491.5312
Anne.hudgens@colostate.edu

Direct any technical problems concerning the survey or website to:

David A. McKelfresh
Director of Assessment
Division of Student Affairs
970.491.4722
david.mckelfresh@colostate.edu

Summary of Survey:

CSU Military and Veteran Student Spring Survey Summary

- Email invitation sent out to 262 CSU students receiving military educational benefits, asking them to participate in online survey with 40 questions
- 79 students began the survey and 70 completed the survey (27% response rate)
- Majority of students responding were veterans (75%), undergraduate (68%), full-time (82%), single (54%), without children (87%), without part time employment (58%), with student loans (71%)
- Out of 77 respondents, they identified as seeking degrees in the following colleges at CSU: Business (25%), Liberal Arts (19%), Applied Human Sciences (16%), Natural Sciences and Warner College of Natural Resources (each with 10%), Engineering (9%), Veterinary Medicine & Biomedical Sciences (6%), and Agricultural Sciences (4%)
- Some of the respondents were in the National Guard or Reserves (30% of respondents in still in one or the other) when they responded, and an additional 10% were still on Active Duty
- All branches of the military represented with respondents identifying as Army (35%), Marines (19%), Navy (9%), Air Force (30%), and Coast Guard (6%)
- 70% of respondents had been on 1-3 deployments (37% on 1, 18% on 2, 15% on 3), with an additional 3% having been deployed 4 times, 1%-5 times, and 5% with more than 5 deployments. 16% of respondents said they had never been deployed
- 13% indicated anticipating additional deployments and another 24% were unsure
- Out of 65 respondents, 45 (69%) of them identified having been deployed to Afghanistan, Iraq, or elsewhere in SW Asia such as Qatar or Kuwait
- When asked how long ago they separated from the military, 10% responded under one year, 12% between 1 and 2 years ago, 32% left the service 2-5 years ago, and 9% had separated over 5 years ago, with another 30% still in the Guard/Reserves
- When asked which of the following types of problems they encountered when transitioning from military to college life, 45% endorsed “assimilating into the student role/routine”, 30% said “dealing with potential recall to active duty”, 27% said “dealing with stress”, 25% said they “didn’t have any significant problems”, and 23% said “transfer of credits from other universities”
- When asked what they think sets them apart from their CSU peers – they answered: Experience (82%), Age (70%), Maturity (75%), Experience of traumatic events (40%), Injury or disability (18%), No differences (14%), and Other (10%) – which included comments such as kids, work ethic, and discipline
- When asked if they feel that CSU students, staff and faculty respect their military service 66% replied favorably (21% - Strongly Agree, 45% - Agree), with 19% marking Neutral, 14% - Disagree, and 1% - Strongly Disagree
- In response to if respondents feel the University recognizes their contributions as a veteran – 42% responded – Yes, and 58% responded – No. 25 of the 31 who responded favorably provided comments, while 40 of the 42 who did not feel their contributions were recognized provided comments, some of them lengthy

- 48% responded that their greatest need was financial support
- Other needs that respondents said they would like assistance with were Having a place for veterans to go (30%), Career help/networking (27%), Academic support (25%), Finding a community of other students (25%), Talking with others that understand the military experience (23%), Making adjustments from military to civilian campus life (21%), Dealing with stress (21%), Dealing with stigma related to asking for help (12%), Dealing with reflexive/instinctual military training (11%), Relationship support (11%), and Counseling for personal issues (10%)
- When asked how they perceive the university faculty and staff, 89% replied favorably (26% - Very friendly, 63% - Friendly)
- When asked if any respondents had ever been treated poorly by a faculty member because of their service in the military, 90% replied that they had not
- When asked if any of them had ever been treated poorly by a staff member because of their service in the military, 94% replied that they had not
- Respondents provided mixed comments regarding how they would characterize the attitude of those who know about their military service towards them – comments included: grateful, respectful, thankful, curious, to misunderstood, shocked, “scared of me,” cannot relate, to name calling such as “murder,” “baby killer,” “war monger”
- Respondents were asked about what services they have used at CSU, the most common responses were financial aid/GI bill assistance (33%), None (14%), Off-Campus Student Services/Resources for Adult Learners (12%), Counseling (11%)
- Given a list of possible services and asked which they would be interested in, the respondents ranked the 10 items in the following order: A One Stop veterans’ office handling all the needs of veterans (57%), Eliminate or decrease delays in receiving educational benefits (53%), Guide, workshop, or forum on what student veterans need to do in order to receive benefits (40%), Campus-wide recognition or appreciation for student veterans (37%), Veteran advisors available for academic counseling (30%), Assistance with transitioning from soldier to student and Flexibility from faculty when interacting with deploying or deployed soldiers (both 24%), Specialized orientation for freshmen and transfer veterans (19%), and Learning assistance for those returning from deployment and Other (both 16%)
- Respondents were asked to enter comments identifying what are the difficulties of returning and transitioning from military to college life and 60 respondents entered comments with the most common responses falling into the following rough subcategories: (percentages are approximate) relating/interacting with and meeting others (25%), financial concerns (20%), adjusting to civilian life (18%), time and stress management (15%), mental/emotional difficulties (12%), and adjusting to dealing with less important things than life/death (12%)
- Respondents were asked to comment on how they handle stress and 62 individuals provided comments which fit into the following broad categories as the most common responses: (percentages are approximate) Exercise (56%), Talking – with friends, family, counselor (29%), Alcohol/drugs/sleeping pills (15%), meditate/read/pray (15%), nature/outdoors (11%),

movies/music/videogames (11%)

- When asked in what ways military veteran respondents feel connected to campus, their written comments group together in the following main categories: (percentages are approximate) Don't feel connected/None (28%), through classes (17%), Clubs/student organizations/Greeks (12%), not connected due to being online/distance learner (12%), friends/classmates (10%), professors/departments (10%)
- In response to being asked if there were specific services for veterans would they use them, 87% said they were likely to
- When asked to comment and provide ideas for how CSU can better assist its military veterans, 39 individuals provided comments which fell into the following main areas: (percentages are approximate) financial/residency/emancipation (38%), veteran recognition/information/organization on campus (31%)
- Comments (from 50 individuals) in response to what is the biggest misconception or mistake CSU could make regarding services for veterans broke down into the following main areas: (percentages are approximate) treating all veterans and their needs the same (22%), that veterans need to be coddled/focus only on mental health (20%), ignoring them/thinking there are not enough veterans to provide services to (12%), that veterans want special attention and to be treated differently (12%), mixing politics and military service (8%), making the assumption that veterans will ask for help (4%), assuming that veterans know how to apply for benefits (4%)
- Respondents were asked to provide comments on what they think CSU should do to prepare for a larger number of veterans returning from the Middle East, and 55 individuals provided comments. The main areas comments broke down into were: (percentages are approximate) veterans' office/seminars/transition help (35%), support/awareness/recognition of veterans (13%), scholarship/financial assistance/information for GI benefits (13%), counseling (13%), welcome and accept them (11%), and a couple respondents pointed out that all veterans did/do not serve in the middle east
- The final question respondents were asked was if they were interested in being a part of a veterans support group and 47% responded yes while 53% responded no, out of 70 individuals



Research Integrity & Compliance Review Office
Office of Vice President for Research
Fort Collins, CO 80523-2011
(970) 491-1553
FAX (970) 491-2293

Date: September 25, 2009

To: Ann Ingala

A handwritten signature in cursive script that reads "Janell Barker".

From: Janell Barker, IRB Administrator

Re: Impact of Military Deployments on College Adjustment

After review of information regarding the secondary data to be analyzed for the above-mentioned project, it was determined that the anonymous data did not meet the requirements of the federal definition of human subject research. "Human subject means a living individual about whom an investigator conducting research obtains data through intervention or interaction with the individual, or identifiable private information."

Living individual – Y

About Whom – Y

Intervention/Interaction – N

Identifiable Private Information – N

Thank you for submitting this information. If you have more projects that are similar, please contact us prior to submission. The IRB must determine whether a project needs to have IRB approval.

From: Barker,Janell
Sent: Thursday, March 25, 2010 5:15 PM
To: Ingala,Ann
Subject: RE: IRB approval

Hi Ann,
Sorry, your project got off my radar. Yes, you can recruit from CSU as approved by UNC's IRB. If you have any problems or questions, please contact me.

Janell

Janell Barker | Assistant Director | IRB Administrator Research Integrity & Compliance Review Office
321 General Services Building | Colorado State University | 970-491-1655

APPENDIX F

PILOT STUDY INFORMATION AND INSTITUTIONAL REVIEW BOARD FORMS AND APPROVALS

Invitation Email to participate in Pilot Study:

Hello, my name is Ann Ingala and I am a veteran of the first Gulf War, a doctoral student at the University of Northern Colorado, and the Assistant Director of Adult Learner and Veteran Services, in charge of veteran's programs and services at Colorado State University. I am currently conducting research for my doctoral dissertation and am looking for individuals who meet the criteria and are interested in participating in this anonymous survey and provide me with initial feedback on the pilot of the survey.

Participants need to be individuals who are currently enrolled in college (two or four year institution), currently serving or have served in the Army, Navy, Air Force or Marines in any component and have been deployed at least once on a peace keeping mission or in a combat zone. For those of you receiving this email invitation who do not meet all of those criterion, thank you so much for your time and your service, or your family member's service to this country. Time constraints have forced me to limit my study to individuals who meet the listed criteria, but that does not limit my appreciation for your service or your loved one's service.

For those of you who do meet the three criteria and are interested in participating, I will briefly explain the purpose of the study, what the survey entails, and the drawing you will be entered for should you choose to complete the survey. If at any time before or after completing the survey you have any questions, please contact me at (970) 491-0601 or inga4143@bears.unco.edu and I would be happy to answer your questions, discuss your concerns, and receive your feedback.

The purpose of the study is to gather much needed information about the impact military deployments have on a service member's transition and adjustment to college life. Information and research conducted to date is very limited in this area of military service member's transition and is of critical importance as more and more service members, especially those of you have served in OEF and OIF return and head to college under the Post 9/11 GI Bill. This information will be utilized to help develop, expand, and refine programs and services designed to help facilitate the transition from warrior to college student as successfully, expeditiously, and painlessly as possible.

At this point I need a smaller group of individuals to take the survey and provide me with feedback on this email invitation, the informed consent, and the survey itself. If you participate in this pilot study to provide me with this much needed feedback to improve the final product, you will be entered into the final drawing, but will be requested not to take the final survey for the overall study.

The linked online survey should take approximately 15-25 minutes for you to complete and consists of 3 different relatively brief instruments asking about your military and deployment experiences, possible reactions that are common to many military service members who have been in dangerous situations, questions about how you feel you are doing in college at this time, followed by some demographic and background questions. Should you choose to participate the first section on the link will be the informed consent

which will explain the instruments a bit more.

No identifying information, such as name, school ID number, or contact information will be collected as part of the survey, to keep the survey responses anonymous, even to me. Because general information such as age, military rank, and school you are attending will be collected for demographic purposes, the results will only be reported in an aggregate manner to prevent anyone from being able to identify any individual respondent.

Upon completion of the survey, you will be provided with information which will allow you to be registered for the drawing to win one of five iPod Shuffles that I will be giving away in appreciation for your time in completing this survey and assisting me with the data collection on my dissertation. In addition to being entered into the drawing, if you would like to find out aggregate data about the results of the survey or the overall study, you can contact me and I will provide that information after I complete data analysis and conclude the study.

If you would like to proceed and assist me with my study, you may access the informed consent and the survey at “final link to survey on Survey Monkey will be provided here”

Informed Consent:



CONSENT FORM FOR HUMAN PARTICIPANTS IN RESEARCH
UNIVERSITY OF NORTHERN COLORADO

Project Title: Impact of Military Deployment on College Adjustment

Researcher: Ann M. Ingala, MA, PhD Candidate, School of Applied Psychology & Counselor Education

Phone Number: (970) 491-0601

e-mail: inga4143@bears.unco.edu

I am researching the impact that military deployments, both peace-keeping missions and in war zones, have on a military service member's adjustment to college. As a participant in this research, you will be asked to take an online survey which consists of three instruments and a demographic and background questionnaire. The first sections on the survey come from the Deployment Risk and Resilience Inventory (DRRI) and will ask you to rate various elements of your unit support while deployed, indicate your combat experiences, and rate the level of postdeployment support you have received. The second instrument is the Posttraumatic Stress Disorder Checklist – Military Version (PCL-M) and will ask about various common experiences reported by military service members who have been exposed to dangerous situations. The third section consists of the questions in the Student Adaptation to College Questionnaire and will ask you to rate how applicable various statements are to your recent college experiences. The final element of the survey consists of some demographic and background questions to gather general information about you; such as your age and family status; your overall military experience; such as length of service, component served/serving in; and overall college information; such as year in school and field you are majoring in. The survey will take approximately 15-20 minutes to complete. At the end of the survey you will be provided with information you will need to register for the drawing.

For the survey, you will not provide your name, but will be asked to provide some basic information such as your age, gender, rank while in and school you are attending. Therefore, your responses will be anonymous. Only the researcher will examine individual responses. Data analysis and results of the survey and this study will be reported only as aggregate information and not on an individual basis.

Risks to you are minimal. You may feel anxious or upset when you are asked to think about and report your combat experiences and recount possible feelings and physical symptoms you may experience. If you experience any flashbacks or feel more than mildly distressed when completing the survey, please contact your institution's counseling center, the local vets center, VA, or a local psychologist or counselor, some numbers for local contacts are provided below. The benefits to you include helping expand the knowledge base regarding the transition from the military to college life which can help facilitate development and improvements in programs for student veterans at colleges and institutions within the state of Colorado and nationwide. In addition to being a doctoral student in the Counseling Psychology program at UNC, I am a military veteran of the first Gulf War and run the veteran's programs and services for student veterans/military at Colorado State University. Aggregate data from this survey and study will be shared with other institutions participating to help expand the knowledge base and develop and improve best practices to assist all student veterans and military to be successful in their college endeavors. If you have any questions or concerns before or after taking this survey, please contact me at the above listed phone number or email and I will be happy to talk with you.

Participation is voluntary. You may decide not to participate in this study and if you begin participation you may still decide to stop and withdraw at any time. Your decision will be respected and will not result in loss of benefits to which you are otherwise entitled. Having read the above and having had an opportunity to ask any questions please complete the survey if you would like to participate in this research. Completing the survey indicates your consent to participate in this research study. You may print out a copy of and keep this form for future reference. If you have any concerns about your selection or treatment as a research participant, please contact the Sponsored Programs and Academic Research Center, Kepner Hall, University of Northern Colorado Greeley, CO 80639; 970-351-1907.

University of Northern Colorado University Counseling Center – (970) 351-2496
Psychological Service Clinic at University of Northern Colorado – (970) 351-1645
Colorado State University Counseling Center – (970) 491-1988, after hours emergency number (970) 491- 1711
Vets Center in Fort Collins – (970) – 221-5176
VA Clinic in Greeley – (970) 313-0027
VA Clinic in Fort Collins – (970) 224-1550


UNIVERSITY of
NORTHERN COLORADO
Institutional Review Board (IRB)



October 1, 2009

See revision
(Copies of survey
questions) attached
S. Collins

TO: Susan Collins
School of Human Sciences

FROM: Gary Heise, Co-Chair 
UNC Institutional Review Board

RE: Expedited Review of Proposal, *Pilot Project for Impact of Military Deployments on College Adjustment*, submitted by Ann M. Ingala (Research Advisor: Basilia Softas-Nall)

First Consultant: The above proposal is being submitted to you for an expedited review. Please review the proposal in light of the Committee's charge and direct requests for changes directly to the researcher or researcher's advisor. If you have any unresolved concerns, please contact Gary Heise, School of Sport and Exercise Science, Campus Box 39, (x1738). When you are ready to recommend approval, sign this form and return to me.

I recommend approval as is.

 10/15/09
Signature of First Consultant Date

The above referenced prospectus has been reviewed for compliance with HHS guidelines for ethical principles in human subjects research. The decision of the Institutional Review Board is that the project is approved as proposed for a period of one year: 10/29/2009 to 10/29/2010.

 10/29/2009
Gary Heise, Co-Chair Date

Comments:

e-mailed 10/29/2009

APPENDIX G

AIMS AND UNC INSTITUTIONAL REVIEW BOARD APPROVALS



*We're all about students.
Your dream is our mission.*

Institutional Review Board

April 22, 2010

Ms. Ann Ingala
Assistant Director for Veteran Services
CSU Adult Learner and Veteran Services
Room 195 Lory Student Center
Fort Collins, CO 80523

Dear Ms. Ingala,

The Aims Institutional Review Board has approved your proposal for the research project titled "Impact of Military Deployments on College Adjustment" pending your written acknowledgement of this approval.

We believe your project proposal dated February 9, 2010 falls into the federally approved Category of Exemption: "Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless: (a) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; **and** (b) any disclosure of the human subjects' responses outside the research reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation."

This response reflects the decision of the Aims Institutional Review Board, whose current members are Dr. Greg Appling, Ms. Marsha Driskill, Dr. Richard Hanks, Ms. Sandra Owens, and Dr. Stephanie Wiegand.

Sincerely,

Gregory B. Appling, PhD.
Co-chair, Institutional Review Board

Please sign and date below to indicate your commitment to executing the project as described in your proposal and within the parameters under which the Aims Institutional Review Board has approved the project. You may send a signed copy by FAX to 970-506-6933 with the original copy following by US mail.

Ann Ingala

3 May 2010
Date

UNIVERSITY of
NORTHERN COLORADO
Institutional Review Board (IRB)



February 16, 2010

TO: Susan Collins
Gerontology

FROM: Gary Heise, Co-Chair *GHH*
UNC Institutional Review Board

RE: Expedited Review of Proposal, *Impact of Military Deployments on College Adjustment*,
submitted by Ann M. Ingala (Research Advisor: Basilia Softas-Nall)

First Consultant: The above proposal is being submitted to you for an expedited review. Please review the proposal in light of the Committee's charge and direct requests for changes directly to the researcher or researcher's advisor. If you have any unresolved concerns, please contact Gary Heise, School of Sport and Exercise Science, Campus Box 39, (x1738). When you are ready to recommend approval, sign this form and return to me.

I recommend approval as is.

Susan Collins *2/25/10*
Signature of First Consultant Date

The above referenced prospectus has been reviewed for compliance with HHS guidelines for ethical principles in human subjects research. The decision of the Institutional Review Board is that the project is approved as proposed for a period of one year: *12 Mar 2010* to *12 Mar 2011*.

Gary Heise *12 Mar 2010*
Gary Heise, Co-Chair Date

Comments:

- See Correspondence with first reviewer, attached
S. Collins 2/25/10
Name: OSP - phone

✓

APPENDIX H

DESCRIPTIVE STATISTICS FOR VARIABLES
INCLUDED IN REGRESSION ANALYSIS

Table 15

Descriptive Statistics for Variables Included in Regression Analysis

Variable	Means	SD	Skew	Kurtosis
SACQ	6.28	1.18	.17	-.69
Combat Experiences	5.40	2.96	.07	-1.17
Number of Deployments	.59	.49	-.35	-1.9
PTSD	33.74	15.92	1.03	.15
Prior Injuries	.31	.47	.82	-1.35
Unit Support	45.38	9.39	-.74	.32
Postdeployment Support	56.21	10.12	-3.5	-.12

N = 128

APPENDIX I

MANUSCRIPT FOR PUBLICATION

MANUSCRIPT FOR PUBLICATION

Abstract

The number of military service members and veterans entering college is increasing with the Post 9/11 GI Bill. Estimates vary on the percentage of veterans suffering from physical and mental health concerns including traumatic brain injuries and posttraumatic stress disorder. Many returning service members arrive on college campuses battling physical or psychological disabilities.

The transition from military to college life is complex and can be difficult to successfully navigate for many. Given the important role of perceived social support for individuals dealing with trauma, especially veterans, little is known about current levels of support for student veterans on college campuses. Even less is known about the perceptions and desires of current student veterans presently attending college.

Survey results from 128 student veterans/military at two- and four-year institutions were examined through multiple regression. There was statistical significance at the $p < .05$ level for three of six research hypothesis. The PTSD, unit support, and postdeployment support variables contributed uniquely to the explanation of college adjustment. Student veterans and military with higher levels of reported PTSD symptoms had lower levels of college adjustment; whereas, those who reported higher levels of unit support and postdeployment support had higher levels of college adjustment.

Introduction

Psychologists and researchers believe that a critical component to trauma recovery is support from family, friends, and the greater community (Herman, 1997; Naparstek, 2004; Sherman et al., 2005). Ongoing wars in Iraq and Afghanistan involving thousands of United States service members raise the likelihood that increasing numbers of service members are and will be dealing with the aftermath of trauma related to war experiences. These increasing numbers make the need to better understand the role of perceived social support even more important.

Military men and women deploy all over the world and face dangerous combat situations. Then they come home and find the battles are not over as they struggle to fit into civilian life. As Sherman (2010) writes, “The transitions are rarely seamless. For many, soldiering is not just a job or career; it is an identity, it is who they become. Leaving it behind is not easy” (p. 4). For many service members, the transition includes trying to fit in on college campuses, get a degree, and then move into successful careers and civilian life.

In the coming years, the number of military service members going to college is anticipated to increase with the implementation of the new Post 9/11 GI Bill providing military service members with additional college funding. Grossman (2009) has stated that based on prevalence rates, 40% of service members may be suffering from various physical and psychological traumas. Since there is no accurate overall estimate of the number of service members suffering from various traumas from their deployments to Iraq and Afghanistan, it is difficult to estimate what percentage of returning service

members who arrive on campuses across the country will battle physical or psychological disabilities.

For persons who have experienced a trauma, the presence or absence of social support can influence how they handle the resulting feelings of helplessness, horror, fear, and the level of distress and the effect these feelings have on their lives (Cantrell & Dean, 2005). Given what we know about the importance of perceived social support for returning service members, especially combat veterans, we need to have a better understanding of the perceptions of student veterans and military. To better support service members who are making the transition to college life, we need to have a better understanding of who they are and what their military and college experiences have been. Even more important is research into the role their military experiences have on their college experiences and transition to college life.

This research examined how military deployments, especially multiple deployments, explained military service members' transition and adjustment to college life. The transition from a military lifestyle, which might have included deployment to a combat zone, to a college lifestyle is a difficult one to navigate. Many of these service members are working their way through this life transition while also dealing with various added challenges such as posttraumatic stress disorder (PTSD), traumatic brain injuries (TBIs), and other physical and mental health struggles.

The current study examined service members' deployment experiences and history--the number of deployments and the types of situations faced while deployed--explained their adjustment to college life. Further information was gathered to examine how diagnoses of PTSD, TBI, and physical injuries might have compounded the

adjustment from military to college life. In addition, because past research has shown how important support is during and after experiencing traumatic events including wartime (Church, 2009; Fikretoglu et al., 2006), this study examined how unit support while deployed and postdeployment support might have mitigated this transition and adjustment to college for these individuals.

The study examined the following six research questions:

- Q1 To what extent do previous military deployment experiences relate to a military service member's adjustment to college life at institutions of higher learning?
- Q2 Are military service members who have been deployed to combat zones multiple times more likely to have adjustment difficulties in college at institutions of higher learning than military service members deployed only once to a combat zone?
- Q3 To what degree does level of PTSD relate to a military service member's adjustment to college life at institutions of higher learning?
- Q4 To what extent does having experienced a physical injury or injuries such as traumatic brain injury, amputation, or other permanent physical disability relate to a military service member's adjustment to college life at institutions of higher learning?
- Q5 To what degree does level of unit support relate to a military service member's adjustment to college life at institutions of higher learning?
- Q6 To what extent does level of post-deployment support relate to a military service member's adjustment to college life at institutions of higher learning?

Methods

This study used a survey to collect data and examine any identifiable correlational pattern between reported military deployment experiences and a service member's subsequent adjustment to college life. Since little research has been conducted specifically related to how military deployments might explain college adjustment,

various common aspects of military deployments examined in the literature were selected for inclusion in the current study. These aspects--support, PTSD, combat experiences, number of deployments, and injuries--were then examined in relation to self-reported college adjustment measured via the Student Adaptation to College Questionnaire (SACQ) to see what if any correlations there were between the military deployment aspects and college adjustment. The data for the study were collected electronically via an online survey.

Data collection was done through veterans' representative(s) at 1 two-year and 2 four-year institutions of higher learning in the Rocky Mountain region; they were invited to ask their student veterans and military members to participate. An email invitation with a link and instructions to access the online survey was provided to the veterans' representatives who agreed to invite their students to participate. The veterans' representatives then forwarded this email invitation out to the appropriate listservs at their institutions.

Participants

Targeted participants were individual military service members attending participating Rocky Mountain region two- and four-year institutions of higher learning. The invitation email specified that only individuals who had been deployed in wartime or in a peacekeeping mission were being asked to participate. Further, the invitation email asked for participants who had served or were currently serving on active duty or in the National Guard or Reserves in any branch of the United States services except the Coast Guard. The email invitation also asked those who received it to pass it along to other

military service members who might meet the selection criteria, resulting in snowball sampling beyond the three participating institutions.

Data were collected on a total of 162 military service members, ages 21 to 69 years old, most of whom completed most of the survey and the demographic and background section. Some participants skipped certain questions throughout the survey; these individuals were not included in the analysis because of the lack of demographic data. In addition, some participants who skipped too many questions in other sections of the survey were also excluded from the analysis, leaving the number of participants for full statistical analysis at 128.

Of the 145 participants who provided their age, the average age was 30.26 ($SD = 8.492$). The range of reported ages was between 21 and 69 years old. In keeping with the majority of the military services being comprised of men, the majority of the sample identified as males (81.5 %), 17.8% identified as females, and one individual identified as transgender. Of the individuals who participated in the research, exactly half of them had served or were serving in the United States Army, followed by 25.3% in the Marines. Of the 146 participants who completed the demographic and background section, 91.9% had been deployed no more than three times, 80.9% had been deployed only once or twice, and just under half (42.5%) had been deployed just once. When asked about the type of deployments, 95.2% indicated they had been deployed in combat zones.

When asked “Where were you deployed, please enter all deployment locations,” 146 participants responded, many of them with multiple locations. Of those 146, 74.7% specifically indicated Iraq or Operation Iraqi Freedom (OIF) once or more. Another 18.5% indicated deployments to Afghanistan or Operation Enduring Freedom (OEF). An

additional 25.3% indicated other locations in southwest Asia such as Kuwait, Saudi Arabia, Qatar, and United Arab Emirates.

Participants were specifically asked if they had suffered any permanent physical injuries while they were deployed in the military and if they had been diagnosed with PTSD. Of the 126 who responded regarding disabilities, 75.4% reported no disabilities. In response to PTSD diagnosis, 138 participants responded; 25.4% indicated they had been diagnosed with PTSD. Additionally, 35% of the 143 who responded stated they had sought mental health counseling of some sort including chaplains and marital counseling.

Instrumentation

Independent variables for this study included (a) number of military deployments; (b) PTSD symptoms; (c) TBIs and other physical injuries; (d) types of combat experiences; (e) level of unit support; and (f) level of postdeployment support. The dependent variable for this study was level of college adjustment as measured by the Student Adaptation to College Questionnaire (SACQ; Baker & Siryk, 1999) overall score. The survey consisted of 151 total questions. The average completion time to take the entire survey was 15 to 20 minutes.

Deployment Risk and Resilience Inventory

Three sections of the Deployment Risk and Resilience Inventory (DRRI) were utilized in the current study: Sections F: Unit Support, I: Combat Experiences, and L: Postdeployment Support (King et al., 2003). For the current study, the original yes/no format was used with the combat experiences scale. For the three measures from the DRRI, the scores were summed and the higher scores were indicative of greater levels of that measure; higher scores on combat experiences reflected increased numbers of

combat experiences, higher scores on unit support indicated higher levels of perceived unit support, and higher scores on postdeployment support reflected higher levels of perceived postdeployment social support. The scores on the combat experiences measure ranged from 0 to 10. For the unit support measure, possible scores ranged from 12 to 60. For postdeployment support, the scores ranged from 15 to 75.

In the current study, exploratory factor analysis (EFA) was conducted with all three sections of the DRRI. The items loaded onto the one expected factor for each of the DRRI scales. Reliability estimates for scores on the DRRI and other measures for the current sample are reported in Table 1.

Table 1(16)

Descriptives and Reliability Coefficients for Measures

Measure	Mean	Standard Deviation	Reliability	Number of Items
Combat Experiences	4.69	3.01	.848	10
Unit Support	44.17	10.39	.925	12
Postdeployment Support	55.15	10.85	.892	15
Posttraumatic Stress Disorder Checklist – Military Version	34.80	17.02	.963	17
Student Adaptation to College Questionnaire	6.31	1.19	.950	64

*Posttraumatic Stress Disorder Checklist—
Military Version*

The Posttraumatic Stress Disorder Checklist (PCL) was developed by researchers at the National Center for PTSD in a self-report format (Blanchard et al., 1996). The Military version (PCL-M) was utilized in the current study. The questions were based on the *Diagnostic and Statistical Manual* (DSM-III-R and now DSM-IV-TR) criteria for PTSD and are broken down according to the three symptom clusters of the PTSD diagnosis (Weathers et al., 1993). An overall severity score can be totaled for the scale and then cutoff scores are applied which vary according to the population in which the respondent falls. For military populations, the cutoff score for being PTSD “positive” is an overall score of 50 out of a possible score range from 17 to 85 (Norris & Hamblen, 2003).

In the current study, exploratory factor analysis was conducted on the PCL-M, resulting in the one factor expected. The reliability estimate for the current study, based on 153 participants and excluding 9 individuals who skipped at least one item, was a Cronbach’s alpha of .963 (see Table 1 above). There were 17 items in the PCL-M.

*Demographic and Background
Questionnaire*

For the current study, basic demographic information was collected along with some additional information pertaining to participants’ military service, health status, and college related variables. To be consistent with previous studies conducted on military service members, these questions were asked for a more complete understanding of the population. Information gathered through the Demographic and Background

Questionnaire was utilized for the independent variables related to number of deployments and physical injury.

*Student Adaptation to College
Questionnaire*

The initial EFA for the SACQ resulted in multiple factors; therefore, Promax with Kaiser Normalization rotation was used to force four and five factors. Based on the sample and the study, the forced five factor model was determined to be a better fit than the forced four factor model that resulted or the four factors identified by Baker and Siryk (1999). The current sample of military service members tended to be older and have more life experiences than traditional age college freshmen populations for which the SACQ was originally developed and normed. Although the use of the SACQ has been expanded beyond freshmen, there has not been extensive use with nontraditional student populations. The different factors that resulted in the current study indicated some clear distinctions between traditional age college freshmen and student veterans and military populations for college adjustment.

For this study, the five factors identified in the EFA were similar to the original four subscales (Baker & Siryk, 1999) with some additional nuances and divisions. The first and largest factor was the personal-emotional adjustment subscale identified by the authors (Baker & Siryk) with some additional items that seemed to pertain to aspects of TBI, PTSD, depression, and anxiety, e.g., problems with concentration and functioning during exams and loneliness.

The second factor was mostly related to academic performance from a personal perspective, i.e., if the respondent was interested in their course work and had well-defined academic goals. Some, but not all, of the social adjustment subscale items of the

SACQ comprised the third factor for this sample. Most of the remaining academic adjustment items formed the fourth factor in the current sample and were related to general or overall academic adjustment. The remaining factor aligned closely with Baker and Siryk's (1999) attachment subscale that was designed to measure attachment to college and the particular institution.

As a result of the EFA looking differently and items loading on the above five forced factors, only an overall score for the SACQ was utilized for this study as a measure of college adjustment. Three of the original 67 items were excluded because they related to only undergraduates or students living in residence halls. Since the items did not pertain to some of the participants, they were skipped. Therefore, in the current study, 64 items were utilized to measure college adjustment. A respondent had to answer at least 60 of the items for inclusion in the statistical analysis. This resulted in possible scores ranging from 60 to 576; higher scores indicated higher levels of college adjustment.

The four original subscales of the SACQ as developed by Baker and Siryk (1999), because they are widely utilized on university and college campuses, were examined with relation to some of the independent variables in the current study. This was done to provide further information for faculty and staff who are familiar with and utilize the SACQ.

Data Analysis

Multiple regression analysis was run on the data after factor analysis was completed to answer all six of the research questions. Since current literature does not provide any basis for establishing priority among independent variables, simultaneous

entry multiple regression was used in which all six explanatory variables (i.e., combat experiences, number of deployments, PTSD, prior injury, unit support, and postdeployment support) were entered into a single regression model with SACQ total scores as the dependent variable. All statistical analyses were conducted using PASW Statistics (formerly SPSS) version 18. Prior to interpreting the regression results, several diagnostic procedures were conducted to assess tenability of the regression assumptions: linearity, homoscedasticity, normality and randomness of residuals, and absence of measurement error. A histogram of residuals assessed the normality assumption and a scatterplot between standardized predicted values and standardized residuals assessed linearity, homoscedasticity, and randomness of residuals. The assumptions appear to have been met based on a visual examination of the scatterplots of the standardized residuals by the standardized predicted values, which resulted in a fairly even distribution around 0. In addition, reliability estimates based on Cronbach's alpha (see Table 1) were used to determine the extent to which the absence of measurement error assumption was met. The final diagnostic procedures included checking for possible outliers and collinearity among the independent variables. Tests for the overall model R^2 value and for individual regression coefficients were conducted at $\alpha \leq .05$.

In addition to the multiple regression conducted to answer the research questions, three independent samples t -tests were run on the data. The first was used to check for any significant mean differences on SACQ scores between respondents attending two-year institutions versus those attending four-year institutions of higher learning. A second independent samples t -test was used to examine the mean differences in college adjustment (as measured by SACQ total score) based on the dichotomous variable of

self-reported PTSD reported on the demographic and background questionnaire. The third independent samples *t*-test was conducted to compare self-reported PTSD diagnosis in the demographic and background section with scores from the PCL-M. These latter comparisons were conducted as validity checks on the accuracy of the self-reported PTSD. Prior to examining results of these supplementary *t*-tests, Levene's test was used to assess the homogeneity of variance assumption and skew/kurtosis values were examined with respect to the normality assumption. For the third *t*-test, Levene's test for equality of variances was not met, indicating a violation of homogeneity of variance. Therefore, an alternative and more robust *t*-test, for which equal variances were not assumed, was used. Skew/kurtosis values falling within + or – 1.0 suggested relatively normal distributions (Huck, 2008). To maintain the desired type 1 error rate ($\alpha \leq .05$) across the three *t*-tests, each test was conducted using a Bonferroni-adjusted alpha of .017.

Results

Collectively, combat experiences, number of deployments, PTSD symptoms, prior injury, unit support, and postdeployment support explained a statistically significant proportion of the variance in college adjustment among military service members, $R^2 = .561$, $F(6, 121) = 25.78$, $p < .05$. Thus, these variables accounted for over half the variation in the dependent variable of respondents' college adjustment (as measured by total score on the SACQ). However, as shown in Table 2, only PTSD symptoms, unit support, and postdeployment support contributed uniquely to explaining college adjustment. Student veterans and military with higher levels of PTSD symptoms tended

to have lower levels of college adjustment, while individuals who reported higher levels of unit support and postdeployment support reported higher levels of college adjustment.

Table 2 (17)

Regression Coefficients of Simultaneous Entry Multiple Regression for Testing Hypotheses One through Six

Model	Unstandardized Coefficients		Standardized Coefficients
	B	Std Error	
(Constant)	5.263	.645	
Combat experiences	-.037	.028	-.093
Number of Deployments	-.070	.148	-.029
PTSD	-.035	.006	-.474**
Prior injury	-.148	.169	-.058
Unit Support	.022	.009	.176**
Postdeployment Support	.036	.009	.308**

Note. Dependent variable: SACQ total score

** indicates significance at $p < .05$.

It was expected that a greater number of combat experiences would be related to decreased levels of college adjustment. As shown in Table 2, although a negative coefficient suggests that combat experience could explain college adjustment, no significance was found, $p = .18$. Therefore, based on the results, those facing more dangerous combat experiences did not report lower college adjustment scores.

Individuals with higher numbers of deployments were anticipated to have reported lower levels of college adjustment. Number of deployments was examined as a dichotomous variable differentiating between one deployment and more than one. Based on non-significant results, $p = .64$, number of deployments was not related to levels of college adjustment.

Military service members reporting higher levels of PTSD were expected to report lower levels of college adjustment. For research question three, those individuals who reported higher levels of PTSD (as measured by the PCL-M) reported significantly lower levels of college adjustment (as measured by the SACQ total scores). PTSD contributed to variation in college adjustment at the $p < .05$ level of significance (see Table 2).

It was anticipated that individuals who reported a permanent physical injury would also report lower levels of college adjustment. For the current sample, reporting a permanent physical injury did not contribute to explaining variance in college adjustment at a statistically significant level. For hypothesis four, the alpha level was $p = .38$.

As predicted, higher reported levels of unit support while deployed (as measured by Section F of the DRRI) contributed to explaining college adjustment at a statistically significant level, $p < .05$. Those individuals who reported higher levels of unit support while deployed reported significantly higher levels of college adjustment as measured by the SACQ total score.

Finally, for research question six, post-deployment support (as measured by Section L of the DRRI) contributed to explaining variance in college adjustment at a statistically significant level, $p < .05$. As predicted, those individuals who reported higher

levels of postdeployment support also reported higher levels of college adjustment as measured by the total score on the SACQ.

Three independent samples *t*-tests were conducted. The first independent samples *t*-test found no significant difference between the student veterans and military in the current study who attended two-year versus four-year institutions.

The second independent samples *t*-test was used to examine differences in college adjustment based on the dichotomous variable of self-reported PTSD from the demographic and background questionnaire. Using the Bonferroni-adjusted alpha of .017, statistical significance was found, indicating a difference in college adjustment between those respondents who self-reported having a PTSD diagnosis versus those who did not self-report having PTSD in a negative direction. Those who self-reported having a diagnosis of PTSD had lower reported levels of college adjustment than respondents who did not report having a diagnosis of PTSD.

The final independent samples *t*-test was utilized to compare scores on the PCL-M with the dichotomized self-reports of PTSD diagnosis from the demographic and background questionnaire. For this *t*-test, Levene's test for equality of variances was not met, indicating a violation of homogeneity of variance. Therefore, an alternative and more robust *t*-test was used for which equal variances were not assumed. Results are reported in Table 3. Statistical significance was found, indicating differences between self-reported PTSD and the level of PTSD symptoms from the PCL-M. This suggests a statistically significant mean difference on the PCL-M scores between those who did versus those who did not self-report having PTSD. Those who self-reported having PTSD had significantly higher means on the PCL-M than those who did not self-report having

PTSD. In addition, the mean for those who did not self-report PTSD diagnosis was 29.24 ($SD=12.88$), indicating that the majority for those who reported they did not have a PTSD diagnosis fell below the PTSD “positive” cutoff of 50 plus one standard deviation. For the group that reported PTSD diagnosis, the mean was 51.47 ($SD=17.25$), indicating that the average score for this group fell above the cutoff for PTSD “positive.” Thus, the third independent samples t -test confirmed that the self-reported yes/no PTSD question from the demographic and background questionnaire was consistent with scores on the PCL-M.

Table 3 (18)

Independent Samples t -Tests for College Adjustment and Self-Reported PTSD

Independent Variable (DV)	t	df	p -value
2 year vs. 4 year (SACQ)	.556	134	.579
self-reported PTSD (SACQ)	-3.802	132	<.000**
PCL-M score (self-reported PTSD)	-6.897	46.022	<.000**

**Statistically significant at the $p < .017$ level.

Even though the EFA for the SACQ did not result in the four factors and subscales developed by Baker and Siryk (1999), supplemental analysis examined the four original subscales of the SACQ (Academic Adjustment, Social Adjustment, Personal-Emotional Adjustment, and Attachment) in relation to number of deployments, PTSD, unit support, postdeployment support, and combat experiences. For this analysis,

number of deployments was examined as a dichotomous variable of one deployment versus two or more deployments as well as one and two deployments versus three or more deployments. No statistical significance was found with any of the four SACQ subscales and number of deployments. The only significance found was with the Social Adjustment subscale and PTSD ($p=.001$), the Attachment subscale and PTSD ($p<.001$), the Social Adjustment subscale and Unit Support ($p=.003$), and the Attachment subscale and Postdeployment Support ($p=.002$).

Discussion

Many of the experiences in combat fall outside the realm of the natural order and are difficult for the service members to express even to their loved ones. This struggle can seem overwhelming when trying to relate to traditional age college classmates, professors, and college administrators.

Several factors related to military deployments appeared to contribute, either negatively or positively, to a military service member's adjustment to college life. Collectively, the independent variables (combat experiences, number of deployments, PTSD symptoms, prior injury, unit support, and postdeployment support) in the current study explained a statistically significant proportion ($R^2 = .561$) of the variance in college adjustment among student veterans and military. In summary, the factors statistically significant for contributing uniquely to college adjustment were symptoms and diagnosis of PTSD and elements of support-- unit support while deployed and postdeployment support. As anticipated in the current study, statistical analysis supported (a) PTSD symptoms having a negative effect on college adjustment and (b) both types of support having a positive effect on college adjustment for military service members who have

been deployed. Combat experiences, number of deployments, and prior injury were not found to significantly explain college adjustment in the current study.

Previous studies have examined the importance of perceived social support for individuals dealing with trauma and undergoing significant life transitions. Higher levels of perceived social support have been shown to be related to lower levels of PTSD development, decreased symptom severity, and improved recovery (Brewin et al., 2000; Naparsteck, 2004; Ozer et al., 2002; Sherman et al., 2005; Thrasher et al., 2010). For those dealing with the aftermath of trauma, social support can lessen symptoms of numbing and avoidance, which are tied to diminished levels of social support and relationships (Cantrell & Dean, 2005).

The current study adds to the importance of perceived social support related to service members' transitions from the military to civilian life. Results of this study indicate that higher levels of perceived social support, as measured by self-reported unit support while deployed and postdeployment support, are significantly related to increased levels of college adjustment for student veterans and military.

Theoretical implications for the current study dealt with how perceived social support relates to supporting and allowing student veterans tell their stories in college venues so that they can move forward, individually and collectively, to find some measure of recognition, restitution, resolution, and redemption. There are a variety of ways college communities can come together to support this transition process and help integrate veterans back into not only college communities but the larger civilian communities to which they are returning. The results of the current study direct college communities toward the critical importance of social support in this transition. The

significance of social support, combined with the disconnect many veterans feel with traditional college peers, faculty, and staff point institutions of higher learning toward how important student veteran organizations, veterans offices and lounges, and veterans cohort classes can be for student veterans. The importance of higher reported levels of unit support significantly relating to higher levels of reported college adjustment points toward how critical it is for institutions of higher learning to incorporate programs such as peer mentoring--student veterans providing assistance to their fellow student veterans. The shared military experiences and culture provide a basis of trust and credibility between veterans that often times is missing with civilians. At the same time, it is important for everyone involved in the transition process to work on assisting the service members on bridging the gaps between the military and civilian worlds.

Implications for university counseling centers and future counselors working in such centers include assessment of and discussions around perceived social support by student veterans and military as well as the need for additional venues for counseling services for military service members. Because of the increased stigma surrounding mental health among military populations and the increased comfort level provided by military peers, university counseling centers may want to offer veteran support groups through veterans' lounges and support services offices on campus rather than at the university counseling center.

Counselors and psychologists working with student veterans through private practice, community mental health organizations, and through the VA could gain insights into their clients and avenues for assisting them by conducting assessments of their perceived levels of unit support while deployed and postdeployment support.

Assessments of social support could prove helpful to the counselors and psychologists since unit support and postdeployment support in the current study were related to reported levels of college adjustment.

The current study illustrated that college adjustment for nontraditional groups of students, such as student veterans and military is difficult to measure and does not cleanly fit the models and factors of many traditional measurement instruments such as the Student Adaptation to College Questionnaire (SACQ). There are many aspects of college experiences and college adjustments that are more complex when the participants are individuals with additional life experiences such as combat, spouses, children, and compounded financial burdens.

An increased interest in student veterans and military transition and adjustment, as well as an overall focus on returning OEF and OIF veterans, has shown a spotlight on some of the mental health limitations related to this population. These limitations and concerns make it imperative that there be an ongoing dialogue between the organizations and agencies working with student veterans and military. Institutions of higher learning need to work with the VA and military entities (such as National Guard and reserve units) to develop a streamlined referral process between their medical and mental health care providers to ensure timely and quality care; this includes testing for cognitive problems related to Traumatic Brain Injuries (TBIs) so that student veterans have access to necessary resources before they fail classes.

For institutions of higher learning developing programs and services, as well as therapists who are working with student veterans and military in university counseling centers and VAs, it is important to remember that social support can take many forms.

According to the National Child Traumatic Stress Network and the National Center for PTSD's Field Operations Guide for Psychological First Aid (Brymer et al., 2006), the main types of social support are emotional support, social connection, feeling needed, reassurance of self-worth, reliable support, advice and information, physical assistance, and material assistance.

Comprehensive programs that incorporate many facets of support are likely to be more successful. As Rose (2010) noted,

The key idea is to treat a complex educational issue in a comprehensive and integrated way. To respond adequately to educational needs, the program has to address psychological, social, and economic needs as well. And, hand in glove, some social and psychological problems--inability to concentrate, feelings of intellectual inadequacy--don't fully manifest themselves unless one is in a classroom, immersed in English or math or poli sci. (p. 1)

Possible future directions leading from the current study include a more thorough examination of student veterans and military including (a) an adapted measure for college adjustment that specifically relates to their transition experiences, (b) a specific measure to assess for TBIs, and (c) concentration on combat related deployments only, (d) measures to assess for depression and anxiety symptoms and diagnoses, and (e) comparison of college adjustment levels between female and male student veterans and military. Suggested future studies include examinations focused on college transition experiences specifically for female military service members and for National Guard and reserve members. Additionally, there may be some distinct differences in college

adjustment for service members who are pursuing degrees online. Also beyond the scope of the current study was an examination of the impact of military deployments on college adjustment for family members including spouses and children of military service members who are or have been deployed to combat.

Summary

The current study analyzed findings from a survey conducted with military service members attending institutions of higher learning to examine various aspects of their past military deployments on college adjustment. Interpretations of the significance of PTSD and perceived social support, in the form of both unit support and postdeployment support, and how these findings are related to previous research in PTSD and support were made.

The results of the study point in the direction of explaining perceptions of unit support and postdeployment support to assess the effects of trauma for student veterans. In addition, the findings of the current study provided evidence for the importance of unit support and postdeployment support to mitigate the transition and adjustment to college for veterans and military. Support in the form of having someone to talk to among friends or family; having someone to go to for advice, money, assistance with moving or illness; and positive reception upon returning from deployment make a significant difference in overcoming trauma and adjusting to college. Military combat may overwhelm normal coping skills and may lead veterans to disorder and breakdowns. Perceived social support, in a variety of forms, can help overcome the disorder and assist in the restoration of a sense of order and resolution and recognition for veterans. The results of the current study call upon faculty, staff, administrators, friends and family, and the community at

large to make a difference in the life of veterans and military returning to college and struggling to overcome trauma and reintegrate into society. The significance of unit support for college adjustment in the current findings highlights the importance of programs where veterans are involved in assisting other veterans in the transition to college life. The significance of postdeployment support illustrates that student veterans and military need support beyond their fellow veterans to ensure a successful transition from military life to college and civilian life.

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